Trillium
2022 Primary Health Care Research Day

Conference Program

Friday, October 14, 2022
Conference

Presented by INSPIRE-PHC

INSPIRE-PHC

*This event will be recorded

Welcome

On behalf of our organizing and planning committees, I would like to extend a sincere welcome to all attendees of this years' conference. Students and emerging researchers, please take the opportunity to reach out to our experienced researchers in primary health care in attendance. We have focused our plenaries on two timely issues: Primary Care as a Foundation for Upstream Health Systems and Addressing Community Primary Care Research Priorities. Thank you to the Ontario SPOR Support Unit and the Ontario Departments of Family Medicine, and the Ministry of Health for making this event possible.

Dr. Michael Green
Lead, INSPIRE-PHC

Acknowledgements

Trillium Primary Health Care Research Day 2022 is facilitated by the INSPIRE-PHC research partnership, supported by a grant from the Ontario Ministry of Health.

About INSPIRE-PHC

INSPIRE-PHC is an overarching program focused on primary health care including a research component, a support component, and a network component to serve the primary health care research community. The INSPIRE-PHC research/policy partnership aims to address major health system challenges of equitable access to high quality primary health care (PHC) and better co-ordination and integration of PHC with other parts of the health and social care system (community care, public health and specialty care).

New studies will provide better quality information on patient needs and PHC capacity to deliver care in defined geographic areas and will provide early feedback on the successes and challenges in introducing PHC reforms. This research will help improve access to care, the care experience for patients, and better health outcomes for all Ontarians.

For more information, please visit: https://inspire-phc.org/

Program Sponsors

Organizers of Trillium Primary Health Care Research Day 2022 would like to acknowledge generous support from the following sponsors:

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Program Contents

Program Agenda

Access live streams in the virtual auditorium at:
https://trillium2022.samaaro.com/

9:00 AM **Room 202**	**Opening Remarks** Dr. Michael Green	**Live Stream Available**
9:10 AM **Room 202**	**Martin Bass Lecture: Primary Care as a Foundation for Upstream Health Systems** Featuring: Dr. Andrew Pinto Introduction: Dr. Rick Glazier, Co-Lead, INSPIRE-PHC Moderator: Dr. Michael Green, Lead, INSPIRE-PHC Dr. Pinto is the founder and director of the Upstream Lab, a research team focused on tackling social determinants, population health management and using data to enable proactive care. He holds the CIHR Applied Public Health Chair in Upstream Prevention. He will explore the latest evidence on what works to integrate health and social care and provide a vision for how systems can evolve in our lifetime.	**Live Stream Available**
10:30 AM **Room 202**	**Break**	
10:45 AM **Room 201 A-F**	**Concurrent Oral Presentations**	**In Person Only**
11:45 AM **Room 202**	**Lunch Break**	
12:30 PM **Room 203**	**Concurrent Poster Presentations**	**In Person Only**
1:30 PM **Room 202**	**Break**	
1:45 PM **Room 202**	**Panel Discussion: Addressing Community Primary Care Research Priorities** Introduction: Dr. Rick Glazier Moderator: Dr. Michael Green This panel will showcase examples of community-based primary care research that demonstrate strong partnerships between the researcher and local community stakeholders. **Dr. Tara Kiran** will discuss 2 studies: the *Keeping Doors Open* collaboration; and her involvement with patient experience survey work. **Dr. Jonathon Fitzsimon** will speak to community involvement in his study involving COVID-19 assessment in rural, remote and underserviced communities. **Dr. Catherine Yu** and Patient Partner **Jennifer Boyle** will weigh in with their experiences with the process.	**Live Stream Available**
3:15 PM **Room 202**	**Closing Remarks** Dr. Rick Glazier	**Live Stream Available**

Martin Bass Lecture

Dr. Martin J. Bass was Chair of the Graduate Studies Program in the Department of Family Medicine at Western University from 1977 to 1980, and the first Director of the Centre for Studies in Family Medicine from 1986 to 1996. His career as a family physician researcher had a major impact on the development of family practice research around the world. This lecture honors Dr. Bass and his strong commitment to family medicine research.

Primary Care as a Foundation for Upstream Health Systems

Dr. Andrew Pinto is the founder and director of the Upstream Lab, a research team focused on tackling social determinants, population health management and using data to enable proactive care. He holds the CIHR Applied Public Health Chair in Upstream Prevention. He is a Public Health and Preventive Medicine specialist and family physician at St. Michael's Hospital in downtown Toronto, and an Associate Professor at the University of Toronto. He is the Associate Director for Clinical Research at the University of Toronto Practice-Based Research Network (UTOPIAN) and the lead for artificial intelligence in a new initiative at the Department of Family and Community Medicine on how new technologies will change healthcare.

Discussion

Conference participants will be given the opportunity to ask questions and respond to Dr. Pinto’s talk.
This segment will be moderated by Dr. Michael Green.

Oral Presentations

Room 201 A-F, 10:45-11:45AM

A listing of oral presentations is provided below; abstracts are included beginning on PAGE 7

Theme	#		Presentation Title	Presenter	Affiliation
Pandemic Responses in Primary Care Moderator: Michael Green Evaluator: Maria Mathews Room A	1	1-A 1045	Family physician leaders: Evolving roles during the pandemic	Judith Belle Brown	Western University
	2	1-B 1100	Changes in adolescent and youth mental health presentations as a result of COVID-19: A study of primary care practices in Northern Ontario	Barb Zelek	Northern Ontario School of Medicine
	3	1-C 1115	Why are Ontario family physicians retiring early during the COVID-19 pandemic?	Rachel Walsh	University of Toronto
	4	1-D 1130	Who will be left behind? The anticipated impacts of an aging family physician workforce on primary care patients and physicians in Ontario	Kamila Premji	University of Ottawa
Team-Based Perspectives Moderator: Maggie MacNeil Evaluator: Cathy Thorpe Room B	5	2-A 1045	Public health and primary health care collaboration experience during the COVID-19 pandemic in eight high-income countries	Q. Jane Zhao	University of Toronto
	6	2-B 1100	Unable to present		
	7	2-C 1115	A framework to support the progressive implementation of integrated team-based care for the management of COPD in primary care settings: A collective case study	Madelyn daSilva	Western University
	8	2-D 1130	Enhancing patient expertise in primary health care research in Ontario: PERC	Maggie MacNeil Rebecca Ganann Lorraine Bayliss	McMaster University
Priority Population Approaches Moderator: Rebecca Ganann Evaluator: Colleen Grady Room C	9	3-A 1045	The impact of 'Care of the Elderly' certificates of added competence on family physician practice: Results from a pan-Canadian multiple case study	Rebecca Correia	McMaster University
	10	3-B 1100	Are sexual abuse histories associated with being under screened for cervical cancer among women living with HIV in Ontario?	Jessica Chan Natasha Richmond	St. Michael's Hospital
	11	3-C 1115	Unable to present		
	12	3-D 1130	Capturing pregnancy history in the electronic medical record: An opportunity to improve women's future cardiovascular health	Noah Crampton	Toronto Western Hospital
Virtual Care and EMR Moderator: Amanda Terry Evaluator: Sathya Karunananthan Room D	13	4-A 1045	Development of a multi-factorial data quality score for primary care electronic medical records	Kathryn Stirling	Western University
	14	4-B 1100	"Can you hear me now?" An exploration of communication quality in virtual primary care encounters for patients with intellectual and developmental disabilities	Avra Selick	University of Toronto
	15	4-C 1115	Virtual healthcare services in Canada: Digital trails, de-identified data and privacy implications	Sheryl Spithoff	Women's College Hospital
	16	4-D 1130	Virtual care use prior to emergency department admissions during a stable COVID-19 period in Ontario, Canada	Vess Stamenova	Women's College Hospital
OHT Data and Support Moderator: Sheena Guglani Evaluator: Shahriar Khan Room E	17	5-A 1045	The progress and maturity of Ontario Health Teams: An environmental scan	Tracy Deyell	University of Ottawa
	18	5-B 1100	Spatial distribution of OHT patients and their geographic accessibility to hospitals	Peter Gozdyra	ICES
	19	5-C 1115	The impact of primary care attachment patterns on COVID-19 vaccination uptake in Ontario	Meghan Kerr	Queen's University
	20	5-D 1130	"I need a family doctor!! How can I find one?" – Docmapper.ca: An interactive map to support (language-concordant) access to primary care	Lise M. Bjerre	University of Ottawa
Health Systems Planning Moderator: Catherine Donnelly Evaluator: Leslie Meredith Room F	21	6-A 1045	Asynchronous Secure Messaging: A current state analysis across five Canadian provinces	Miria Koshy	Women's College Hospital
	22	6-B 1100	Exploring neighbourhood characteristics to support access to primary care for older adults	Catherine Donnelly	Queen's University
	23	6-C 1115	An intersectional approach to examining access to primary care	Jennifer W. He	Western University
	24	6-D 1130	Machine learning, bias, and risk factors: Implications for primary care	Steve Durant	Unity Health Toronto

Poster Presentations

Room 203, 12:30-1:30PM

A listing of posters is provided below; abstracts are included beginning on PAGE 19

#	Presentation Title	Presenter
1	Identifying the impact primary care physicians have on the appropriateness of outpatient antibiotic prescribing for individuals with Spinal Cord Injury	Arrani Senthinathan
2	COVID-19, health and social care screening in a community paramedic wellness clinic linking to primary care for older adults residing in social housing settings: A CP@clinic adaptation	Hanna Dias
3	Primary care physician engagement in health system transformation: A review of the literature	Atharv Joshi
4	Building evidence towards health information technology maturity in Ontario's long-term care homes	Ramtin Hakimjavadi Presented by S Karunananthan
5	Sexual health promotion for sexual and gender minorities in primary care: Preliminary results of a scoping review	Anna Yeung
6	Unable to present	
7	A qualitative study on the relational, cultural and communications practices to achieve Primary Care integration in Alberta, Canada	Myles Leslie Presented by N Pinto
8	Identifying social determinants of health in primary care electronic medical record (EMR) data	Stephanie Garies
9	Improving folic acid counselling within primary care	Kholoud Ayesh
10	The impact of funding models on the integration of registered nurses in primary health care teams	Jennifer Xiao
11	Implementing social prescribing in primary health care	Caitlin Muhl
12	Developing an Audit and Feedback dashboard for family physicians: A user-centered design process	Jennifer Shuldiner
13	The impact of consecutive shifts on emergency physician quality of care	Jessica Saini
14	Implementing Screening for Poverty And Related Social Determinants and Intervening to Improve Knowledge of and Links to Resources (SPARK) in five provinces	Mélanie Ann Smithman
15	Protocol for a qualitative study exploring the Pharmacist's role in supporting post-secondary students with psychotropic medication management	Andrea McCracken
16	A learning system for adolescent depression in primary care	Diana Sarakbi
17	Using learning collaborative teams to address the cancer-screening backlog due to COVID-19	Sara Bhatti
18	A multi-pronged collaborative approach to health care research: Engaging with key stakeholders in mixed-methods study on virtual care encounters in primary care	Jeanette Smith
19	Optimizing the role of social work in primary health care across Ontario	Rachelle Ashcroft
20	Effectiveness of the Community Paramedicine at Home (CP@home) program for frequent users of emergency medical services in Ontario: A randomized controlled trial	Jasdeep Brar
21	Improving the rates of screening offered for chlamydia and gonorrhea in young adult male patients	Perri Deacon
22	Evaluation of real-time collection of patient-reported experience to support continuous improvement	Catherine Donnelly
23	Primary care attachment and Emergency Department Visits: Should everyone be attached?	Christopher Schieck
24	Describing a family medicine teaching unit community practice experience of pivoting to virtual care in response to the COVID-19 pandemic crisis	Azza Eissa
25	Mindfulness-based stress reduction for community-dwelling older adults with subjective cognitive decline and mild cognitive impairment in primary care: A mixed-methods feasibility randomized control trial	Todd Tran
26	Eviction filings during bans on enforcement during the COVID-19 pandemic: Implications for primary care	Steve Durant
27	POPLAR, the Primary Care Ontario Practice-based Learning and Research Network	Marissa Beckles
28	Family Health Teams in Ontario: Is everyone receiving equal care?	Joel Schieck
29	"…swamped with information…": Family physicians and information management during the COVID-19 pandemic	Gillian Young
30	CAMERA: e**C**onsult requests **A**bout **M**edications in old**E**r adults with f**R**ailty from prim**A**ry care providers	Tyler Schneider

Panel Discussion

Addressing Community Primary Care Research Priorities

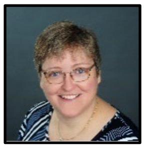
This panel will showcase examples of community based primary care research that demonstrate strong partnerships between the researcher and local community stakeholders. Dr. Tara Kiran will discuss 2 studies, the Keeping Doors Open collaboration, and her involvement with patient experience survey work. Dr. Jonathon Fitzsimmon will speak to community involvement in his study involving COVID-19 assessment in rural, remote and underserviced communities. Community members, Dr. Catherine Yu and Jennifer Boyle will weigh in with their experiences with the process. The session will conclude with a question and answer session moderated by Dr. Michael Green

Moderator: Dr. Michael Green

Panelists:

Dr. Jonathan Fitzsimon practices family medicine in Arnprior. He is Medical Lead of the Renfrew County Virtual Triage and Assessment Centres and the Renfrew County Integrated Virtual Care program. Dr. Fitzsimon is an Assistant Professor at the University of Ottawa, Department of Family Medicine with a program of research on using virtual care as a means of improving access to primary care in rural, remote, and underserved communities. He was the recipient of the OMA's 2021 Glenn Sawyer Service Award.

Dr. Tara Kiran is the Fidani Chair in Improvement and Innovation and Vice-Chair Quality and Innovation at the Department of Family and Community Medicine, University of Toronto. She practices family medicine at the St. Michael's Hospital Academic Family Health Team and is an Associate Professor at the University of Toronto in the Faculty of Medicine and the Institute of Health Policy, Management and Evaluation. Her research seeks to improve quality in primary care by influencing policy and practice.



Jennifer Boyle is an active patient partner in research and education. She became a Patient Partner in the Patient Expertise in Research Collaboration (PERC) in primary health care because she sought to advocate for patient engagement in both education and research initiatives. She is also the Co-Chair of the Patient Advisory Committee for the Centre for Advancing Collaborative Healthcare and Education at the University of Toronto. Primary health care integrates care, prevention, promotion, and education. Patients have vast experiential knowledge and can contribute to primary health care research in meaningful ways. By being an active member of PERC, Jennifer hopes to facilitate patient engagement in primary health care research.

Dr. Catherine Yu is a family physician at Health Access Thorncliffe Park and the Physician Lead at East Toronto Family Practice Network. She is also the Engagement Lead in the Department of Family and Community Medicine Office of Health Systems Partnership at the University of Toronto and an Assistant Professor at the University of Toronto in the Faculty of Medicine.

The Session will conclude with a questions and answer session moderated by Dr. Michael Green.

Evaluation

Please be sure to complete the evaluation form emailed to you following the event. This will provide the conference organizers with needed feedback going forward.

Abstracts: Oral Presentations

Family physician leaders: Evolving roles during the pandemic

Judith Belle Brown, Cathy Thorpe, Amanda L. Terry, Bridget L. Ryan, Saadia Hameed Jan, Rebecca E. Clark

Background: Key to the development of Ontario Health Teams (OHTs) is the intentional engagement of family physicians (FPs). Objective: This ongoing study explores the role of FP leaders and their role in involving community-based FPs in OHTs.

Background: Descriptive qualitative study using individual interviews. An iterative and interpretive process was conducted with individual and team analysis to identify overarching themes. A purposive sample of 36 primary care leaders (49 interviews in total) engaged in health system change from across Ontario, from January 2020 – April 2022.

Results: Over the last 3 years, an evolution has been occurring as FP leaders transition from being champions who push out ideas to leaders who co-create and enact ideas. Their initial motivation to serve as leaders was to advocate for their patients and the discipline of Family Medicine while being committed to making significant changes in how health care is provided, thereby achieving the quadruple aim. COVID-19 required that they add new priorities and activities, including procuring PPE and organizing health human resources for assessment and vaccination centres. Many FP leaders were called upon to contribute to pandemic response planning organizations, locally and provincially. Collectively, they brought a strong voice for primary care to these tables. Leaders emphasized the need to develop sustainable infrastructure to enlarge the pool of FP leaders and to maintain current leaders.

Conclusion: These findings provide a unique perspective on the evolution of FP leadership in health system change and the contextual factors that are influencing this transition. jbbrown@uwo.ca

Changes in adolescent and youth mental health presentations as a result of COVID-19: A study of primary care practices in Northern Ontario

Barb Zelek, Brianne Wood PhD, Shreedhar Acharya MSc, MPH, MHM, Roya Daneshmand PhD, Mike Cotterill

Background: Children and young people (CYP) are at greater risk of serious mental health conditions resulting from exposure to long-term stressors such as the COVID-19 pandemic. In Canada, even prior to the pandemic, adolescents experienced challenges in accessing mental health services. These challenges are further exacerbated in rural areas. Access and delivery of mental health services in northern Ontario faces unique challenges related to the systemic social inequalities and shortage of health care providers which have worsened due to the pandemic. Primary Health Care (PHC) is often the only point of contact with the health care system for patients in rural and remote northern Ontario. Electronic medical records (EMR) data in PHC settings can be used to evaluate patterns of access and use of care delivery for health conditions, including mental health conditions.

Approach: PHC EMR data was used to assess the pattern of using PHC for depression and anxiety in CYP (age 10-24) by determining the prevalence of depression and anxiety pre-pandemic compared to post pandemic using prescription of antidepressant and anti-anxiety medications and billing data.

Results: Early results of this study point to a significant increase in the rate of both visits and medication prescription at 21 months post pandemic (P=0.004). Sex analysis further points to increased visits by female patients.

Conclusions: Using mental health services for anxiety and depression in PHC settings increased after pandemic in Northern Ontario in CYP especially in female patients.
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Why are Ontario family physicians retiring early during the COVID-19 pandemic?

Rachel Walsh, Deanna Telner, Debra Butt, Paul Krueger, Karen Fleming, Sarah MacDonald, Aakriti Pyakurel, Liisa Jaakkimainen

Background: Large numbers of family physicians are retiring during the COVID-19 pandemic, worsening the pre-existing family doctor shortage in Ontario. We aimed to determine which factors are contributing to family physicians' desire to retire earlier during the pandemic.

Approach: We administered two online surveys to Ontario family physicians during the 1st and 3rd waves of the pandemic (Apr-Jun 2020 and Mar-Jul 2021, respectively). We used logistic regression to determine if factors were associated with early retirement planning, while adjusting for age.

Results: There were 393 and 454 eligible responses to the 1st and 3rd wave survey, respectively. The proportion of respondents planning to retire early increased from 6.7% to 21.8% from the 1st to the 3rd wave. In the 3rd wave, respondents were more likely to want to retire early if they were over 50 years old (odds ratio (OR) 5.07, 95% confidence interval [2.33-12.30]), felt unable to handle work or non-clinical responsibilities (OR 4.47 [1.31-16.33], OR 2.95 [1.79-4.94], respectively), or felt infection control practices in clinic or obtaining personal protective equipment (PPE) needed improvement (OR 2.10 [1.12-3.89], OR 2.00 [1.16-3.43], respectively). Respondents were less likely to want to retire early if they felt their work was valued (OR 0.33 [0.14-0.73]), or if they felt able to provide good care (OR 0.35 [0.16-0.78]).

Conclusion: Supporting family physicians in their clinical and non-clinical roles, letting them know their work is valued, and supporting infection control practices in clinic and PPE procurement may help reduce the number of family physicians retiring prematurely. rachel.walsh@sunnybrook.ca

Who will be left behind? The anticipated impacts of an aging family physician workforce on primary care patients and physicians in Ontario

Kamila Premji, Michael E. Green, Shahriar Khan, Richard H. Glazier, Susan E. Schultz, Maria Mathews, Steve Nastos, Eliot Frymire, Bridget L. Ryan

Background: Concerns have been raised around the immediate and future supply of the comprehensive family physician workforce in Ontario.

Approach: To assist in primary care HHR planning in Ontario, we examined temporal practice trends among comprehensive family physicians (FPs) and the patients they serve. Using ICES health administrative datasets and a novel, validated algorithm for determining patient attachment to a FP, we conducted cross-sectional analyses of comprehensive FPs and their patients at three time points: 2008, 2013, 2019.

Results: Patient attachment to comprehensive FPs increased over time. The overall FP workforce grew, but the proportion of FPs practicing comprehensiveness declined from 77.2% (2008) to 70.7% (2019), with shifts into other/focused scopes of practice occurring across all physician age groups. Over time, an increasing proportion of the comprehensive FP workforce was near retirement age. Correspondingly, an increasing proportion of patients were attached to near-retirement comprehensive FPs. By 2019, 13.9% of comprehensive FPs were 65 years or older, corresponding to 1,695,126 patients. Over time, mean patient age increased, and near-retirement comprehensive FPs served markedly increasing numbers of medically and socially complex patients.

Conclusions: Primary care faces capacity challenges as physicians enter retirement and fewer choose to enter or remain in comprehensive practice. Simply growing the size of the FP workforce is unlikely to be sufficient to serve a growing and increasingly complex patient population over the near- and medium-term. Innovative solutions that improve efficiency and support at the practice-level, and in turn the appeal and sustainability of comprehensive practice, will be needed. kpremji2@uottawa.ca

Public health and primary health care collaboration experience during the COVID-19 pandemic in eight high-income countries

Q. Jane Zhao, Carnelle Lawes, Sara Willems, Dorien Vanden Bossche, Peter Decat, Sara Ares-Blanco, María Pilar Astier-Peña, Judith de Jong, Peter Groenewegen, Naoki Kondo, Madelon Kroneman, Daisuke Nishioka, Guri Rørtveit, Emmily Schaubroeck, Stefanie Stark, Andrew D. Pinto

BACKGROUND: The COVID-19 pandemic highlights the necessity for strong public health (PH) and primary health care (PHC) systems in times of crisis. PH and PHC systems, however, often act in parallel streams but rarely together. This study describes PH and PHC collaboration during the COVID-19 pandemic in eight high-income countries. APPROACH: In-depth case study reports were generated for each jurisdiction. Reports included PH and PHC actions during the pandemic and an evaluation of strengths and weaknesses. Expert content validation was conducted by internal country stakeholders. Thematic content analysis was conducted and a coding framework was developed. The study team discussed and reconciled discrepancies in themes until consensus was reached. RESULTS: Data was collected from eight high-income countries (Belgium, Canada, Germany, Italy, Japan, the Netherlands, Norway, and Spain) from March 2020 to July 2021. Three themes were identified. 1) Communication and amplification of PH messaging was paramount, though the degree to which this effort was coordinated between PH and PHC varied between jurisdictions, and with varying population-level outcomes. 2) Data and health information systems played a critical role; linkages between PH and PHC data, usually through newly-developed phone applications, facilitated collaboration and more efficient case management. 3) Health human resources were overwhelmed, with many staff redeployed and undertrained; new COVID-related roles were also created. CONCLUSIONS: Health system needs shifted dramatically in the COVID-19 pandemic. Our findings highlight three key lessons regarding PH and PHC collaboration from eight high-income countries. Future pandemic preparedness should focus on communication, data, and health human resources.

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Examining the work done by Interprofessional Healthcare Providers in primary care teams

Michelle Greiver, Kavita Mehta, Catherine Donnelly, Karen Tu, Morgan Slater, Kevin Samson, Ravninder Bahniwal, Chelsea Christie, Angela Ortigoza Bonilla, Renata Musa

Background: Interprofessional Healthcare Providers (IHPs) are key members of interprofessional primary care teams. However, IHPs do not bill OHIP; the use of administratively collected billing data limits the description of IHP services provided and consequently measurement of impact on health outcomes. We propose developing and validating algorithms using Electronic Medical Record (EMR) data for IHP services, enabling estimates of associations between services and patient outcomes.

Approach: This is a chart audit and validation study conducted using EMR data collected from Family Health Teams. Phase one will be the development of a chart abstraction manual. Phase two will be a chart audit using an electronic abstraction platform, including a pilot review of 100 charts from three different EMR applications. Visit records will be randomly selected, with oversampling of patients most likely to be seen by IHPs, including adults with multi-morbidity, diabetes, mental health conditions or polypharmacy and babies under the age of 19 months. Records will be labeled by IHP role, encounters done by an IHP, and type of encounter (in-office visit, phone, email, etc.). The pilot will inform sample size for a larger audit. Phase three will include the development of algorithms; the best performing algorithms will be selected and applied broadly.

Results: Once validated, our algorithms will allow measurement of work done by IHPs within team-based primary care.

Conclusions: We are developing and validating algorithms for IHP encounters. Information on IHP work within interprofessional teams can be used to inform planning for IHP resources in primary care.

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A framework to support the progressive implementation of integrated team-based care for the management of COPD in primary care settings: A collective case study

Madelyn daSilva, Shannon L. Sibbald, Vaidehi Misra Madonna Ferrone, Christopher Licskai

Background: In Ontario, there is consensus about the need for integrated, team-based care in primary care settings to help manage chronic conditions such as chronic obstructive pulmonary disease (COPD). However, there is limited understanding on how to support the spread of successful models; there is limited empirical evidence to support this process in chronic disease management. We studied the supporting and mitigating factors required to successfully implement and spread a model for COPD management in primary care, a process that we call progressive implementation.

Approach: We conducted a collective case study using an integrated knowledge translation approach. Data collection included interviews, living documents, and a focus group. Our study explored a team-based model of care for COPD known as Best Care COPD (BCC) that has been implemented in primary care settings across Southwestern Ontario. BCC is a quality improvement initiative that was developed to enhance the quality of care for patients with COPD.

Results: We identified mechanisms influencing the spread of BCC and categorized them as foundational, transformative, and enabling mechanisms across three different implementation phases. We developed a framework to inform the progressive implementation of integrated, team-based care for chronic disease management within primary care settings.

Conclusions: This study explores the implementation and spread of integrated team-based care in primary care settings. Despite using COPD as an exemplar, we believe the findings can be applied in other chronic disease contexts in primary care settings. We provide a framework to support progressive implementation of integrated team-based care for chronic diseases.

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Enhancing patient expertise in primary health care research in Ontario: PERC

Rebecca Ganann, Maggie MacNeil, Lorraine Bayliss, Joan Barker, Ron Beleno, Jennifer Boyle, Clare Cruickshank, Mary Huang, Caron Leid, Claire Ludwig, Vivian Ramsden, JoAnn Stans

Background: Patient-oriented research (POR) can inform primary health care (PHC) delivery to responsively align with the needs of Canadians. Ontario's Patient Expertise in Research Collaboration (PERC) centre aims to strengthen capacity in patient-engaged research in PHC in Ontario and beyond. PERC's Advisory Board is comprised of nine diverse patient partners and academic researchers with collective expertise in POR. This study describes PERC's co-designed activities to build awareness, provide strategic advice and mentorship, and create resources to support the PHC research community.

Approach: PERC engages in ongoing evaluation (via surveys, analyzing social media metrics, debriefing with patient partners) to refine our collaborative approaches and impacts.

Results: PERC employs a variety of strategies to enhance PHC capacity in POR. PERC provides strategic advice to PHC researchers on patient engagement approaches. PERC created a new website to share relevant resources. To profile patient partners' extensive expertise and reach new patients interested in PHC research, PERC's patient advisors and academic team collaboratively developed video scripts and produced videos for the website. Advisors co-facilitated a workshop mentoring PHC trainees on leading interdisciplinary POR teams. Advisors also worked as reviewers for the inaugural PERC/TUTOR-PHC Fellowships, offering advice on proposals to advance their POR competencies. Survey results suggest advisors are satisfied with their engagement with PERC. Web metrics indicate (predominantly Canadian) visitors are most interested in PERC's resources provided on PERC's site.

Conclusions: Diverse evaluation metrics suggest PERC's co-designed activities are advancing its mandate to enhance patient-oriented PHC research among researchers, patients and trainees in Canada.

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The impact of 'Care of the Elderly' certificates of added competence on family physician practice: Results from a pan-Canadian multiple case study

Rebecca Correia, Lawrence Grierson, Ilana Allice, Henry Siu, Alison Baker, Janelle Panday, Meredith Vanstone

Background: Family physicians serve an important role in the care of older adults, and have variable levels of training navigating this complex patient population. The Care of the Elderly (COE) Certificate of Added Competence (CAC) offered by The College of Family Physicians of Canada recognizes family physicians with advanced expertise in older adult healthcare. We explored how COE training and certification impacts primary care delivery to older patients.

Approach: We conducted a secondary analysis of multiple case study data to explore similarities and differences within and across cases. We defined cases as a collective of family physicians working within a defined group of patients in an interconnected community. We analyzed semi-structured interview transcripts (n=48) from six practice groups of family physicians across Canada. We used a conventional (unconstrained, inductive) content analysis approach to develop a conceptual framework.

Results: We identified similarities and differences in how COE family physicians function within their group practice and the broader healthcare system. In some cases, COE certifications increased patients' access to geriatric resources by reducing travel and wait times. Some physicians observed minimal changes in their role or group practice after earning the COE designation. While family physicians tended to highly value their CAC, this designation was differentially recognized by others.

Conclusions: Our findings highlight the impacts and limitations of COE training and certification, including an opportunity for COE family physicians to fill knowledge and practice gaps. COE family physicians are uniquely positioned to strengthen the health system's capacity to deliver specialized geriatric care. correirh@mcmaster.ca

Are sexual abuse histories associated with being under screened for cervical cancer among women living with HIV in Ontario?

Jessica Chan, Natasha Richmond, Catharine Chambers, Jennifer Gillis, Joanne Lindsay, Anita C. Benoit, Claire E Kendall, Abigail Kroch, Ramandip Grewal, Mona Loutfy, Ashley Mah, Kristen O'Brien, Gina Ogilvie, Janet Raboud, Anita Rachlis, Anna Yeung, Mark Yudin, Ann N Burchell

Background: Women who live with HIV are at greater risk for human papillomavirus (HPV) related cervical cancer than the general population. They also have a higher risk for experiencing sexual violence, which is a risk factor for being under screened. Our aim was to explore whether sexual abuse histories are associated with cervical cancer screening attendance among women with HIV in Ontario.

Approach: From July 2017 until January 2020, questions about cervical cancer screening were administered by interviewers to participants of the Ontario HIV Treatment Network Cohort Study, a multi-site clinical cohort of people living with HIV. We calculated the proportion of women who were up-to-date with Papanicolaou screening (screened in last three years), versus under screened (last screened more than three years ago, never screened, or uncertain). Next, we compared screening according to reported childhood sexual abuse (CSA) and/or intimate partner violence (IPV) using chi-squared tests.

Results: Among 350 women, reports of sexual abuse were: any CSA (32.5%), any IPV (33.2%), either CSA or IPV (45.8%). Most (82.7%) reported a Pap test within the past 3 years. The proportion of women screened in the past 3 years did not significantly differ according to their sexual abuse history: either CSA and IPV (82.9%), CSA only (79.7%), IPV only (81.7%), neither CSA nor IPV (84.7%) (P=0.71).

Conclusions: Although we did not observe fewer screening attendance for women with HIV with sexual abuse histories, clinicians should provide Pap screening from a trauma-informed approach given the prevalence of sexual abuse in this population. Jessica.chan@medportal.ca

Development of a multi-factorial data quality score for primary care electronic medical records

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Background: Current research regarding Canadian primary care electronic medical record data suggests the quality of data is variable. For researchers who wish to use EMR data, it is important to have a method of evaluating data quality for research purposes that is applicable to multiple EMR datasets. There is currently no single scoring system for assessing the quality of primary care EMR data.

Approach: In this study, we developed and tested a composite score representing data quality using previously-validated measures that assessed the data quality domains of completeness, correctness, and currency. Composite data quality scores were created by generating values representing data quality for different aspects within each of the data quality domains and then combining these values using the arithmetic mean. Data used in building this scoring system were obtained from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN).

Results: Domain level scores for the data quality domains of completeness, correctness, and currency and overarching composite data quality scores were created. The reliability of the scores was tested by splitting the data randomly into two groups and repeating the scoring procedure. The score was found to give reliable results.

Conclusions: This scoring system could be used by researchers to examine EMR data quality and compare data quality across data sources. The scoring system has been developed as a starting point for researchers looking to evaluate EMR data quality with the intent that data quality assessment can become a routine element of research that uses primary care EMR data sources.

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Capturing pregnancy history in the electronic medical record: An opportunity to improve women's future cardiovascular health

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Background: Women who experience pregnancy complications have an increased risk of cardiovascular disease (CVD). Pregnancy complications are often not captured in family physicians' electronic medical records (EMRs). Due to this lack of documentation, effective prevention strategies that exist for CVD are often missed in this population. We designed and evaluated an EMR-based feature to support family physicians in documenting pregnancy complications and initiating preventative care for patients with increased CVD risk.

Approach: Needs assessment: 6 family physicians at Sunnybrook reported on their current EMR documentation practices.

Discovery: 10 family physicians, 2 technical experts at Sunnybrook and Toronto Western Hospital, and 1 external technical expert were interviewed to identify challenges and opportunities for designing an EMR tool within the Telus PS Suite.

Design and Evaluation: Workflows and reminder pathways were designed. Structured feedback was elicited from 8 physicians to evaluate the usability and feasibility of the proposed workflows.

Results: Altering workflows to take advantage of existing EMR tools was deemed to be more feasible than introducing a new tool within the EMR. We propose several workflow scenarios to improve physician documentation of obstetrical history in the EMR, and to promote follow-up and education for CVD prevention among patients and providers.

Conclusions: We have provided well-designed EMR workflow scenarios that have potential to bridge care transitions for pregnant women and prevent chronic disease for a large population of at-risk patients. These workflows will be able to incorporate the incoming guidelines for prevention of CVD in patients who have experienced pregnancy complications.

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Virtual healthcare services in Canada: Digital trails, de-identified data and privacy implications

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Background: Commercial virtual care expanded with the Covid-19 pandemic, providing rapid access to medical services. The companies providing the services gather many forms of data on patients from personal health information to user information (e.g., internet protocol (IP) addresses). Our research objective was to examine the direct-to-patient commercial virtual care industry in Canada, focusing on privacy-related ethical implications.

Approach: We conducted a theory-informed thematic analysis on the data collected from 18 semi-structured interviews with individuals working in the Canadian commercial virtual healthcare industry and from 11 relevant policy documents.

Results: We identified 62 platforms owned by 55 companies operating in Canada. Through our analysis, we developed 4 major themes. First, commercial virtual care platforms were positioned as solving problems in Canadian healthcare systems. Second, companies distinguished between different types of data collected through the platforms, enabling widespread commercial use and sharing of de-identified health data, registration information and user data. Third, for the companies, “data was the name of the game.” They used the data for business purposes such as developing new products and increasing the uptake of business partners’ products by analyzing and adjusting patient care pathways. Last, consent processes to gain access to health data were described as problematic, particularly because patients were not able to opt-out of commercial uses of their data.

Conclusions: Commercial virtual care in Canada is likely to lead to widespread commercial use of health data, enabling surveillance, and presenting risks to privacy, autonomy and health outcomes. These risks are likely to disproportionately affect structurally marginalized groups and communities. Sheryl.spithoff@wchospital.ca

“Can you hear me now?” An exploration of communication quality in virtual primary care encounters for patients with intellectual and developmental disabilities

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Background: High quality communication is central to effective primary care. The COVID-19 pandemic led to a dramatic increase in virtual primary care and little is known about how this may affect communication quality. This study explored how the use of virtual modalities (including phone and video) affects communication for patients with intellectual and developmental disabilities (IDD), a group who may experience additional communication challenges.

Approach: Semi-structured interviews were conducted with 38 participants in Ontario, Canada between March and November 2021. A maximum variation sampling strategy was used to achieve a diverse sample including 11 adults with IDD, 13 family caregivers, 5 IDD support staff and 9 primary care physicians. Both inductive and deductive approaches were used to code the data and synthesize higher level themes.

Results: For some people with IDD, virtual care hindered effective communication. For others, it improved communication. Participants discussed the impact of virtual care on four elements of communication: (1) patient ability to hear other participants and have the time and space to speak; (2) whether the technology facilitated nonverbal communication; (3) patient ability to form trusting relationships with their provider; (4) patient engagement in the appointment. Video offered some advantages over telephone.

Conclusions: There are circumstances in which virtual delivery can improve communication for patients with IDD, but there are challenges to achieving high quality patient-provider communication over phone and video. A flexible patient-centred approach is needed that includes in-person, phone and video options for care.

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The progress and maturity of Ontario Health Teams: An environmental scan

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Background: Ontario Health Teams (OHTs) are groups of providers and organizations that deliver coordinated care to a population. The model was introduced in 2019 to improve communication and transitions between different care settings. As of August 2022, 51 OHTs have been approved, but their progress in each region is unknown.

Approach: We performed an environmental scan of publicly available online resources (OHT websites and Google results) for 3 OHTs from each of the 4 approval cohorts (12 total) to examine the progress of OHTs with a focus on their maturity and program outcomes. A thematic analysis was conducted to identify the OHTs' progress using the Community Coalition Action Theory (CCAT) Framework, which depicts health coalition development along a continuum that includes formation, maintenance, and institutionalization.

Results: A preliminary analysis of 12 OHTs indicates that there is significant within- and cross-cohort variability of public transparency of programs and outcomes and placement along the CCAT continuum. The differences in OHT website content make it difficult to assess their progress and maturity uniformly.

Conclusions: This is research in progress. Our next steps are to apply web-scraping and Natural Language Processing techniques to identify the location of policy documents and examine large volumes of text data that are publicly available online, to classify them automatically, and to extract relevant information for organizing them using the CCAT Framework. Summarization of such information can aid in informing OHTs, providers, patients, and policy.

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Virtual care use prior to emergency department admissions during a stable COVID-19 period in Ontario, Canada

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Background: The increased use of telemedicine during the pandemic has led to concerns about increased emergency department (ED) visits and outpatient services before ED admissions. We examined the frequency of telemedicine use prior to ED admissions and characterized the patients with prior telemedicine use and the physicians who provided these visits.

Approach: We conducted a retrospective, population-based, cross-sectional analysis using linked health administrative data in Ontario, Canada to identify patients who had an ED visit between July 1 and September 30, 2021 and patients with an ED visits in 2019. We grouped patients based on their use of outpatient services in the 7 days prior to admission and reported on their sociodemographic and healthcare utilization characteristics.

Results: There were 1,080,334 ED admissions in 2020 vs. 1,113,230 in 2019. In 2021, 74% of these visits had no prior outpatient visits (virtual or in-person) within 7 days of admission, compared to 75% in 2019. Only 3% had both virtual and in-person visits in the 7 days prior to ED admission. Patients with prior virtual care use were more likely to be hospitalized than those without any outpatient care (13% vs 7.7.%).

Conclusions: The net amount of ED admissions and outpatient care prior to admission remained the same over a period of the COVID-19 pandemic when cases were relatively stable. Virtual care seems to be able to appropriately triage patients to the ED and may even prove beneficial for diverting patients away from the ED when an ED visit is not appropriate. vess.stamenova@wchospital.ca

The impact of primary care attachment patterns on COVID-19 vaccination uptake in Ontario

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Background: In Ontario, Canada, primary care providers are accessible and trusted information sources for patients, providing an indispensable service to the COVID-19 vaccination efforts. The purpose of the present study is to explore the association between primary care attachment and patient enrolment model (PEM), and those who remain unvaccinated among people aged 12 and older in Ontario using administrative health service records prior to September 1, 2021. Approach: We applied a validated algorithm to identify patient attachment status of people aged 12 years and older receiving healthcare in Ontario (n = 12,829,049). Attachment status was first dichotomized to attached and uncertainly attached to a primary care provider. Patients attached to primary care were further categorized by attachment to a patient enrolment model (PEM). Vaccination status of individuals was obtained through the linkage of the COVAXON dataset. Results: One-fifth (20.2%) of patients attached to primary care were unvaccinated (i.e., 0 doses of any COVID-19 vaccine); among attached patients, the highest proportion of unvaccinated patients were enrolled in Enhanced Fee-For-Service (EFFS) PEMs (37%). Of patients attached to EFFS models, 22% were unvaccinated; of patients attached to blended capitation models, 19% were unvaccinated; of patients attached to family health teams, 19% of patients were unvaccinated. Two-fifths (39.1%) of patients uncertainly attached to primary care remained unvaccinated. Conclusions: Our findings suggest primary care attachment is associated with increased vaccination uptake. Our findings can assist in guiding government investment in public health campaigns to optimize vaccination of the Ontario population.

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Spatial distribution of OHT patients and their geographic accessibility to hospitals

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Background. Ontario's healthcare delivery system is undergoing a major reorganization, moving from 14 LHINs to (currently) 51 Ontario Health Teams (OHT). Each OHT is comprised of one or more hospitals and community practices. Patient attribution to an OHT is based on their attachment to a primary care provider (PCP) and the PCP's referral patterns to hospital care. Understanding of the distribution of each OHT's patients and their geographic accessibility to hospital is a crucial element of a well-informed health services planning and evaluations.

Approach. We have used various mapping techniques and spatial analysis defining areas of the closest travel time proximity to OHT's hospitals to better understand the potential demands for, and gaps in OHT's healthcare services provision.

Results. Our maps and analyses showed an uneven pattern of patient distribution across OHTs, especially in rural vs. urban settings. In rural OHTs, patients typically cluster in areas around the main hospital. These areas can be quite large but are still distinct from other OHTs. OHTs in urban areas, however, show substantial geographic overlaps of their patients. In OHTs consisting of primary and secondary care hospitals, patients are usually clustered around the main hospital location. For OHTs with tertiary care hospitals, the distribution of patients is quite spread out throughout the region or even the province.

Conclusions. The results show complex primary care and health system attribution within different OHTs. This knowledge is essential to better understanding the health care needs of OHT populations and can be used to improve healthcare integration, provision, and access.

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Asynchronous Secure Messaging: A current state analysis across five Canadian provinces

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Background: Asynchronous secure messaging (ASM) between patients and primary care providers has significant potential to improve access and quality of care. Provinces have taken different approaches to ASM implementation, remuneration, and support. This prompted us to explore the current state of ASM in five provinces, to provide recommendations for future efforts across Canada.

Approach: We conducted 11 semi-structured interviews with provincial level policy makers and virtual care experts from Alberta, British Columbia, Nova Scotia, Ontario and Quebec. Elements of the 'Nonadoption, Abandonment, Scale-up, Spread, and Sustainability Framework'and functional and normative capabilities specific to integrated primary care were used as sensitizing concepts to analyze how clinical, professional, organizational and system integration may be achieved through virtual health technologies. Concepts for data categorization included value proposition, data governance, technology procurement and remuneration.

Results: Provincial ASM initiatives differed in terms of scale, duration, remuneration and levels of integration. The existence of ASM billing codes did not seem sufficient to encourage uptake. Government support at multiple levels was acknowledged to be crucial for effective ASM rollout. Interoperability was also a challenge, with some emphasizing the importance of a standardized interface and a 'Digital Front Door' for users to initiate communication and be triaged.

Conclusions: Provinces are rolling out different virtual care programs at different speeds, creating opportunities for shared learning. By comparing the key features of programs and differences in context, this study demonstrates the value of standardization and coordinated efforts across multiple levels, alongside suitable remuneration, for optimal ASM uptake in primary care. miria.koshy@wchospital.ca

"I need a family doctor!! How can I find one?" – Docmapper.ca: An interactive map to support (language-concordant) access to primary care

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Background: Evidence indicates that access and continuity of primary care are key to population health. Furthermore, mounting evidence shows that language-concordant care – care in a patient's preferred language – improves patient outcomes. Yet many Ontarians do not have a regular family doctor, and existing online official physician lists only enable searches by physician name or city, making it hard to find local resources.

Approach: We produced interactive maps locating community-based family physicians practicing in Ottawa and Renfrew County using publicly available data from the College of Physicians and Surgeons of Ontario (CPSO), and Google's geocoding API. We exclude family physicians working in facilities such as long-term care, hospitals, etc.

Results: www.docmapper.ca – www.trouvezenmedecin.ca in French – is an interactive online map that enables patients and other users to search for community-based family physicians practicing in the Ottawa area and Renfrew County. Users can search by location and physician language. Hovering over a "pin" representing a physician office displays contact information. Limitations include the lack of information about which physicians are taking on new patients, and the need for the maps to be updated to reflect changing physician demographics.

Conclusions: Docmapper provides a novel interactive means for patients and other users to find nearby family physicians who speak their preferred language. Currently, it covers Ottawa and Renfrew County, but could be expanded to other regions. As such, www.docmapper.ca / www.trouvezunmedecin.ca can help support access to language-concordant primary care in Ontario and beyond. lbjerre@uottawa.ca

An intersectional approach to examining access to primary care

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Background: Conventionally, the roles of social identities and positions in having a primary care provider are treated as independent and additive. Intersectionality theory allows us to reflect the interdependent and intersecting realities of an individual's social identity/position.

Approach: A quantitative intersectionality approach using multilevel analysis of individual heterogeneity and discriminatory accuracy examined whether respondents to the Canadian Community Health Survey (2015-2019) had a primary care provider based on membership in intersectional strata (constructed using gender, age, immigration status, race, and income). Measures of discriminatory accuracy (i.e., Intra-class correlation coefficient, Proportional change in variance) were obtained for the null, partially-adjusted, and fully adjusted models. For each stratum, predicted probabilities based on both intersectional and additive methods, and their difference were calculated.

Results: Membership in these intersectional strata could, to a very good extent, explain individual variation in whether one has/does not have a primary care provider (Intra-class correlation coefficient: 23%). Not all between-stratum variance in this outcome could be explained by the additive effects of gender, age, immigration status, race, and income (remaining Intra-class correlation coefficient: 6%). For 40 intersectional strata, the predicted probability obtained through intersectional methods differed from that obtained through additive methods. Three of these intersectional strata had negative differences (i.e., the predicted probability based on the additive method was higher than that based on the intersectional method).

Conclusions: There is a need to adopt an intersectional lens to develop research tools, conduct quantitative research, and create targeted interventions to improve primary care access. jhe2026@meds.uwo.ca

Exploring neighbourhood characteristics to support access to primary care for older adults

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Background: Naturally occurring retirement communities (NORCs) are unplanned communities with a high proportion of older residents. Mapping NORCs and understanding their unique sociodemographic characteristics and health utilization patterns can assist primary care teams in supporting older adults by identifying geographical areas of high service need and, developing neighborhood-based programs. The objectives are to: a) identify NORCs across Ontario and describe their sociodemographic characteristic, and b) examine the proportion of older adults living in NORCs who are enrolled in team-based models of primary care Ontario.

Approach: Observational design. Descriptive analysis identifying proportions of communities in the province of Ontario, Canada with ≥40% of persons with ≥55 years of age (NORCs) and the sociodemographic characteristics, health utilization and primary care enrollment models were displayed in a series of maps. Spatial analysis maps offered a visual presentation of provincial patterns of high density of older adults.

Results: Eastern and Northern regions had the greatest number of NORCs. The majority of NORCs had high proportion of older adults enrolled in team-based models of primary care. Patterns of health use and frailty varied across the province.

Conclusions: This is the first known study to map NORCs in Ontario and highlights the complex and varied patterns of health use and primary care enrollment. catherine.donnelly@queensu.ca

Machine learning, bias, and risk factors: Implications for primary care

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Background: Machine learning (ML) has received much attention for its potential to automate tasks and improve accuracy in clinical care and preclinical research. Less attention has been placed on the uptake of ML in population and public health, and the downstream implications for primary care: in particular, the potential for biases to be reproduced and amplified during model development, training, and implementation.

Methods: We conducted a scoping review to identify studies that use ML to address population and public health challenges, focused on the most common risk factors for chronic disease: tobacco use, problematic alcohol use, unhealthy eating, physical activity, and psychological stress. Among included studies, we assessed the extent to which the potential for bias was considered, and identified strategies used for mitigation.

Results: Among studies that use ML to examine risk factors, few took a population or public health approach. ML approaches were applied to tobacco and alcohol use more commonly than other risk factors. Most studies that met our inclusion criteria did not explicitly discuss bias, or did so only in a perfunctory way – for example, by including socio-demographic variables without discussion of their implications for model performance.

Conclusions: As machine learning becomes more prevalent, assessment and mitigation of bias will be critical to ensuring health equity. Guidelines for knowledge users, including primary care practitioners, will be essential. Our research will contribute to guidelines that will enable primary care practitioners and health system leaders to ensure ML-derived evidence is appropriate to the needs of the populations they serve.

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Abstracts: Poster Presentations

Identifying the impact primary care physicians have on the appropriateness of outpatient antibiotic prescribing for individuals with Spinal Cord Injury

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Background: Primary care providers (PCPs) are intended to be the main point of contact for disease prevention, illness diagnoses, and medical treatment for individuals with Spinal Cord Injuries (SCI). As such, PCPs may be tasked with prescribing antibiotics for individuals with SCI, who are frequent antibiotic users due to recurrent infections. However, little is known about outpatient antibiotic prescribing for individuals with SCI. The purpose of this study was to identify patterns of outpatient antibiotic prescribing in individuals with SCI.

Approach: A retrospective cohort study using linked primary care electronic medical records (EMR) and health administrative databases to describe antibiotic prescribing for 432 individuals with SCI from January 1 ,2013 to December 31, 2015. Regression analyses were conducted to determine if any patient and/or physician factors were associated with prescription factors.

Results: For individuals with SCI, 58.9% of total outpatient antibiotics were prescribed by physicians in their rostered-primary care practice. Late-career PCPs prescribe longer antibiotic prescriptions durations compared to early-career PCPs. Early-career PCPs were significantly more likely to order a urine culture when prescribing an antibiotic to treat urinary tract infections (UTIs) for individuals with SCI. In addition, we also found male physicians and international medical graduates were more likely to prescribe fluoroquinolone antibiotics for UTIs, rather than nitrofurantoin antibiotics.

Conclusions: PCPs are a key prescribing of outpatient antibiotics for individuals with SCI. Furthermore, PCPs demographic and training characteristics may play an important role in antibiotic prescribing and testing patterns, which suggests interventions targeting prescribers may be needed. arani.senthinathan@utoronto.ca

COVID-19, health and social care screening in a community paramedic wellness clinic linking to primary care for older adults residing in social housing settings: A CP@clinic adaptation

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1. Background

COVID-19 has changed healthcare access and delivery, disproportionately impacting older adults. Community Paramedicine at Clinic (CP@clinic) is a disease prevention, management, and health promotion program for community dwelling low-income older adults, linking to primary care. We investigated the telecare adaptation of CP@clinic during the pandemic.

2. Approach

Community paramedics delivered CP@clinic telephone visits to residents of 36 social housing buildings. They conducted screening for COVID-19, emergency preparedness, and social health factors. Paramedics provided education on staying safe, self-isolating, self-monitoring, and preparing for pandemic situations using governmental educational infographics. Descriptive analysis was conducted for each assessment completed between March and June 2020. Thematic analysis of paramedic documentation was conducted to identify common themes and temporal trends.

3. Results

The 191 participants had at least one telephone visit and 34.6% had ≥2 visits; 82.8% were aged 65+, 30.9% had internet access, and 57.9% had cable TV (limiting exposure to COVID-19 information). CP@clinic program infrastructure provided a platform for paramedics to easily contact many vulnerable older adults to screen for COVID-19, educate on safe practices, and facilitate primary health and social care access. One-quarter of participants screened positive for social isolation, which was echoed in the thematic analysis. Paramedics described participants taking COVID-19 precautions after receiving telephone-delivered education.

4. Conclusions

Community paramedics were able to support vulnerable older adults living in social housing through the unique CP@clinic adaptation. This innovative program delivery increased vulnerable populations' access to primary healthcare services and public health information at a time of great health need. diash@mcmaster.ca

Primary care physician engagement in health system transformation: A review of the literature

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Background: Ontario is undergoing healthcare transformation with the introduction of Ontario Health Teams (OHTs). Primary care physician engagement (PE) is critical to the success of OHTs. In response to the need for a coordinated sector approach, a group of physicians in Southwestern Ontario formed a primary care coalition: London-Middlesex Primary Care Alliance (LMPCA). This grassroots alliance supports unified PE within the health system reform. To achieve our research aim (a narrative LMPCA development), we first needed to explore existing literature to understand more about PE (what it means, how to do it well, how to evaluate it) in health system reform.

Approach: We conducted a broad literature search in PubMed and Google Scholar using keywords: "physician engagement", "primary care", "health systems", and "reform". Additionally, we forward-searched foundational and seminal articles, hand-searched websites, key journals, and references of articles. Articles that met our search criteria were categorized and analyzed to uncover themes and gaps.

Results: Results indicate that greater levels of PE can lead to improved primary care performance and efficacy. Engagement in primary care settings has been facilitated both top-down and bottom-up; however, empirical evidence on bottom-up approaches is limited. Three overarching themes were evident: lack of physician voice, insufficient renumeration, and unsuitable strategies (e.g., alternative activities during clinical hours).

Conclusion: More research is needed to explore how to engage primary care physicians in a more meaningful way. Our next step is to conduct a case study exploring PE within OHTs through a rich description of the LMPCA development. ajoshi52@uwo.ca

Building evidence towards health information technology maturity in Ontario's long-term care homes

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Background: The rapidly ageing Canadian population is expected to place long-term care (LTC) homes under increasing pressure. Health information technology (HIT) maturity can improve the quality, safety, and efficiency of care in numerous clinical settings including LTC. However, the level of HIT maturity in Ontario's LTC homes is unknown. Our aim is to evaluate the level of HIT maturity in Ontario's LTC homes.

Approach: We will use a cross-sectional design to investigate the level of HIT maturity in Ontario's LTC homes. HIT maturity is defined in a series of seven stages from no electronic health records (stage 0) to data generated by residents to support self-management (stage 6). HIT maturity will be assessed with the LTC HIT Maturity Instrument, a validated survey examining HIT capabilities, the extent of HIT use, and degree of internal/external HIT integration across the domains of resident care, clinical support, and administrative activities. All LTC homes in Ontario will be invited to participate. Analyses will consist of descriptive statistics characterizing HIT maturity across LTC homes and inferential statistics to examine the association between key facility-level characteristics (size, ownership, rurality) and HIT maturity.

Results: We anticipate beginning survey dissemination in 2023.

Conclusions: We have adopted the LTC HIT Maturity survey instrument and plan to conduct a cross-sectional province-wide assessment – the first of its kind in Canada. Understanding the current state of HIT maturity in Ontario's LTC homes will be fundamental to harnessing the potential of technology in the sector and measuring its impact on resident care. rhaki019@uottawa.ca

Sexual health promotion for sexual and gender minorities in primary care: Preliminary results of a scoping review

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Background: Sexual and gender minorities (SGM) face health disparities including discrimination, barriers to care, and higher rates of negative health outcomes including sexually transmitted infections (STI). Primary care is well-suited to positively influence the sexual health of SGM. Our aim was to synthesize the evidence for sexual health promotion interventions in primary care and identify areas of priority, improvement, and future research.

Approach: We conducted a scoping review by searching nine databases between 01/2000-05/2022 with additional hand-searching of grey literature. We included articles if they focused on SGM aged 12+ years and if the intervention promoted sexual health in the primary care setting in economically developed countries. Two reviewers independently screened publications using Covidence. Extracted data included setting, aims, populations, and results. The protocol is registered on the Open Science Framework Registries (https://doi.org/10.17605/OSF.IO/X5R47).

Results: 116/4,474 publications met the inclusion criteria and were included in the synthesis. The majority included content on HIV prevention and care (n=41), particularly Pre-Exposure Prophylaxis (PrEP) (n=36), and bacterial STI testing (n=22), with fewer examining viral STIs including vaccination (n=7), or gender-affirming care (n=2). 106 papers included gay, bisexual, or other men who have sex with men (GBM), and only 13 addressed racialized populations.

Conclusions: Published sexual health promotion interventions largely focus on biomedical aspects such as uptake and adherence of HIV PrEP, and interventions addressing non-GBM and racialized communities are scarce. Next steps include analysis of publications by theme, and using the Gender-based Analysis Plus framework to reorganize and summarize the results. anna.yeung@unityhealth.to

Leveraging Primary care Ontario Practice based Learning and Research (POPLAR) Network to Improve Quality in Primary Care: The SPIDER study

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Background: Polypharmacy and Potentially Inappropriate Prescriptions (PIPs) increases risk of poor health, reduced quality of life, lower physician satisfaction and high system cost. 25% of Canadian seniors take ≥ 10 medications annually, and amongst these, 75% have at least 1 PIP. Approach: We established a Structured Process Informed by Data Evidence and Research (SPIDER) to support quality improvement (QI) in primary care practices. We are studying SPIDER in a randomized controlled trial across Canada to reduce PIPs in individuals 65 and older with polypharmacy. Intervention arm practices participate in Learning Collaboratives, receive support of a QI coach, and are given data on the PIPs prevalence in their practice. Primary care Ontario Practice based Learning and Research (POPLAR) Network, a coalition of seven practice-based learning and research networks has centralized and standardized the SPIDER process to enhance efficiency and potential for impact. POPLAR securely collects and de-identifies EMR data to support practices in delivering optimal care and strengthen practice-based clinical research and QI processes. Results: In this presentation, we will demonstrate how POPLAR can be used to support QI in primary care practices by describing how it was leveraged for SPIDER's study conduct. An algorithm was developed to extract, clean, and standardize data centrally. Central data management and reporting mechanisms were established. Conclusion: The centralized governance structure of POPLAR has allowed for 1) standardized EMR data collection, cleaning, and reporting, 2) increase in the ability of a QI to support geographically distributed practices, and 3) wider recruitment at the provincial level. SDahrouge@bruyere.org

A qualitative study on the relational, cultural and communications practices to achieve Primary Care integration in Alberta, Canada

Myles Leslie, Raad Fadaak, Nicole Pinto

Background: Health service integration has been a global policy goal for decades. Specifically, primary care (PC) integration into health systems and social services has received much attention, with the goal of delivering Primary Health Care as defined by the WHO. With much research focused on what should be done for integration to occur, considerably less has discussed how to make this possible. Values such as establishing pro-integration culture, fostering inter-organisational relationships and open communication have been identified as key components to successful integration. How to enact these values is less certain. Our research examines specific practices and facilitators of PC integration into Alberta's COVID-19 response. While our case study is grounded in a specific experience, we highlight generalisable lessons for doing integration that transcend context.

Approach: Semi-structured interviews were conducted with stakeholders directly involved in Alberta's pandemic response. Of 127 interviews, a subset of 10 were reserved to explore how PC integration was achieved at different stages of the pandemic. Inductive coding identified key behaviours or activities that operationalised the broader concepts of culture, inter-organisational relationships, and open communication.

Results: Key ways of achieving integration include: enacting attitudes and commitments to shared cultural values supporting integration; following through, proving good intent, and persevering to nurture relationships; and communicating bidirectionally through formal and informal channels.

Conclusions: We present novel findings on how PC integration is achieved through behaviours and expressions of values. Those looking to achieve PC integration may consider how to adapt the specific ways of operationalising cultural, relationships, and communication that we describe. myles.leslie@ucalgary.ca

Identifying social determinants of health in primary care electronic medical record (EMR) data

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1. Background: Understanding social determinants of health (SDoH) is critical for addressing health inequities and predicting health service use. However, primary care teams and decision makers do not have consistent or comprehensive access to most SDoH information. The widespread use of electronic medical records (EMR) in primary care is a potential source of rich data that can overcome limitations of primary data collection. Our objective is to evaluate several methods to extract information about patients' SDoH and social needs from EMR data.

2. Approach: De-identified EMR data from the St. Michael's Hospital Academic Family Health Team was used (N=17,139), including patient-reported responses to a health equity questionnaire administered during family health team visits since 2013. A pattern-matching strategy was constructed using text terms and codes derived from expert knowledge, data exploration, research literature and Unified Medical Language System (UMLS) vocabularies. Search algorithms were applied to data in the EMR, which included progress notes, patient demographics, appointments, billing and health conditions. The results of the search were compared to the patient-reported SDoH outcomes.

3. Results: The results of the pattern-matching method will be presented with relevant validity metrics (i.e., sensitivity, specificity, PPV, NPV). Preliminary findings indicate gender identity is classified with high accuracy (98%) and housing instability with reasonable accuracy (89%). Immigrant status and income insecurity were less accurately identified (60% and 69%, respectively).

4. Conclusion: Pattern-matching may provide a relatively simple way to identify SDoH information. The next phase will evaluate machine learning and natural language processing methods to improve classification accuracy. stephanie.garies@unityhealth.to

Improving folic acid counselling within primary care

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BACKGROUND: Neural tube defects are one of the most common major congenital malformations of the central nervous system. The current recommendations from the Canadian Taskforce on Preventative Health Care and the Society for Obstetrics and Gynecology (SOGC) support routine folic acid supplementation in all women of childbearing age with preserved fertility for early prevention of neural tube defects. Our objective was to increase how often health care providers at our practice, Stonechurch Family Health Center (SFHC), provide counselling on folic acid initiation to female patients aged 20-40 by 10% from the current baseline.

APPROACH: An educational session on folic acid guidelines was held for all health care providers involved in reproductive and preventative health visits. An electronic medical record (EMR) template was introduced to facilitate counselling. Pre and Post surveys were distributed to evaluate participants in five key domains: knowledge of guidelines, practices around counselling, comfort with risk stratification and prescribing, and EMR template use.

RESULTS: Using paired t-tests it was determined that there was a statistically significant difference between pre and post-education session responses in all domains. An average of responses addressing counselling practices demonstrated a 19% increase in intent to counsel, and a 54% increase in intent to use the counselling template.

CONCLUSIONS: By increasing awareness and education about the importance of folic acid counselling, this study was able to achieve an improvement in anticipated folic acid patient counselling. kholoud.ayesh@medportal.ca

The impact of funding models on the integration of registered nurses in primary health care teams

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Background: Primary health reforms in Canada have introduced various funding models designed to promote inter-professional teams. Despite the recognition that appropriate funding models are critical to support collaborative primary health care teams, few studies have described these funding models in relation to the roles and functions of non-physician health care providers. We are interested in investigating the impact of funding models on the integration of Registered Nurses in primary healthcare (i.e., family practice nurses, FP-RNs).

Approach: The project consists of three studies: the funding model analysis, the case studies, and the survey of FP-RNs. In the Funding Model Analysis, we will identify and classify funding models used to include FP-RNs in primary health care settings across Canada. In the Case Studies, we will conduct qualitative interviews with FP-RNs, family physicians and administrators and ask FP-RNs to complete activity logs in Ontario, British Columbia, Nova Scotia, and Quebec. Finally, we will conduct a national, cross-sectional survey to FP-RNs to inform funding models, nurse work activities, and team functions.

Results: The funding model analysis is underway. Presently, we are recruiting sites for the Case Studies in Ontario where family physicians work with one or more Registered Nurses. Participants may be compensated.

Conclusions: Findings will help provincial governments structure funding models that best optimize the roles of FP-RNs and realize benefits from team-based care. The project informs the training of the FP-RNs and contributes to ongoing efforts to evaluate the integration of FP-RNs and improve primary health care in Canada. jxiao227@uwo.ca

Implementing social prescribing in primary health care

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Background: According to the Social Prescribing Network, social prescribing is a means of enabling healthcare professionals to refer patients to a link worker, to co-design a non-clinical social prescription to improve their health and wellbeing. Quest Community Health Centre (CHC) supports individuals experiencing social, economic, and cultural barriers by providing primary health care services and promoting wellness, community, and social justice. Upon conducting a Social Prescribing Client Survey, it became clear to Quest CHC that clients want and need social prescribing. The aim of this work was to implement social prescribing at Quest CHC. Approach: Drawing on the Social Prescribing Guidebook from the Alliance for Healthier Communities, team members worked together to build the infrastructure for social prescribing. They created a social prescribing process map, developed a social prescription pad for health care providers, created a social prescribing menu for clients and link workers, developed an evaluation plan, worked with data experts to establish social prescribing documentation in the EMR, conducted social prescribing training sessions for staff members, including separate sessions for health care providers and link workers, and held a social prescribing launch session for clients. Results: Team members successfully implemented social prescribing at Quest CHC. The Social Prescribing Guidebook played a crucial role in guiding this work. Using quality improvement techniques, improvements will be made to the social prescribing pathway over time. Conclusions: With social prescribing gaining momentum across Canada, it is anticipated that this work will help to advance the evidence base on social prescribing in Canada. caitlin.muhl@queensu.ca

Developing an Audit and Feedback dashboard for family physicians: A user-centered design process

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Background: Audit and Feedback (A&F), the summary and provision of clinical performance data, is a popular quality improvement strategy. We have developed an interactive web-based dashboard that uses data from the practice electronic medical record to help physicians identify gaps in care and act. In order to maximise the impact of A&F, we undertook a design process to consider the needs and goals of clinicians.

Approach: Our design process included (1) Prototype development based on A&F theory and input from clinical improvement leaders; (2) a co-creation workshop with family physician quality improvement leaders to develop personas (i.e., fictional characters that represent an archetype character); (3) user-centered interviews with family physicians to learn about the physician's reactions to the dashboard.

Results: Our persona workshop produced four user personas: Dr. Skeptic, Frazzled Physician, Eager Implementer, Sidney Big Wig. Using personas facilitated empathy during the design process. Our interviews found that: (1) physicians were interested in how they compare with peers; however if performance was above average, they were not motivated to improve even if gaps in care remained; (2) Burnout levels are high; physicians are trying to catch up on missed care during the pandemic, and less motivated to act on the data; (3) Important features included integration within the EMR, and up-to-date and accurate data.

Conclusions: Successful design and implementation of an A&F dashboard should address physicians' data skepticism, present data in a way that spurs action, and support physicians to have time and capacity to engage in quality improvement work. Jennifer.shuldiner@wchospital.ca

The impact of consecutive shifts on emergency physician quality of care

Jessica Saini, Shira Brown, Stephenson Strobel

Background: Physicians have demanding schedules and are at high risk of burning out. This has the potential to impact patient outcomes. A body of literature has documented the effects of shortening daily physician work hours on outcomes. However, little attention has been paid to consecutive shifts scheduling. How many consecutive days of work is too much for a physician?

Approach: We examine consecutive shifts scheduling at five emergency department sites in the Niagara Health system. We assess impacts of additional scheduled shifts on patients per hour, patient time in the ED, number of procedures, number of imaging tests, and return to the ED (bouncebacks).

Results: We find that consecutive shifts reduce the use of imaging and procedures over shifts 2-4 before returning to baseline by shift 6. CT scan ordering is reduced by 3 to 6 percent and ultrasound ordering is reduced by 12 percent from baseline. Procedures are reduced by 2 to 5 percent from baseline. Despite the reduction in resource use, there was no degradation in quality as measured by bouncebacks. This combination of stable patient outcomes and reductions in resource utilization suggests improved efficiency.

Conclusions: Results suggest that there is an optimal range of consecutive shift scheduling. Increases in efficiency and productivity do not compromise patient outcomes that we can measure. While these improvements seem marginal, the potential for aggregate impact on a systems-level may be considerable. jessicabsaini@gmail.com

Implementing Screening for Poverty And Related Social Determinants and Intervening to Improve Knowledge of and Links to Resources (SPARK) in five provinces

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BACKGROUND: Primary care lacks robust individual-level demographic and social needs data. Routinely collecting this data could help meet patients' social needs and reduce health inequities by tailoring individual care, linking patients to resources, supporting quality improvement and new care pathways, and informing policy and health system planning. The SPARK Tool is a set of survey questions, developed to collect data about patients' social determinants of health such as food security, income, housing, gender identity, sexual orientation, education, race, and ethnicity. Our objective is to study the acceptability and feasibility of implementing the SPARK Tool in diverse primary care contexts.

METHODS: We are conducting an implementation study in five primary care clinics each located in a different province: Ontario, Manitoba, Saskatchewan, Newfoundland and Labrador and Nova Scotia. Starting September 2022, data collection will occur over a 6-month period. Data includes SPARK Tool patient responses and process data, observations in clinics, interviews with patients (n=50) and clerical staff (n=30), and focus groups with clinic leaders, providers and staff (n=15).

RESULTS: Preliminary results include early challenges and considerations for implementing the SPARK Tool, such as training clinic staff, communicating with patients, integrating the tool into clinical workflows and addressing logistical challenges.

CONCLUSIONS: Findings from the implementation study will be used to improve the acceptability and feasibility of using the SPARK Tool in diverse primary care contexts. This will guide future efforts to spread and scale-up routine collection and use of demographic and social needs data in primary health care. melanie.ann.smithman@usherbrooke.ca

Protocol for a qualitative study exploring the Pharmacist's role in supporting post-secondary students with psychotropic medication management

Andrea McCracken, Lisa Dolovich, Beth Sproul, Kristin Cleverley

Background: There is a gap in exploration of relationships amongst students' state of mental health, confidence in managing mental health, psychotropic medication management knowledge and pharmacy services. The question of how pharmacists, in the primary health care ecosystem, can best work with post-secondary students to identify and support psychotropic medication self-management and how the pharmacy can optimize digital technology when providing psychotropic medication management care to post-secondary students remains unanswered.

Approach: This qualitative study will incorporate Thorne's (2008) approach to interpretative description. This study aims to explore post-secondary students' common/shared experiences and needs with their psychotropic medication management. In doing so, a semi-structured interview guide has been developed to ensure that the value of expressed experiences is recognized. The study will involve one-on-one interviews with students via Microsoft Teams or over the phone based on student preference. This study will use purposeful snowball sampling method to recruit participants which is a good approach to recruiting participants when seeking access to a specific population.

Results: This study is currently in data collection and there are no results to report yet. Information provided from the interviews will be reviewed and summarized into key themes. The analysis will follow the process described by Braun and Clarke for inductive thematic analysis.

Conclusions (Significance): Study findings will increase understanding about how pharmacists within the primary health care ecosystem can care for post-secondary students during the complicated time of transition to adulthood. New programs will be developed, evaluated and if beneficial, scaled up across Ontario. andrea.mccracken@utoronto.ca

A learning system for adolescent depression in primary care

Diana Sarakbi, Kim Sears, Joan Tranmer, Dianne Groll

Background: While primary care is often the first point of contact for adolescents with depression, more than half of depressed adolescents are either untreated or undertreated. One of the priorities of Ontario Health Teams (OHTs) is improving the quality of mental health services. The aim of this study is to understand the policy implications of the quality domains for integrated care measured by the Practice Integration Profile (PIP) survey for adolescent depression within the context of OHTs.

Approach: A descriptive, multiple case study of OHTs consisting of a scoping review on quality integrated care for adolescent depression, administration of the PIP survey to the primary care services provided by OHTs to obtain a baseline measure on the quality domains for integrated care, and focus groups with OHTs to identify potential policy implications and obtain their perspectives on using a learning system approach to address policy gaps based on real-world evidence.

Results: The scoping review highlighted considerations for quality integrated care at the patient/family, primary care team, and national/sub-national health system levels. More research is needed on the PIP quality domain for patient engagement and retention which includes following-up with patients as part of their relapse prevention plan and addressing barriers to treatment uptake. Data collection from the selected OHTs is currently in progress.

Conclusion: OHTs could build on the results to design a learning system for adolescent depression in primary care within their region, re-administer the PIP survey to track their progress, and measure the impact on detection and treatment rates for adolescent depression. Diana.Sarakbi@queensu.ca

Using learning collaborative teams to address the cancer-screening backlog due to COVID-19

Sara Bhatti, Stephanie Bale, Jennifer Rayner

Background: A Learning Collaborative (LC) is a short-term learning system that brings together peers from multiple organizations to seek improvement in a focused topic area, with guidance from a quality improvement (QI) coach. The Alliance for Healthier Communities implemented its first LC in 2021 to help support its member centres to equitably clear their cancer screening backlogs built up through the COVID-19 pandemic. This involved training in QI methodologies and coach support in applying methodologies and testing change ideas at their centres. A capstone event was held where each team presented their successes as well as lessons learned.

Approach: 11 teams from Community Health Centres and 3 from Aboriginal Health Access Centres participated, with each team consisting of a QI team lead, healthcare providers, data management coordinators and administrative staff. A process evaluation was conducted to determine if the LC met its intended objectives and to identify areas that worked well and those needing improvement. The evaluation involved a survey administered to each team and interviews with QI coaches and LC participants.

Results: Both survey and interview findings revealed that the LC helped improve cancer screening rates as well as increase QI knowledge and skills of participants. Change ideas to improve rates included stratifying screening rates by race/ethnicity, adding reminders in the EMR, providing quarterly reports on rates to clinicians, creating a patient script on benefits for screening, etc.

Conclusion: The results of this evaluation were used to inform the next LC, focused on improving collection rates of sociodemographic data. sara.bhatti@allianceon.org

A multi-pronged collaborative approach to health care research: Engaging with key stakeholders in mixed-methods study on virtual care encounters in primary care

Jeanette Smith, Rachelle Ashcroft, Simone Dahrouge, Simon Lam, Kiran Saluja

Background: Primary care quickly transitioned from to virtual care due to the COVID-19 pandemic, impacting health care delivery in Ontario. To explore the experiences of patients, it is important to engage and connect with a variety of stakeholders in the research process to generate relevant findings and enhance the quality of care and patient outcomes.

Approach: Meaningful engagement with patients, policymakers, professional organizations, and other key stakeholders during the development of our mixed-method research study investigating patients' experiences with virtual care. Engagement included presenting the study and research tools to various stakeholders, meeting one-on-one with key individuals, obtaining feedback from primary care partners, and consulting with patient advisors.

Results: Our study engaged in a multi-pronged, collaborative process with a wide variety of key stakeholders, including: 1) Patient Advisors by connecting with patient advocacy groups and health-oriented organizations to identify interested individuals in guiding our research, selecting individuals based on geographical, gender, and socio-cultural factors; 2) Professional Organizations representing primary care teams and providers like the Association of Family Health Teams of Ontario, Alliance for Healthier Communities, and the Ontario College of Family Physicians; 3) Policymakers and Decision-Makers from various levels including Ontario Health and the Ontario Ministry of Health. Relationships with stakeholders were nurtured over time and helped the research team incorporate feedback as well as facilitate rapid uptake of research findings.

Conclusions: Primary care research benefits from meaningful and genuine patient and stakeholder engagement by providing important perspectives and expertise. This results in generating person-centred research outputs. Rachelle.ashcroft@utoronto.ca

Optimizing the role of social work in primary health care across Ontario

Rachelle Ashcroft, Catherine Donnelly, Simon Lam, Keith Adamson, Amina Hussain, Peter Sheffield, Deepy Sur, Nele Feryn, Judith Belle Brown

Background: Social workers are key members of primary health care (PHC) teams in Ontario, Canada. They are involved in the provision of mental health support through early identification, treatment, counselling, follow-up, and recovery. The COVID-19 pandemic led to significant changes in social work practice from transitioning to virtual services and increasing demands for mental health care and patient complexities. Our study seeks to describe the current state of social work practice and recommend how to optimize the role of social workers in PHC.

Approach: This cross-sectional, online survey was distributed to social workers working in PHC across Ontario. It consisted of a mix of 45 open and closed-ended questions, inquiring about the primary care context, structure of social work practice, recommendations, and social work leadership.

Results: Approximately 50% of all participants (N = 170) worked in a Family Health Team with another 35% working in a Community Health Centre. Survey participants indicated that social work practice can be improved with higher levels of in-person interactions post-pandemic while continuing virtual communication. Participants noted the need for enhanced tracking of social work contributions and additional focus on non-clinical work. Access to social work services could be increased by implementing triage processes, assessing patient's readiness for counselling, and allowing clients to self-refer. Many social workers provide informal leadership and participants expressed the need for more formal leadership opportunities and recognition of leadership work.

Conclusions: The COVID-19 pandemic has highlighted opportunities for social work practice to be improved and enhanced post-pandemic. Rachelle.ashcroft@utoronto.ca

Effectiveness of the Community Paramedicine at Home (CP@home) program for frequent users of emergency medical services in Ontario: A randomized controlled trial

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Background: Frequent emergency medical service users disproportionately use limited healthcare resources, worsening healthcare system burdens. We evaluated the impact of Community Paramedicine at Home (CP@home), a primary care home-visit intervention, on ambulance calls among frequent users.

Approach: A 6-month, open-label, pragmatic, randomized control trial with parallel intervention/control arms conducted in four Ontario paramedic services. Eligible participants were frequent callers (≥3 ambulance calls within six months) or had ≥1 lift assist call in the previous month. In the intervention, community paramedics conducted risk assessments, provided health education, referred to appropriate resources, and reported to family physicians. Intention-to-treat and sensitivity analyses were conducted using Poisson Regression with subgroup analysis (among frequent caller and lift assist groups) to evaluate intervention effectiveness on reducing ambulance calls.

Results: There were 1025 intervention participants (52.7% female, mean age 69.65 [SD 19.98] years) and 994 control participants (52% female, mean age 69.78 [SD 19.09] years). Ambulance call rate was significantly lower in the intervention group compared to control (mean difference= -0.15, 95%CI [-0.26, -0.05], p=0.004); the intervention had significant effect in the lift assist subgroup (mean difference= -0.61, 95%CI [-0.93, -0.20]), but no significant effect among the frequent caller subgroup (mean difference= -0.04, 95%CI [-0.15, 0.08]). The sensitivity analyses found a similar association for the lift assist group.

Conclusions: CP@home demonstrated effectiveness in reducing ambulance calls among frequent users, especially those with a lift assist call. This program can contribute to shifting primary care delivery to address community needs and reduce healthcare burdens. brarj14@mcmaster.ca

Improving the rates of screening offered for chlamydia and gonorrhea in young adult male patients

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Background: Chlamydia and gonorrhea are the most prevalent sexually transmitted bacterial infections in Canada (1), and ascending infection can result in numerous complications (2). The Canadian Task Force on Preventive Health Care recommends annual opportunistic screening for chlamydia and gonorrhea in sexually active individuals below age 30 (3). This quality improvement project aimed to increase gonorrhea and chlamydia screening rates for male patients aged 16-29 at a community family practice through provider education and electronic medical record (EMR) alerts, by 20 percent over one year.

Approach: The primary objective measure was percentage of patients in demographic of interest appropriately offered screening for chlamydia/gonorrhea in the last 12 months. In February 2022, two interventions were implemented: an information handout for healthcare providers, and an EMR alert. Chart reviews were completed for target demographic patients pre- and post-intervention to identify those offered screening appropriately.

Results: In March 2021, 16 patients met inclusion criteria; 0 (0%) were offered chlamydia/gonorrhea screening in the previous 12 months. Interventions were implemented in February 2022. In March 2022, 13 patients met inclusion criteria; 6 (46%) were offered chlamydia/gonorrhea screening in the previous 12 months.

Conclusions: Our interventions were associated with increased chlamydia/gonorrhea screening rates for male patients aged 16-29. Screening is expected to increase case detection, reducing complication and transmission risk. It may also increase opportunity to evaluate sexual risk factors. Interpretation is limited by study size and duration. Next steps could include evaluating long-term impact or repeating the intervention with a larger patient sample. Perri.Deacon@medportal.ca

Evaluation of real-time collection of patient-reported experience to support continuous improvement

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Background: Improved patient experience is at the core of an effective health care system. While many tools have been developed to measure patient-reported experience and outcomes, little has been done to implement these within standard, routine care, limiting the availability of patient-reported data for health care providers and decision makers. The Frontenac, Lennox & Addington Ontario Health Team (FLA -OHT) is implementing the routine collection and reporting of patient experience data in primary care practices. The aim of this project is to describe the implementation of the patient-reporting process and understanding how end-users incorporate patient experience data into routine use.

Approach: The Consolidated Framework for Implementation Research and Process Redesign (CFIR-PR) will guide data collection and evaluation across five major domains: intervention characteristics; outer setting (e.g., political, economic, and social context); inner setting (e.g., culture and leadership); characteristics of the individuals involved (e.g., knowledge and beliefs); and implementation process. Stakeholders including administrative personnel, health care providers, and managerial team members of each participating primary care clinic, as well as decision-makers from the FLA-OHT will participate in surveys and interviews.

Results: We plan to capture traditional measures of reach and fidelity and describe contextual factors relevant to survey implementation including capacity, needs, facilitators and barriers.

Conclusions: As this project is highly scalable, we anticipate our findings will inform the implementation of routine patient experience and outcome measurement across other primary care practices, as well as community support services and other health care partners, both locally, across the province, and beyond. Catherine.donnelly@queensu.ca

Primary care attachment and Emergency Department visits: Should everyone be attached?

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Background: Recognized as essential health care, primary care has been repeatedly shown to reduce morbidity and mortality. In support of these benefits, Ontario recently attached 88% of its population to primary care physicians. However, the remaining uncertainly attached cohort remains a burden on the healthcare system. To investigate this problem, we specifically analyzed the utilization of emergency departments (ED) between these two cohorts. We aim to reveal the current trends in patient attachment with respect to ED visitation, while identifying sub-cohorts within Ontario's uncertainly attached population that are key targets for future attachment initiatives.

Approach: This analysis is based on ICES 2019-2020 primary care data reports, providing quantitative data for ED visitation between 2018-2020 which was cut into attached and uncertainly attached cohorts. These data sets also included adjustments for various demographics, patient characteristics, and utilization of health resources. Analysis focused on attachment status while adjusting for morbidity as proxy for patient health.

Results: Unhealthy uncertainly attached patients, including those with low, moderate, or high morbidity, had greater ED visitation rates than their attached counter-cohorts. Additionally, both cohorts indicated a positive relationship between ED visitation and morbidity score. However, healthy uncertainly attached patients showed lower ED visitation rate than healthy attached patients.

Conclusions: While striving for 100% patient attachment is the end goal, certain populations should be prioritized to maximize the benefits received by patients and minimize the costs for the system. Those suffering from higher levels of chronic disease should be prime candidates for attachment, however attachment initiatives should not prioritize those who express no morbidity.18cdgy@queensu.ca

Describing a family medicine teaching unit community practice experience of pivoting to virtual care in response to the COVID-19 pandemic crisis

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OBJECTIVE: The coronavirus outbreak tested family medicine community practices and teaching sites worldwide. In this study, we map out how a family practice rapidly pivoted to virtual care (VC) in response to the pandemic declaration and examine impacts on patients' access and practice operation.

METHODS: We conducted retrospective charts review of a 6-week period in 2020 representing: a pre-pandemic control (Week-0: March 2-6), WHO pandemic-declaration (Week-1: March 9-13), Ontario's pandemic-declaration (Week-2: March 16-20), VC-transition (Week-3: March 23-27), post-VC transition (Week-4: April 6-10) and consolidation (Week-5: April 20-24). The primary outcome (access to care) was weekly clinic visits and type (virtual versus in-person). Secondary outcomes (process measures): provider type, day of the week, patients' demographics, chief complaints and encounter types were analyzed using ordered probit regression analysis. RESULTS: There were 4 146 total visits among 2 481 unique patients, with a mean of 2.46 visits per patient. Staff physicians, residents and nurses provided care for 44%, 33%, and 23% of patients, respectively. Clinic visits remained stable across study weeks, with a mean of 687 visits per week. Virtual visits increased from 28% to 89% of the total visits in week-0 compared to week-5, respectively. Patients' age, sex, and income had no significant effect on VC-access. A significant increase in covid-related complaints, mental health, preventative health and prenatal virtual visits was noted.

INTERPRETATION: While the coronavirus pandemic declaration necessitated a rapid pivot to virtual care, it did not negatively impact patients' access to care across study weeks. VC-transition correlated with a higher workload on staff physicians and addressing more preventative and mental health concerns. azza.eissa@mail.utoronto.ca

Mindfulness-based stress reduction for community-dwelling older adults with subjective cognitive decline and mild cognitive impairment in primary care: A mixed-methods feasibility randomized control trial

Todd Tran, Catherine Donnelly, Emily Nalder, Tracy Trothen, Marcia Finlayson

Background: Community-dwelling older adults living with subjective cognitive decline or mild cognitive impairment may experience inefficiencies or challenges with everyday life tasks (i.e., iADLs). Decreased everyday performance may increase anxiety and decrease mood, which may further exacerbate cognitive complaints. Primary care providers, such as occupational therapists (OTs), are often the first point of contact when older adults and their families become concerned about memory problems. OTs can provide non-pharmacological interventions, such as an 8-week Mindfulness-Based Stress Reduction (MBSR), to address these psychosocial variables. Limited research has examined the feasibility of OTs, providing MSBR with this population in primary care.

Approach: To use a mixed-methods methodology to explore the feasibility of an MBSR program and the acceptability of iPads for program delivery in primary care among community-dwelling older adults with early cognitive deficits.

Results: The recruitment rate was 27 instead of 30 specified participants, and the retention rate was 64.3%, under the specified 75-80%. The adherence rate was moderately successful at 64%, and participants used their iPads on average 1.6 hrs per week. Both participants and OTs conclude that MBSR is beneficial, satisfying and engaging to participate in and support psychosocial issues. OTs with MBSR training found the delivery of the program to be satisfying and rewarding in meeting the needs of this population.

Conclusions: Some of the feasibility rates were below the study's specified priority, but MBSR demonstrated a valuable tool for OTs to use in supporting psychosocial variables in older adults with cognitive impairment in primary care. Todd.Tran@wchospital.ca

Eviction filings during bans on enforcement during the COVID-19 pandemic: Implications for primary care

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Background: Stable housing is a crucial social determinant of health. To mitigate COVID-19-related housing displacement, three bans on eviction enforcement were enacted in Ontario, covering periods between March 2020 and January 2021. Understanding the impact and limitations of these bans could support efforts by primary care practices and health system leaders to design targeted, collaborative interventions to prevent displacement and its negative impact on health.

Approach: We leveraged eviction filing records from the Ontario Landlord Tenant Board to examine eviction filings in Ontario from January 2017-January 2022. Segmented regression models were used to assess changes in the average weekly filing rates for evictions due to non-payment of rent (L1 filings) and reasons other than non-payment of rent (L2 filings) before, during, and after each ban on eviction enforcement.

Results: The average weekly filing rates for L1 and L2 applications dropped by 67% and 50% following the first ban ($p<0.001$), however, their efficacy appeared to wane over time. Subsequent changes in filing rates were insubstantial but remain lower than their pre-pandemic averages. Notably, filing rates for L1 and L2 applications never fell to zero, and L1 filings appeared to increase towards the end of the study period.

Conclusions: The impacts of bans on eviction enforcement may be temporary; policies that tackle the root causes of displacement may better prepare jurisdictions for future public health emergencies. Along with advocating for such policies, primary care practices can prepare for the potential increase in evictions following the lifting of enforcement bans through partnerships with providers of legal and social services. Steve.Durant@unityhealth.to

POPLAR, the Primary Care Ontario Practice-based Learning and Research Network

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Background: The future of primary care can be shaped through collaborations between clinicians and academics. The term "Practice Based Learning and Research Networks" (PBLRNs) has been proposed for key partnerships; PBLRNs use electronic medical record (EMR) data and evidence-based strategies to improve care as part of Learning Health Systems. Administrative leadership, clinical team and patient engagement, ongoing relationships across stakeholders, and data stewardship are needed to drive change.

Approach: Ontario's seven PBLRNs (six affiliated with a University Department of Family Medicine and one in the Alliance for Healthier Communities) coalesced to form the Primary care Ontario Practice-based Learning And Research Network, POPLAR (https://www.poplarnetwork.ca). Initiated in 2021, POPLAR is harmonizing data collection and processing into a provincial data platform, allowing standardized and efficient province-wide reporting of indicators. POPLAR is also coordinating efforts to enable meaningful analytics, implement clinical research and foster quality improvement initiatives.

Results: Funded by Ontario's provincial government through the primary care Research-Policy partnership INSPIRE-PHC, the POPLAR data platform is currently being constituted and has initiated support for data and clinical research project requests. POPLAR is also supporting CareCanvas, a QI Dashboard initiative, led by quality improvement and implementation science experts, which aims to provide ready access to several practice metrics to practices, teams and OHTs.

Conclusions: A person-centered Learning Health System requires data, research, and quality improvement, all embedded in sites where care is provided. POPLAR provides value by supporting all three; centralized data management activities and support for QI and research are currently underway. marissa.beckles@queensu.ca

Family Health Teams in Ontario: Is everyone receiving equal care?

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Background: While inequalities undoubtedly exist in Ontario's healthcare system regarding various determinants of health, far less research has pursued the inequality of care due to patient attachment models. Team-based Care (TBC) care involves a multi-disciplinary approach which integrates a range of interprofessional healthcare providers to establishes a dynamic network of patient However, recent healthcare reforms have restricted entrance into TBC. Our aim is to graphically represent the distribution of the currently supported TBC practices across all 51 Ontario Health Teams (OHTs) and determine primary care cohorts most influenced by TBC models.

Approach: We based our analysis on ICES 2019-2020 primary care datasets, allowing us to quantitatively identify TBC distribution. The cut data was adjusted for each OHT, with TBC attachment represented as a ratio of the total population.

Results: Utilizing excel, a dual-bubble scatter plot was generated to graphically express TBC attribution in order of decreasing proportion. A negative relationship between OHT size and attributed population was observed, leading to the isolation of several outliers including Peterborough, Guelph, Barrie, and Hamilton which demonstrated abnormally high proportions of FHT attribution with respect to their cohort size.

Conclusions: There is a developing inequality between attachment models with many of Ontario's most populated regions being significantly underrepresented by TBC. We have expanded on the beneficial role of TBC and identified key OHTs in both urban and rural centers with successful integration of TBC. Future research should investigate the specifics of TBC within these unique OHTs, and direct future policy to emphasize a transition towards TBC across Ontario. 18jbgw@queensu.ca

"…swamped with information…": Family physicians and information management during the COVID-19 pandemic

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Background: Providing family physicians (FPs) with the information they need to run their practices is crucial for their participation in a coordinated pandemic or health emergency response, and to provide them with the information they need to run their practices. Most pandemic planning documents do not address communication plans specific to FPs. This study describes family physicians' experiences and challenges with information management during the COVID-19 pandemic in Canada.

Approach: We conducted semi-structured qualitative interviews with FPs and asked about their roles during different pandemic stages, as well as facilitators and barriers they experienced in performing these roles. We transcribed the interviews and used a thematic analysis approach to develop a unified coding template across the four regions and identify recurring themes.

Results: We interviewed 68 physicians and identified two key themes pertaining to communication. The first is participants' experiences managing information and their information needs during the COVID-19 pandemic. FPs were overwhelmed by the volume of information and found it to be difficult to adapt to their practices. The second is the specific attributes FPs need of the information sent to them. Participants wanted summarized and consistent information from credible sources that are relevant to primary care.

Conclusions: Providing clear, collated, and relevant information to FPs is essential in pandemics and other health emergencies. Future pandemic plans should integrate strategies to deliver information to FPs that is specific to primary care. Findings highlight the need for a coordinated communication strategy to effectively inform family physicians in health emergencies. gyoung57@uwo.ca

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CAMERA: eConsult requests About Medications in oldEr adults with fRailty from primAry care providers

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Background: eConsult is an asynchronous web-based tool that allows primary care providers to access specialist advice for patients. We aimed to characterize medication-focused eConsult questions for patients with frailty to identify learning opportunities for primary care providers and potential eConsult service enhancements.

Approach: In 2019, sixty-one eConsult cases were submitted for patients aged 65 or older with frailty through the Champlain BASE eConsult service; 35 cases categorized as medication-focused were analyzed. A coding scheme was developed and refined iteratively over three cycles of improvement, then applied to each case.

Results: Twenty-four out of 35 cases involved female patients. The most common specialties consulted were endocrinology (n=9) and cardiology (n=5); the most common condition inquired about was osteoporosis (n=8). Question intent was classified into 3 categories: proposing a plan and checking for agreement (n=14), proposing a plan and asking for additional options (n=10), or not proposing a plan and requesting advice (n=11). The specialist provided focused answers in 5 cases, with focused answers and additional advice given in the majority of cases (n=30). Specialists recommended avoiding certain medications in 14 cases, including 5 cases with recommendations to deprescribe.

Conclusions: Most primary care providers are seeking specialist reassurance when submitting medication-related eConsults for people with frailty. eConsult specialists often provide more information than originally requested, confirming the added value that medication-focused eConsults bring to primary care providers. tyler.schneider@mail.utoronto.ca