

Piloting care planning tools in primary care for complex patients

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Objective:

Pilot the feasibility of a shared care plan template and online digital support tool, co-developed with patients and physicians, in primary care practices.

Design:

Pragmatic trial within practices; qualitative interviews, focus groups, thematic analysis.

Participants:

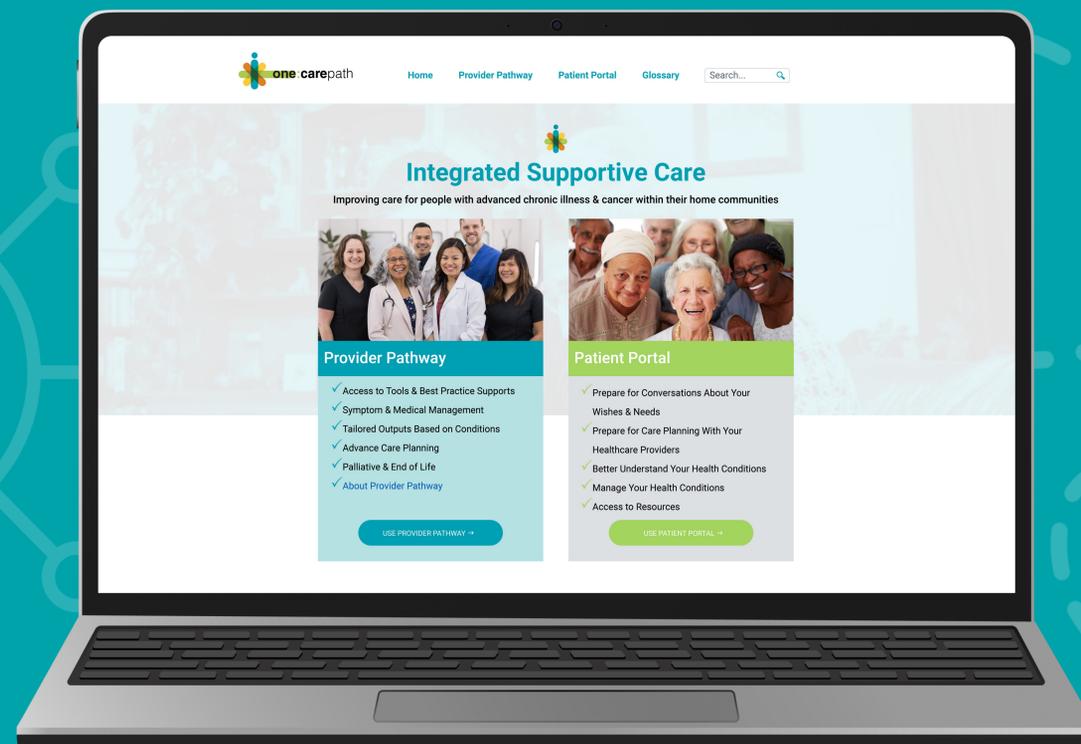
Family physicians (n=16), Nurses (n=2), Pharmacists (n=1), Patient Advisors (n=9), in Alberta primary care rural/urban settings (n=4).

Outcome/Evaluation:

Assess the effectiveness of integrating a co-developed shared care plan embedded in 4 provincial Electronic Medical Records (EMR), and use of an online digital support tool, to enhance care coordination and support patients living with advanced complex chronic disease.

“...It really makes things **simple**, especially for busy family physicians

Co-developed integrated care planning tools prove valuable, accessible, and feasible.



HOW IS THIS DIFFERENT FROM REGULAR CARE PLANNING?

Co-development:

Incorporates the patient's voice, needs and preferences while seamlessly integrating with clinic flow.

Potential scalability:

The care plan has been uploaded to 4 of the 5 provincial EMRs.

The result:

The one:carepath co-developed care planning tools proved to be valuable, accessible and feasible.

Next steps

We are seeking primary care physicians to test if the tools increase informational and relational continuity and reduce hospital admissions and ER visits.



We welcome any questions and comments. Please contact Lynn Toon: toon@ualberta.ca

Scan QR code to request information.



Results:

The care plan was smoothly integrated into providers' distinct clinic processes and contexts.

What providers liked:

- Understanding what is most important to patients.
- Managing complexity over time rather than a single encounter.
- Accessibility of the care plan for any team member.

What patient advisors liked:

- Incorporating their words, providing space to share their preferences and wishes.
- Helping prepare for discussions with family members.
- Guiding their symptom management.



A lot of attention was put into saying it right..., so it sinks in. Having worked on other things... this one really stands out. It's incredible.

Patient advisor

Conclusions:

One:carepath applies a personalized lens to patient care through a co-developed platform, deepening the provider-patient relationship. Untethered from a fee code and embedded in the EMR, the healthcare team can utilize existing resources and patient information, enabling optimal team-based care.

Limitations of ICD-9 coded billing data from primary care electronic medical records & solutions for the 21st century



UNIVERSITY OF
CALGARY

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INTRODUCTION

- ICD-9 was adopted in Canada in **1979**.
- This is still used by Canadian physicians for submitting diagnosis codes as part of billing claims.
- ICD-9 coded billing data are used frequently for secondary uses (research, policy decisions, costing, disease surveillance).
- Do these codes really represent the diagnoses, activities and complexities of primary care practice?

Study Objective: To quantify information loss resulting from ICD-9 billing codes compared to primary care visit information and to explore newer alternatives that may be more suitable and accurate

METHODS

- Retrospective secondary analysis of primary care electronic medical record (EMR) data from the Canadian Primary Care Sentinel Surveillance Network.
- **Sample:** active patients with at least 1 visit to their primary care provider between 2017 and 2022
- Charts with both an ICD-9 billing code *and* information about the visit (text or coded) were included.
- Ranked lists of most frequent diagnoses were produced & compared for billing codes and for visits.
- A sub-analysis of generic "catch-all" ICD-9 codes (780) was conducted to explore how well different coding systems could capture this information.

CONCLUSIONS & NEXT STEPS

- Primary care billing data are quite general (often only three-digit ICD-9 codes)
- Accompanying text is often standardized, so is not much more informative
- Poor specificity for frailty, pain, cancer, etc. Not in sync with DSM-V
- Poor fit for detailed analysis, deciding resource allocation, and informing public health policy

NEXT STEPS:

- Analyze free-text for terms not covered by ICD-9
- Phase 2 will report on ICD-11 & ICPC-3 use as family physicians code patient vignettes.
- Phase 3 in progress: focus groups with physicians & interviews with policymakers to understand feasibility of replacing ICD-9

PRELIMINARY RESULTS

Patient demographics (N= 338,520)

Characteristics	
Female, n (%)	181,819 (53.7%)
Age, mean years (SD)	38.6 (24.1)
Urban residence, n (%)	279,682 (82.6%)
Median number of primary care encounters (IQR)	26 (39)
Assigned to female physician, n (%)	170,676 (50.4%)
Location (province), n (%)	
British Columbia	43,187 (12.8%)
Alberta	195,742 (57.8%)
Manitoba	55,347 (16.3%)
Nova Scotia	44,178 (13.1%)

Comparison of top 10 billing codes and diagnoses for same visit

Top 10 Conditions in Billing Ranked by Frequency	Top 10 Conditions in Visit Text Ranked by Frequency
1. Hypertension (401)	1. Hypertension (401)
2. Anxiety (300)	2. Anxiety (300)
3. General symptoms (780)	3. Diabetes Mellitus (250)
4. Medical Exam (780)	4. Medical Exam (780)
5. Diabetes Mellitus (250)	5. General symptoms (780)
6. Depression (311)	6. Depression (311)
7. Disorders of back (724)	7. Disorders of back (724)
8. Respiratory symptoms (786)	8. Respiratory symptoms (786)
9. Joint disorders (719)	9. Joint disorders (719)
10. Abdominal symptoms (789)	10. Osteoarthritis (715)

Top 10 text terms with ICD-9 780 (general symptoms)

Visit Information	Best ICD-9 Code	Best ICD-11 Code	Best ICPC-3 Code
General symptoms	780	MG4Y; MG9Y	AS99
Fatigue or malaise	780.7	MG22; MG25	27179500; 367391008
insomnia	780.52	7A0Z	193462001
Sleep disturbances	780.5	MG41	PS06
dizziness	780.4	MB48.Z	404640003
syncope	780.2	MG45.Z	271594007
phone call			
Sleep apnea	780.57	7A40.Z; 7A41	73430006
chronic pain	338.2	MG30.Z	LS18; 82423001; 373621006
fever	780.60	MG26	386661006

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LUBRICANTS FOR SEX: A GUIDE FOR PROVIDERS



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BACKGROUND

Lubricant use during sexual activity can offer several benefits.

- Use can help manage:
 - Genital dryness
 - Dyspareunia
 - Symptoms of sexual dysfunction
- Use can decrease the risk of condom tearing and, thereby, may reduce the risk of STI transmission and unplanned pregnancy

Inadequate natural genital lubrication is a common sexual health complaint, however:

- Accessible evidence-based clinical resources are lacking.
- Patients and healthcare providers are hesitant to discuss the topic.

OBJECTIVES

Scoping review to inform development of:

A guide to help clinicians navigate discussions and counsel patients on the use of lubricant to improve sexual well-being.

An accessible handout for patients.



METHOD

Scoping review using the Arksey and O'Malley framework:

- Inclusion criteria:
 - identifies patient populations most likely to benefit from lubricant.
 - addresses pros/cons of different classes of lubricant.
 - describes properties or ingredients found in certain lubricants that may cause harm.
- Population: Sexually active individuals, with no restrictions placed on geographic location, age, gender, sexual orientation or type of sex.

RESULTS



1. Patient-Specific Factors

Lubricant use particularly benefits patients who experience genital dryness, irritation, and dyspareunia - symptoms associated with the following patient factors:

Intercourse Categories	Factors Associated with Genital Dryness, Irritation, or Dyspareunia
All Types (anal, vaginal, penile)	<ul style="list-style-type: none"> • Mental health complaints • Partner-related factors: inadequate arousal, genital size incompatibility, etc. • Cystitis and urethritis • Past perineal or pelvic surgery • Genital dermatoses
All Receptive Types	<ul style="list-style-type: none"> • Gastrointestinal conditions: IBS, IBD, etc. • Postpartum • Anorectal conditions: hemorrhoids, fissures, etc.
Vaginal (receptive)	<ul style="list-style-type: none"> • Genitourinary syndrome of menopause (GSM) • Introital pain conditions: vulvodynia, vaginismus, etc. • Comorbidities predisposing vaginal dryness: MS, DM, CHF, RA, SLE, Sjögren's syndrome, etc. • Medications predisposing vaginal dryness • Breastfeeding • Breast cancer, radiation, chemotherapy
Anal (receptive)	<ul style="list-style-type: none"> • Sex involving non-lubricating receptive anatomy • Chronic constipation or diarrhea • Prostate cancer and treatments
Penile (insertive)	<ul style="list-style-type: none"> • Conditions affecting penile erection • Foreskin conditions: phimosis, frenulum breve, etc. • Penoscrotodynia • Chronic pelvic pain syndrome

2. Classes of Lubricant

SILICONE OR WATER-BASED RECOMMENDED! NOT OIL!



Compatibility with materials present in genital area:

Materials	Latex Plastic Rubber Polyisoprene	Glass Ceramic Metals	Polyurethane Lambskin Nitrile	Silicone
Oil-Based Lubricant	X	✓	✓	X
Silicone-Based Lubricant	✓	✓	✓	X
Water-Based Lubricant	✓	✓	✓	✓

3. Formulation Considerations (water-based only)

- IDEAL: Osmolality: <1200 mOsm/kg, pH: ~ 4.5 (vaginal) or 5.5-7 (anal)
- AVOID: glycerin(e)/ glycerol, propylene glycol, polyethylene glycol (PEG-8), parabens, chlorhexidine, nonoxynol-9, oils/petroleum, dyes, fragrance, flavour (with nutritive sweeteners such as glucose and sucrose), warming, stimulating, or numbing properties.

CONCLUSION

- 1) Many patients can benefit from lubricant use.
- 2) Silicone and water-based lubricants without harmful additives are recommended.
- 3) Our guide will help providers incorporate patient-specific recommendations for lubricant use into clinical practice.

PATIENT HANDOUT,
POSTER, AND
REFERENCES



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Health Surveillance of Community-Dwelling People with Dementia and their Caregivers

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BACKGROUND

Context:

The health and experiences of people living with dementia and their caregivers are often intertwined. However, few studies have explored the nature of this relationship while considering the well-being of both parties simultaneously^{1,2}

Objective:

To examine how the health of caregivers interacts with that of people living with dementia

METHODS

Study Design/Population:

A prospective cohort study of 177 dyads of community-dwelling people living with dementia and their caregivers

Persons-living-with-Dementia

- Identified based on the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) case definition³ and validated by participating healthcare providers (*figure 1*)

Caregivers:

- Identified by participating healthcare providers (*figure 1*)

Data Sources:

Clinical Records from Electronic Medical Records (EMRs):

- CPCSSN routinely extracts, de-identifies and standardizes patient health data from electronic medical record (EMR) systems of participating primary care providers across Canada
- 8 out of 13 CPCSSN networks contributed data for this study (*figure 2*)

Data Analysis:

Linked CPCSSN dementia dyad data were assembled and analyzed descriptively using SAS 9.4

Outcomes:

- Demographics**
 - age, sex, location
- Health outcomes**
 - healthcare utilization, CPCSSN-defined comorbidities (osteoarthritis, depression, chronic kidney disease, hypertension, dyslipidemia)
- Risk factors**
 - use and misuse of alcohol, smoking, BMI
- Lived experiences of dyads**
 - narrative documentary

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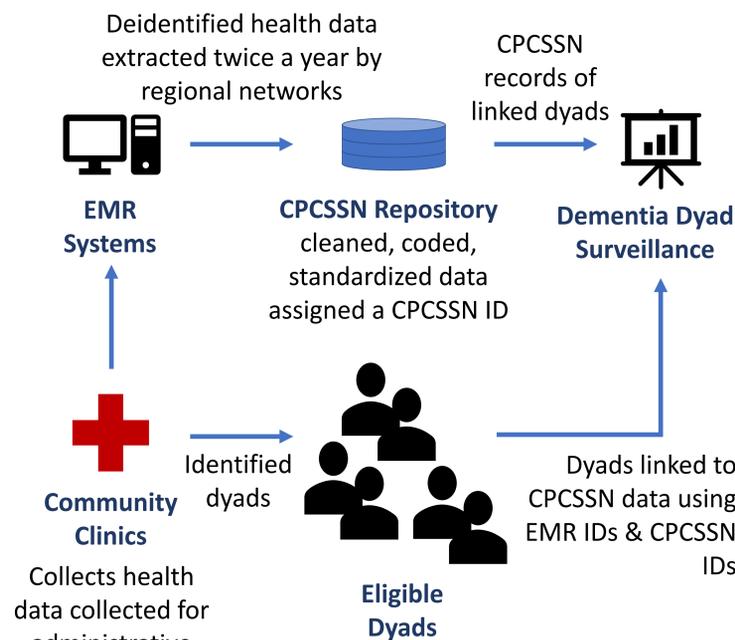


FIGURE 1: Process map for dyad identification and linking in CPCSSN data

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We would like to acknowledge all the community primary care clinics and members of the patient and provider advisory committee for their valuable time and contribution.

TABLE 2: HEALTH OUTCOMES BEFORE AND AFTER DEMENTIA DIAGNOSIS

Dyad Characteristics (N=354)	Caregiver (n=177)		Care-recipient (n=177)		CPCSSN Controls (n=508)
	Before Dementia	After Dementia	Before Dementia	After Dementia	
Healthcare Utilization (mean (SD))	15.0 (15.2)	17.2 (16.1)	18.3 (14.4)	19.9 (16.7)	15.3 (13.3)
BMI (n, %)					
• Underweight	3 (1.7)	3 (1.7)	4 (2.3)	3 (1.7)	11 (2.2)
• Normal	38 (21.5)	42 (23.7)	45 (25.4)	67 (37.9)	83 (16.3)
• Overweight	48 (27.1)	56 (31.6)	56 (31.6)	44 (24.9)	109 (21.5)
• Obese	57 (32.2)	49 (27.7)	40 (22.6)	40 (22.6)	110 (21.7)
Comorbidities (n, %)					
• Dyslipidemia	92 (52.0)	111 (62.7)	115 (65.0)	129 (72.9)	298 (58.7)
• Osteoarthritis	32 (18.1)	51 (28.8)	45 (25.4)	69 (39.0)	105 (20.7)
• Hypertension	73 (41.2)	87 (49.2)	94 (53.1)	114 (64.4)	226 (44.5)
• Depression	48 (27.1)	67 (37.9)	62 (35.0)	85 (48.0)	153 (30.1)
• Chronic Kidney Disease	25 (14.1)	39 (22.0)	54 (30.5)	74 (41.8)	89 (17.5)
Current Risk Factors (n, %)					
• Alcohol Use & Abuse	75 (42.4)	100 (56.5)	70 (39.5)	100 (56.5)	--
• Smoking	15 (8.5)	15 (8.5)	16 (9.0)	18 (10.2)	--

CONCLUSION

Important outcomes such as increased healthcare use and an increased prevalence of comorbidities in dyads after a dementia diagnosis and compared to the control population were observed. Results provide a valuable opportunity to further investigate the needs of these dyads.

TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF DYADS

Dyad Characteristics (N=354)	Caregiver (n=177)	Care-recipient (n=177)
Age in years (mean (SD))	68.3 (15.7)	82.1 (9.8)
Sex (n, %)		
• Female	110 (62.1)	107 (60.5)
• Male	67 (37.9)	70 (39.5)
Location (n,%)		
• Rural	17 (9.6)	15 (8.5)
• Urban	158 (89.3)	159 (89.8)



Dementia: You Can Make A Difference / Démence : vous pouvez faire une différence

A short narrative documentary featuring people living with dementia and their caregivers sharing their experiences

Follow the link:

<https://www.youtube.com/watch?v=7pj9H2Ntb1U>

Scan the QR Code



FIGURE 2:

The eight CPCSSN networks that are contributing data to this project from left to right are BC-CPCSSN, SAPCReN, MaPCReN, EON, OPEN, RRSPUM, MaRNet & APBRN



Describing the Epidemiology of Microvascular Complications of Diabetes in a Primary Care Patient Population in Canada



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Background & Objective

- Diabetes (DM) & related complications are commonly managed in primary care settings^{1,2}
- There is limited information about the prevalence & epidemiology of diabetes complications in primary care
- Neuropathy, retinopathy & nephropathy** are common microvascular complications of diabetes³⁻⁶

This study aims to better understand the epidemiology of microvascular diabetes complications in people visiting primary care clinics across Canada

Results

Study Population Characteristics	Complication(s) n=26,876 (35.4)	No Complications n=48,960 (64.6)
Sex: female, n(%)	12,972 (48.3)	23,323 (47.6)
Age, n(%)		
18-44	923 (3.4)	5,677 (11.6)
45-74	13,768 (51.2)	34,492 (70.4)
75+	12,185 (45.3)	8,791 (18.0)
Location: rural, n(%)	3,963 (14.7)	7,615 (15.6)
Comorbidities ^a , n(%)		
0	871 (3.2)	4,600 (9.4)
1-2	8,961 (33.3)	24,454 (49.9)
3+	17,044 (63.4)	19,906 (40.7)
HbA1C, n(%)		
≤ 6	3,638 (13.5)	7,708 (15.7)
7-9	20,240 (75.3)	34,696 (70.9)
> 9	2,789 (10.4)	4,408 (4.4)
eGFR, n(%)		
<30	2,173 (8.1)	111 (0.2)
30-44.9	4,576 (17.0)	252 (0.5)
45-59.9	8,190 (30.5)	1,685 (3.4)
60+	10,697 (39.8)	40,029 (81.8)
ACR, median (IQR)	3.93 (1.50-15.00)	1.10 (0.60-2.11)
Deceased: yes, n(%)	563 (2.1)	293 (0.6)

a. Comorbidities included adult asthma, cardiovascular disease, cerebrovascular disease, chronic heart failure, cirrhosis, COPD, coronary artery disease, dementia, depression, dyslipidemia, epilepsy, herpes zoster, hypertension, multiple sclerosis, non-vascular atrial fibrillation, osteoarthritis, Parkinson's disease, pediatric asthma & PTSD defined based on CPCSSN case definitions⁸

Approach

- Data Source & Setting:** Diabetes Action Canada National Diabetes Repository (DAC-NDR) with electronic medical records of patients of participating primary care providers in AB, MB, ON, QC & NL
- Study Population:** Adults (18+) diagnosed with DM who had 1+ encounter between 2019-2021
- Microvascular complications**
 - neuropathy⁷:** ICD9 codes 357.2 or 250.6 or free text "neuropathy" or "neuropathie"
 - retinopathy⁷:** ICD9 codes 362.0 or free text "retinopathy" or "retinopathie" or "rétinopathie"
 - Nephropathy^{7,8}:** one ACR >20 mg/mmol or two ACR ≥2 mg/mmol within 3 months or two eGFR <60 ml/min/1.73 m² separated by between 3 months and 18 months, inclusive
- Outcome Measures:**
 - Prevalence of neuropathy, retinopathy & nephropathy
 - sociodemographic & clinical characteristics
 - summary statistics (descriptive analysis)
 - prevalence ratios (logistic regression)

Conclusions

- The prevalence of diabetes complications was high in this primary care population of people living with diabetes
- Having one or more comorbidities significantly increased the prevalence of being diagnosed with a diabetes complication
- Given the high prevalence, it is important to prepare for & develop targeted strategies to manage diabetes complications in primary care to reduce the burden on people living with these conditions & to minimize provider burnout

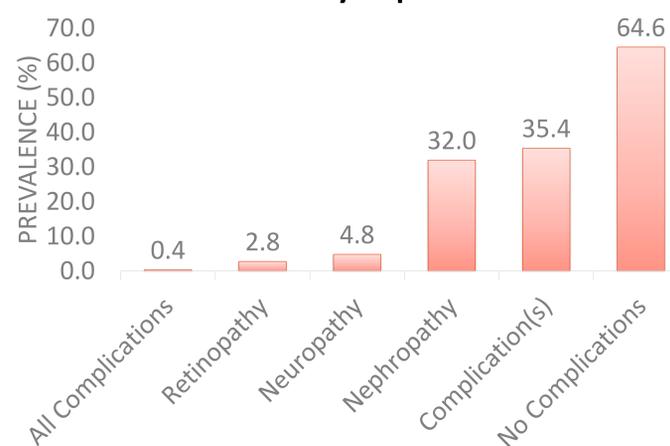
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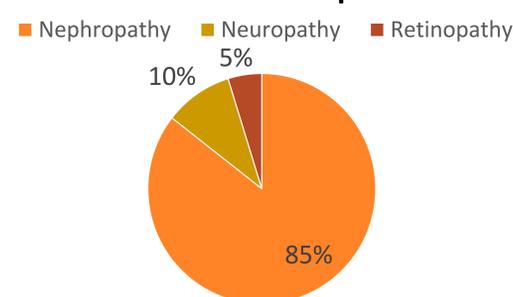
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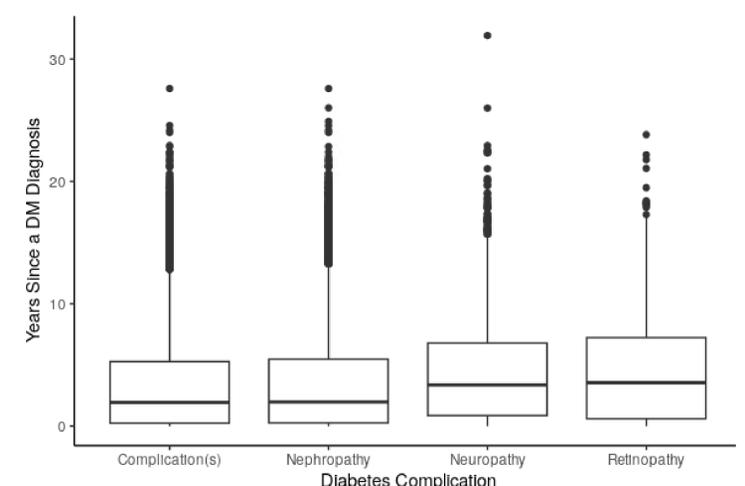
Prevalence of Diabetes Complications in the Study Population



First Recorded Complication



Years from a DM Diagnosis to the Onset of a Complication



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Facilitators and Barriers to the implementation of the BETTER WISE intervention: A qualitative study

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Background

- BETTER WISE (Building on Existing Tools to Improve Cancer and Chronic Disease Prevention and Screening in Primary Care for Wellness of Cancer Survivors and Patients) involved a comprehensive, evidence-based approach that proactively addressed chronic disease prevention, screening, and cancer survivorship, including screening for poverty and addressing lifestyle risks.
- The intervention, a prevention visit, was provided by a healthcare professional - the Prevention Practitioner (PP) – who was a member of the primary care team with enhanced skills in prevention, screening, and cancer survivorship.
- In a 1-hour visit with the patient, the PP provided them with an overview of their individual risk for cancer and chronic disease, including family history and lifestyle risk factors, informed patients about eligible screening, and helped patients make S.M.A.R.T. goals for their health.
- Patients 40-65 years of age were invited to participate as most prevention and screening recommendations apply to this age group.



Objective

- To understand the facilitators and barriers to the implementation of the BETTER WISE intervention using qualitative methodology.

Setting

- Thirteen primary care settings (urban, rural, and remote) in Canada (6 in Alberta (AB), 4 in Ontario (ON), and 3 in Newfoundland & Labrador (NL)).

Domain 1: Intervention Characteristics

Relative advantage

"[BETTER WISE] definitely prevented a lot of people from falling through the cracks. Because we can still call them to remind them, we are here and try to keep them as up to date as possible." [PP, ON]

Adaptability

"I'm not a huge fan of the phone call visits. I just don't feel as though you get as connected (...) I like to see people and to have the time and I think people relax a little bit more when they can see someone face-to-face, versus over the phone." [PP, AB]

Domain 3: Characteristics of Individuals

"I got to say these last couple of years doing that, that's one of the best things that I've done (...) I was able to help people. And hopefully make a difference so that they would make some positive lifestyle changes, you know?" [PP, NL]

"People really appreciated our [PP]. She has a very nice way about her. She's very fun and person-centered and nice to talk to (...) They also really appreciated the time (...) it's more time to sit down and talk about these things deliberately than they would usually get just with me" [Physician, AB]

Domain 5: Process

"We didn't have people coming in so I was actually able to focus a little bit better on the BETTER WISE because, obviously, appointments were a little bit different. So, even though we were short staffed I was able to actually take the time to go work and away in the office and not be interrupted, so that was good." [PP, AB]

Domain 2: Outer Setting

"(...) prevention kind of stuff we did as physicians really took a back seat (...) at the beginning, labs wouldn't even allow us to do present patients' stool for blood and mammography, they were just turned away." [Physician, AB]

"My capacity to follow the eating and lifestyle commitments has waxed and waned (...) partly due to the effects of the pandemic, but it has been a valuable (...) having the PP's check-ins, which give me a lift and inspiration to do my best with this." [Patient, female, AB]

Domain 4: Inner Setting

"I think it was something that our unit was cognizant of—that there is concern about burnout and fatigue through the pandemic, without a doubt. How we've managed it is, part of our objective for the new year is to really focus on wellness—to the point that we've developed a wellness committee, that it is at the forefront, recognizing that we have to make sure that all our providers are taking care of themselves to be able to continue their roles at their full capacity." [Physician, ON]

Read the publication



Participants

- Primary care providers (N = 132; including all 13 PPs) participated in 17 focus groups and 48 key informant interviews. They were asked about implementation, uptake, impact, and sustainability of BETTER WISE.
- 585 feedback forms were received from patients who attended a 1-hour visit with their PP. They were asked about expectations for the visit, what they liked and what they would like to be different, and any other comments.

Analysis

- Qualitative data was analyzed using a constant comparative method informed by grounded theory in a first round of coding.
- The second round of coding employed the Consolidated Framework for Implementation Research (CFIR) to focus analysis on the most salient categories of the five CFIR domains to identify the facilitators and barriers to the implementation of BETTER WISE.

Results

Themes identified within the 5 CFIR domains (**Figure 1**):

- Intervention Characteristics:** relative advantage and adaptability (in the context of the COVID-19 pandemic);
- Outer Setting:** patients' needs and resources (PPs compensated for increased patient needs and decreased resources);
- Characteristics of Individuals:** patients and physicians described PPs as compassionate, knowledgeable, helpful;
- Inner Setting:** network and communication (collaboration and support in teams or lack thereof);
- Process:** COVID-19 hindered execution, but PPs mitigated and adapted to challenges.

Conclusion

Despite the COVID-19 pandemic, the BETTER WISE intervention continued, driven by the PPs and their strong relationships with patients, primary care team members, and the BETTER WISE team. Our learnings may help inform implementation strategies for prevention and screening programs facing external challenges.

Acknowledgement

Production of this poster has been made possible through a financial contribution from Alberta Innovates. The views expressed herein represent the views of the authors and do not necessarily represent the views of the project funders.

Figure 1. Quotes for themes identified within the 5 CFIR domains

Improving cancer surveillance for breast, colorectal and prostate cancer: Actionable recommendations for the BETTER Program

C. Fernandes¹, H. Cheung¹, E. Grunfeld², A. Lofters^{2,3}, D. Campbell-Scherer¹, K. Aubrey-Bassler⁴, M. Shea-Budgett⁵, T. Wong⁶, K. Latko³ and D. Manca¹

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Context

- Cancer and chronic disease prevention and screening (CCDPS) guidelines are not consistently applied in primary care.
- Cancer survivors are not only at risk of cancer recurrence but also remain at risk for other cancers and chronic diseases.
- Despite closer monitoring, cancer survivors achieve fewer prevention and screening goals than the general population.
- The BETTER Program involves an evidence-based intervention provided by a healthcare professional with enhanced skills in CCDPS and cancer surveillance, the Prevention Practitioner (PP).
- Guided by the BETTER toolkit, the PP meets with patients to assess their risk for cancer and chronic disease, and for patients with a personal history of breast, colorectal, or prostate cancer, also determines their cancer surveillance status.

Objectives

- To describe the evidence review and knowledge synthesis process used to identify and amalgamate high-quality clinical practice guidelines (CPGs); and
- To harmonize the cancer survivorship recommendations for breast, colorectal and prostate cancer; and
- To identify, develop and refine the resources and tools for inclusion in the BETTER Cancer Surveillance toolkit.

Setting

- Rural, remote, and urban primary care settings in Canada.
- Cancer survivors – adults 40-69 years of age.

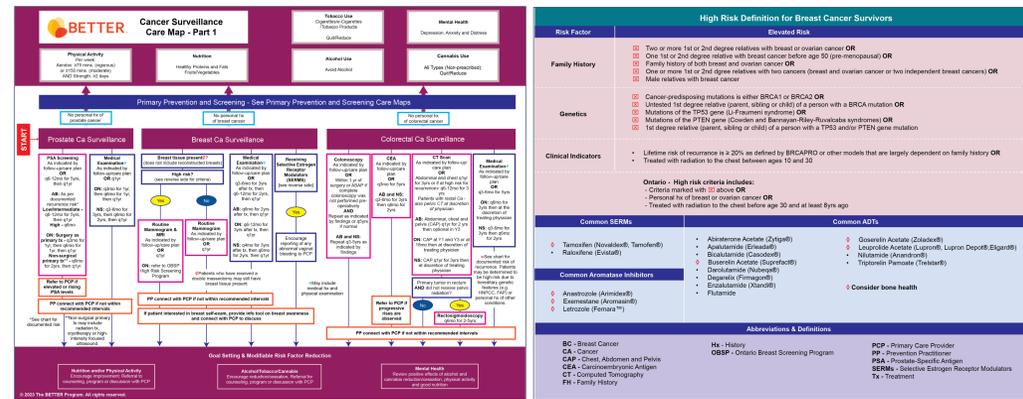
Methods

Who? Clinical Working Group (CWG) composed of decision-makers, researchers, clinicians and a patient representative across Canada.

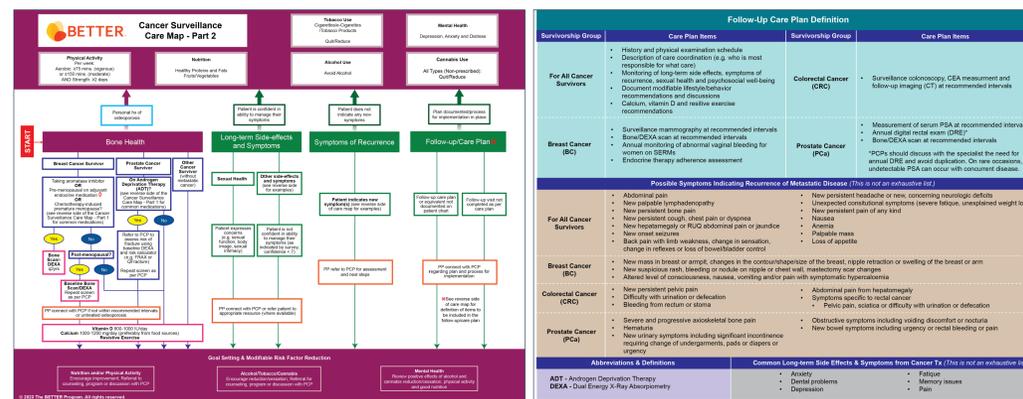
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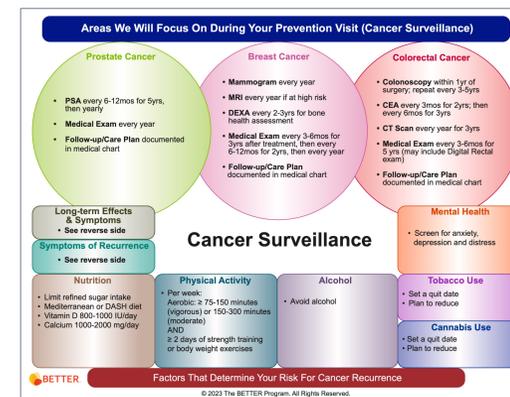
Figures 1 and 2. The BETTER Cancer Surveillance Care Map – Part 1



Figures 3 and 4. The BETTER Cancer Surveillance Care Map – Part 2



Figures 5 and 6. The Prevention Prescription and Bubble Diagram



Methods (cont'd)

How? Building on previous work¹ and working with the Centre for Effective Practice (Toronto, Ontario, Canada), high-quality international, Canadian, and Provincial CPGs published between 2016 and 2021, focusing on breast, colorectal, prostate or general cancer survivorship, and applicable to our population of interest were identified to update the existing BETTER Cancer Surveillance toolkit.

What? Four areas were identified as topics of focus for review and synthesis of the guideline recommendations:

- Breast cancer survivorship
- Colorectal cancer survivorship
- Prostate cancer survivorship
- General cancer survivorship

Results

The BETTER Cancer Surveillance Care Maps (Figures 1-4) guide clinicians on appropriate care paths for breast, colorectal and prostate cancer survivorship. These consider bone health, long-term side effects and symptoms, signs and symptoms of recurrence and follow-up/care plan for all cancer survivors 40-69 years of age.

The final CWG recommendations informed the updated BETTER Cancer Surveillance toolkit:

- Patient health survey focused on information not well documented in charts, including a detailed cancer treatment history.
- Agenda-setting and patient-facing educational tools - the Prevention Prescription and Cancer Surveillance Bubble Diagram (Figures 5 and 6).

Conclusion

Synthesized and evidence-based integrated care paths can be used to assess patients' cancer survivorship status and preferences in diverse populations in Canada.



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Greening the Central Family Medicine Teaching Clinic

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Background

As impacts of climate change increase, community medical practices are applying Planetary Health (PH) principles to “green” their workplaces.¹ However, community-based physicians are often left unsupported in this process. There are some published tools which provide broad ideas for greening of clinical care, but few describe practical implementation strategies.^{2,3}

The University of Calgary (UofC) Central Family Medicine Teaching Centre (CFMTC) is in downtown Calgary, Canada and has 66 total staff and 11,000 patients).

We conducted key informant interviews, and then applied the COM-B theory of behaviour change⁴ to implement greening of our physical workspace, operations, and clinical care. The ultimate goal of this initiative is to provide workable, pragmatic strategies for greening primary care throughout the UofC Department of Family Medicine, including urban and rural teaching practices in southern Alberta.

Methods

Our change process



Our quality improvement process has 5 steps:

- 1) pre-work: present PH concepts to staff, including policy brief⁵ and literature reviews,² as well as information about early QI projects on climate-conscious inhalers, sterile glove reduction, and table paper waste reduction.
- 2) staff survey: establish interest, create Green Team,
- 3) pledge to action: create a clinic PH pledge (Figure 2),
- 4) large group session: quality improvement half day for all clinic staff: workshop QI initiatives and introduce Indigenous Ways of Knowing, and
- 5) small group workshop: develop QI projects for future implementation.



Results

- Early projects resulted in greater awareness of PH and **13%** reduction in use of climate-unwise metered-dose inhalers clinic wide.
- Initial survey results (n = 27)
 - a. Median 4 out of 5 felt it was important our clinic became environmentally friendly
 - b. 63% interested in advocating for change
 - c. Our green team grew from 3 to 9 individuals
- PH pledge becomes our own!
- QI half day
 - a. Indigenous Ways of Knowing, care for ourselves so we can care for the planet – Elder Pablo Russell
 - b. Workshop quality improvement projects
 - c. Update: **15%** clinic-wide reduction in climate-unwise metered-dose inhalers
 - d. Pre/post paired workshop findings (n=30) improvements in:
 - i. understanding of PH principles
 - ii. comfort in initiating quality improvement projects
 - iii. and 23, yes 23, new members added to our Green Team!
 - iv. LIST OF IDEAS FOR QI PROJECTS

**The Central Family Medicine Teaching Clinic
Planetary Health Pledge**

I, as a healthcare worker, solemnly pledge to:

- Practice my career with conscience and dignity and in accordance with good practice, taking into account planetary health values and principles.
- Advocate for equity and justice, inclusive of Indigenous Ways of Knowing, by actively addressing environmental, social, and structural determinants of health while protecting the natural systems that underpin a viable planet for future generations.
- Attend to our own health, wellbeing, and abilities in order to provide care and serve the community to the highest standards.
- Be a role model for my patients and society by embodying planetary health principles in my own life, acknowledging that this requires maintaining the vitality of our common home.



Pap test... can patients bring their own drapes for the pap clinic.

Paper reducing thru: Electronic scheduling, exam bed paper usage, recycling appropriately.

Speculum project – either switching to metal or implementing reusable lights., decrease driving by booking families together. E-faxing, reduce paper.

Recycle appropriate materials in clinic. Turn off lights, computers, screens. Paper reduction.

i. LIST OF PERSONAL CHANGE IDEAS

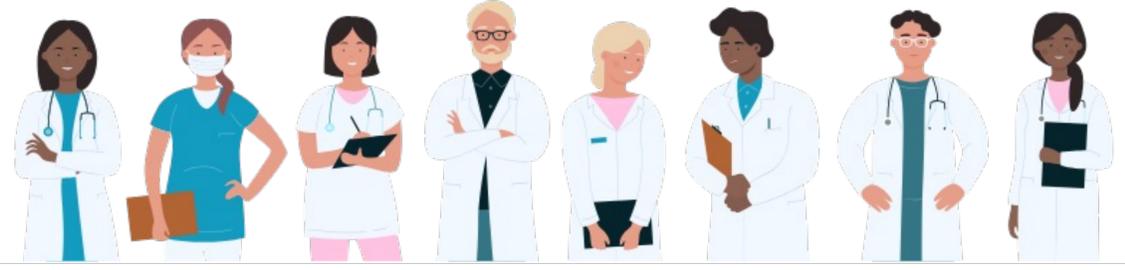
Avoid plastics, save papers, recycle wherever possible

Phone appointments/virtual care for patient around this time of year due to weather, transportation and if concern does not require a physical assessment.

DPI vs MDI and learn how to sew to fix items.

[Decrease] use of paper roles, giving web address of patient education material

Buying in bulk, minimizing single plastic use, reduce emission with current vehicle.



Conclusions

To date, the greening process at the CFMTC has engaged staff beyond expectations and will serve as an excellent framework for other UofC affiliated community primary care clinics to model as they begin their greening journey.

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Development and Delivery of a Workshop on Physical Examination of the Ear, Nose, Throat, and Neck

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A workshop on physical examination of the ENT-Neck is a unique learning opportunity for family medicine residents and medical students because of the minimal training in ENT knowledge/skills.

BACKGROUND

- Inadequate knowledge and examination skills among trainees
- Shift to online education during the COVID-19 pandemic

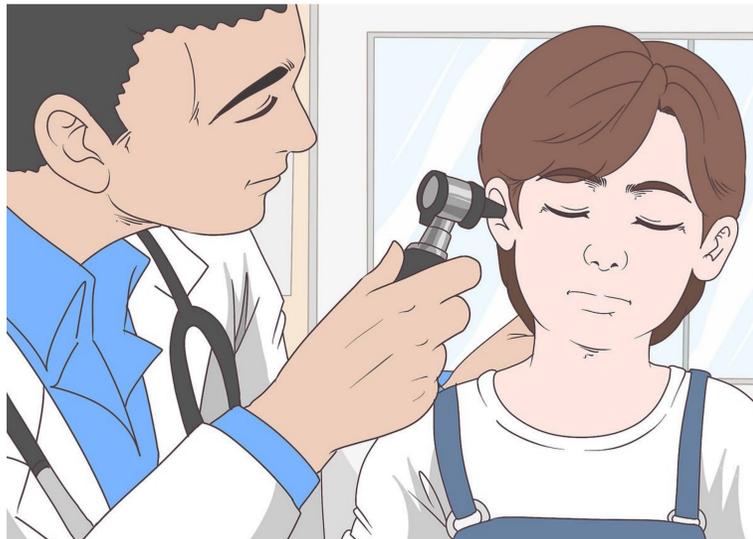
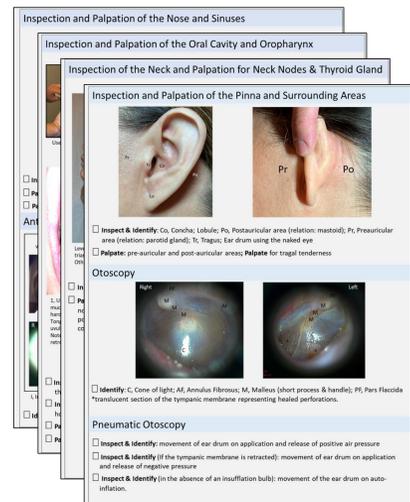
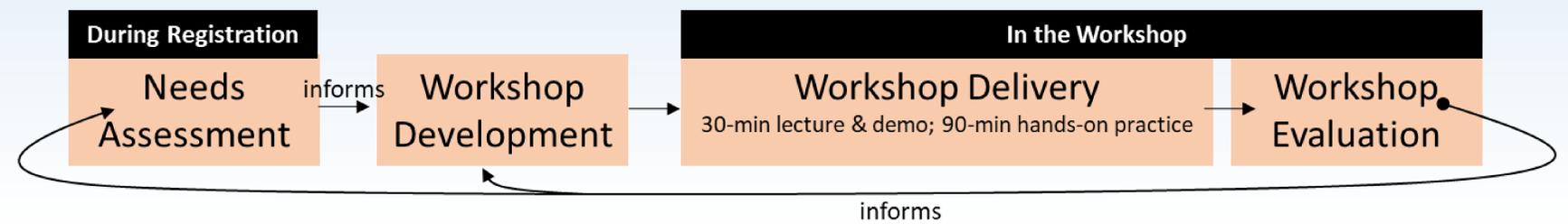


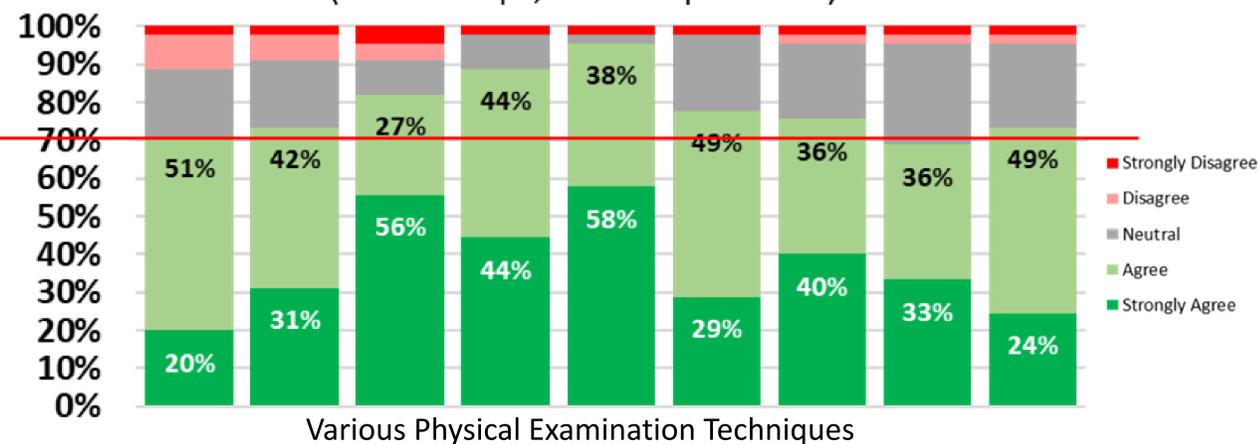
Image Credit: <https://www.wikihow.com/Relieve-Ear-Pain-at-Night#/media:Relieve-Ear-Pain-at-Night-Step-13.jpg>

METHODS

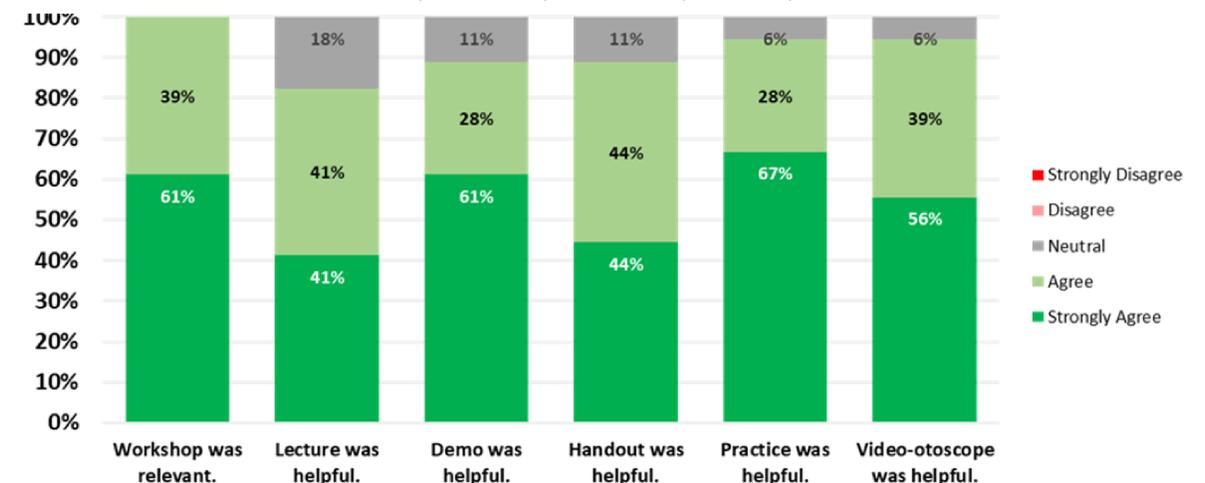


RESULTS

Needs Assessment – Family Medicine Residents (3 workshops; n=45 respondents)



Evaluation of Workshop Components – Family Medicine Residents (3 workshops; n=18 respondents)



Examining Training Experiences and Practice Patterns of Graduates of Enhanced Skills Programs

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INTRODUCTION

- Enhanced Skills (ES) training provides additional training to family physicians in Canada. We aimed to better understand the training experiences of physicians who have completed ES training at one Canadian university.
- Objective: To explore the training experiences of physicians who graduated from ES programs at the

METHODS

- Design: A mixed methods study using both survey and interviews to explore graduates perspectives on the strengths and weaknesses of ES programs.

Online Survey



Online Interviews

- Outcome Measures. Perceived strengths and weaknesses.

RESULTS

A total of 56 ES graduates completed the survey (response rate = 36.8%); Nine interviews

Clinical Issues	Overall
Management of common clinical problems	V. Prepared (41/44; 93.2%)
Referral and consultation process	V. Prepared (30/44; 68.2%)
Approach to clinical problems	V. Prepared (36/44; 81.8%)
Teaching of health promotion / prevention	V. Prepared (19/44; 43.2%)
In-hospital management of patients	V. Prepared (22/44; 50.0%)
Evidence-based Medicine (critical appraisal)	V. Prepared (26/44; 59.1%)
Procedural Skills	V. Prepared (20/44; 45.5%)
Urgent/Emergency Care	V. Prepared (21/44; 47.7%)
Psychosomatic problems	S. Prepared (25/44; 56.8%)
Management of psychosocial problems	S. Prepared (21/44; 47.7%)
End-of-Life / Palliative Care	S. Prepared (18/44; 40.9%)
Cost-effective Use of Diagnostic Tests	S. Prepared (16/44; 36.4%)
Continuity of Care	S. Prepared (15/44; 34.9%)
General Issues	Overall
Communication skills	V. Prepared (27/44; 61.4%)
Clinical/medical ethics	S. Prepared (31/44; 70.5%)
Cross-cultural issues	S. Prepared (28/44; 63.6%)
Health care system	S. Prepared (24/44; 54.5%)
Health care reform	S. Prepared (21/44; 47.7%)
Maintenance of clinical competence	S. Prepared (19/44; 43.2%)
Relating to professional organization	S. Prepared (24/44; 54.5%)
Physician self-care and wellness	S. Prepared (24/44; 54.5%)
Practice Management Issues	Overall
Medical/legal issues	S. Prepared (24/44; 54.5%)
Issues related to establishing a practice	S. Prepared (23/44; 53.5%)
Organization of practice	S. Prepared (24/44; 55.8%)
Clinic records	S. Prepared (19/44; 43.2%)
Electronic medical records	S. Prepared (20/44; 45.5%)

Most Perceived Strengths (Survey)

- Program organization (40/48, 83.3%)
- Approachability of instructors (39/47, 83.0%)
- Availability of resources (38/47, 80.9%)
- Structured Learning (36/48, 75%)
- Examination Process – Oral (26/39, 66.7%)
- Flexibility to meet indiv. needs (31/47, 66.0%)

Most Perceived as Neutral/Weakness (Survey)

- Evaluation Process - Faculty (33/48, 68.8%)
- Awareness of rural needs/opp (29/42, 60.4%)
- Evaluation Process - Residents (26/48, 54.2%)
- Evaluation Process - Program (25/48, 52.1%)

Four Themes from Interviews (n=9)

- Residents gained core skills and academic knowledge
- It is important to have skilled and committed preceptors
- Resident wellness and work-life balance are differentially impacted, the program can be lengthened and strengthened.

CONCLUSION

Taken together, results suggest that the experiences of graduates overwhelmingly support ES programs. These results can help tailor the programs going forward to build a better experience.

Culturally-Appropriate End-of-Life-Care Considerations for Physicians and Other Formal Care Providers

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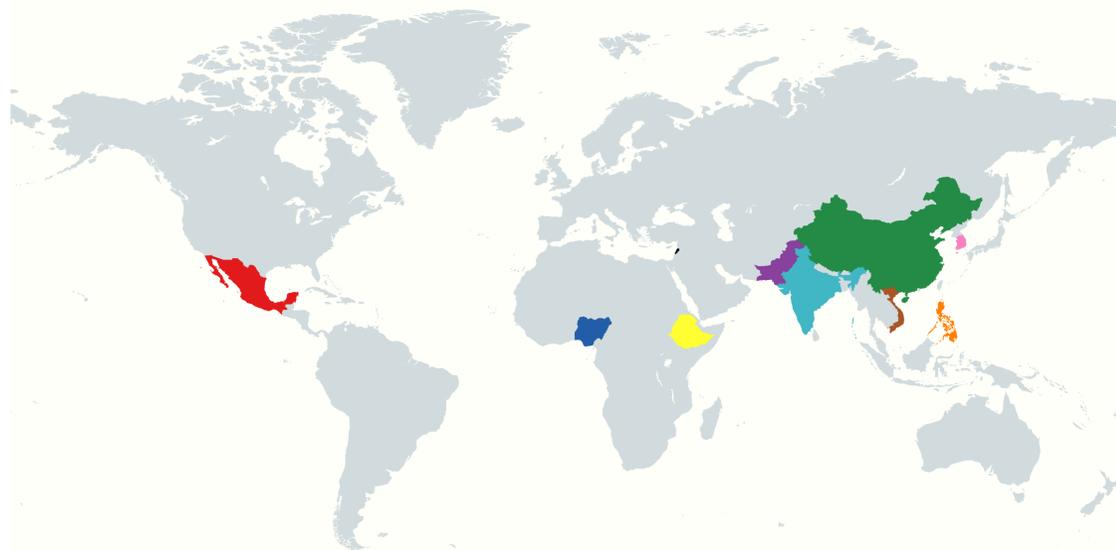
Corresponding Author: Dr. Jean Triscott (Jean.Triscott@ualberta.ca)

INTRODUCTION

- 33,000 deaths occur each year in Alberta, a number that will increase with population growth and population aging.
- Alberta is largely comprised of people who moved here from other countries.
- Alberta is not alone in needing to address culturally-relevant health care considerations, as nearly ¼ of all Canadian citizens now were born in another country.
- People are increasingly arriving from African and Asian countries, where different traditions exist in relation to appropriate (and inappropriate) activities occurring before death, at the time of death, and in the immediate post-death period.
- Culturally relevant end-of-life activities and care practices have become a major consideration for end-of-life planning.
- With less than half of all deaths taking place in hospitals now, physicians and other formal care providers need to take new, different, and also highly diverse cultural norms and expectations into consideration, and regardless of where the end-of-life care occurs.

OBJECTIVE & METHODS

- A multi-stage literature review was conducted to identify culturally-appropriate and also inappropriate end-of-life activities in the pre-death, time of death, and immediate post-death periods for 10 of the newest, larger, and growing immigrant groups: Philippines, India, China/Hong Kong, Pakistan, Vietnam, Mexico, Korea, Nigeria, Ethiopia and Lebanon.
- After library database searches and Google searches were concluded, the information gained for each of the 10 immigrant groups was confirmed or corrected by local, provincial, or federal cultural group leaders in Canada.



RESULTS

- Some dying people and their families hold to what was practiced in their home country before immigrating to Canada, even if those practices have since changed, while others have adopted or will accept Canadian practices.
- There is no certainty about what dying people who immigrated to Canada and their families expect from physicians, other formal healthcare providers, and the healthcare system.
- We encourage asking 5 open-ended questions about cultural practices and end-of-life customs to gain insight into what cultural considerations are important to the dying person and their family.

1

- Is it ok if I ask you some questions about your end-of-life customs?

2

- Where was your family member born?

3

- Are there any cultural expectations about what should happen now in this end-of-life care period?

4

- Are there any cultural expectations about what should happen when the death takes place?

5

- Are there any cultural expectations about what should happen soon after the death takes place and how the body should be managed?

CONCLUSION

- This scoping review was undertaken to gain information on culturally-appropriate end-of-life care for dying people and their families who are members of ten (new) immigrant groups in Alberta.
- Given the cultural diversity identified, it is important for physicians and other care providers to not only be open to differences but also to learn about any individual or family-specific end-of-life expectations or preferences.
- Meeting these preferences or attempting to meet them could be a major factor in making this a “good” death for all people involved.

Exploring the Initial Residency Match Intentions of Applicants to FM-EM Enhanced Skills Programs

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 Departments: ¹University of Calgary, Department of Family Medicine, ²Western University, Department of Family Medicine, ³University of British Columbia, Department of Family Medicine



UNIVERSITY OF CALGARY

Objectives

- Describe the initial PGY1 match intentions of applicants to PGY3 FM-EM programs
- Identify demographic factors that impact application to PGY3 FM-EM programs
- Compare PGY3 applicant initial PGY1 match intentions to the family medicine residents overall

Background

- Focused practices have become commonplace amongst family physicians in Canada
- The 2010 National Physician Survey indicated that 30.5% of general practitioner respondents reported having a focussed practice – emergency medicine was the most common of these
- There are currently at least 30 enhanced skills training programs offered through Canadian medical schools
- The enhanced skills program in Emergency Medicine was chosen for this study for a number of reasons
 - It is the largest of enhanced skills program options – for the 2022 enhanced skills match cycle, 134 out of 277 (48.4%) of total enhanced skills positions that match through CaRMS were for emergency medicine
 - Enhanced skills Emergency Medicine has been utilizing CaRMS for its application process for longer than most enhanced skills programs allowing for a centralized data source to utilize for analysis

Methods

- This study was a retrospective analysis using secondary data from the Canadian Residency Match Service (CaRMS)
- Participants included all applicants to Family Medicine Enhanced Skills training in Emergency Medicine from 2016-2020
- For baseline data related to all PGY 1 Family Medicine residents, a cohort from 2013-2017 was used – this was meant to accommodate for a time lapse between PGY 1 and PGY 3 application cycles

Results

Demographics

- FM-EM applicants represented a slightly younger cohort of overall family medicine residents (27.9 years vs 28.5 years of age – adjusted to time of FMR1 match)
- There was a significant shift towards male applicants to FM-EM training compared to the overall gender distribution of all FM residents (61.1% of all FM residents are female compared to 45.7% of FM-EM applicants). Of note, there was no statistically significant gender difference between successful and unsuccessful candidates to FM-EM programs.
- There is a statistically significant difference in increased Canadian Medical Graduates applying to FM-EM program versus International Medical Graduates when compared to the distribution in FM programs overall (84.1% of FM residents are CMG vs 88.3% of FM-EM applicants)

		FM-EM	FM-R1
Average age		29.7	28.5
Total applicants		1181	7253
Gender	Male	641	2823
	Female	540	4430
Medical School	CMG	1043	6099
	IMG	134	1096
	USMG	4	58

Table 1 – Demographic summary

FM Interest at Time of PGY1 Application

- 30.5% of FM-EM applicants had a non Family Medicine first choice at the time of their initial PGY1 CaRMS match
- This compares to 15.3% of FM residents as a whole
- Of note, there was no difference in the FM interest between successful and unsuccessful FM-EM applicants

		FM 1 st choice	Non FM 1 st choice
FM-EM	All applicants	821 (69.5%)	360 (30.5%)
	Successful	442 (69.8%)	191 (30.2%)
	Unsuccessful	379 (69.2%)	169 (30.8%)
FM-R1		6145 (84.7%)	1108 (15.3%)

Table 2 – FM interest at time of PGY 1 application

First Choice Discipline	Total
Family Medicine	6145
Emergency Medicine	164
Internal Medicine	147
Pediatrics	137
Anesthesiology	90
Obstetrics and Gynecology	88
Dermatology	76
Psychiatry	71
Family Medicine integrated Emergency Medicine	50
Diagnostic Radiology	41

Table 3 – Top 10 first choice specialities of FM residents

Limitations

- For the purposes of first choice speciality, due to confidentiality parameters in the data mining, only the last iteration applied to before the match could be used for this data – for example – a candidate who was unsuccessful to a specialty of choice in the 1st round of the CaRMS match who then applied to Family Medicine in the 2nd round would be listed as a having Family Medicine as a first choice discipline – the assumption is that this underrepresents the number of residents who had a non-FM first choice for both FM residents as a whole and for FM-EM applicants.

Summary of Study

- Applicants to FM-EM programs had a higher likelihood of having a non-FM first choice at the time of PGY1 residency application. This was true for both successful and unsuccessful FM-EM applicants
- There were also differences in gender (increasingly male) and smaller differences in age (slightly younger) and location of medical school graduation (increasing Canadian) for FM-EM applicants

Implications

- From a health human resources perspective as we consider numbers of family medicine trainees across the country and expectations of the future practice patterns of these trainees upon graduation, it becomes an important consideration to consider that a large proportion may end up in specialized practice settings
- While considering the number of enhanced skills positions across the country on an annual basis would help in this consideration, it is also important to recognize that there are other residents who upon the initial residency match did not necessarily seek family medicine as a first choice raising the possibility that they may seek practice styles that don't include comprehensive office-based family medicine

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A New Selection Test for Family Medicine



UNIVERSITY OF CALGARY

FMPProC CProMF
Family Medicine Professional Choices
Choix Professionnels en Médecine de Famille

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- ⁷ Work Psychology Group, Derby, UK.



Work Psychology Group
Thinking differently

BACKGROUND

2020-Family Medicine (FM) Residency Program Directors' Selection Working Group recommendations included:

- Improve assessment of non-academic attributes
- Improve psychometric rigor & reduce bias
- Increase use of technology

There is good validity evidence for use of situational judgement tests (SJTs) in assessing non-academic attributes and predicting the subsequent in-training performance of the attributes.¹⁻³

KEY INTERVENTION

Develop, implement and evaluate an online Canada FM-specific SJT for national use by FM Residency Programs in the selection process.

RESEARCH QUESTIONS

1. How reliable is a Canada-FM SJT developed for use in the ranking of applicants in FM residency selection?
2. How do different demographic groups perform on the Canada-FM SJT?
3. What are the candidate reactions to the Canada-FM SJT?

DATA COLLECTION

2021

- SJT developed, piloted and evaluated in collaboration with Work Psychology Group®
- Designed to assess: professional integrity, adaptability, team-working/collaboration and empathy/compassion⁴⁻⁷

2022 CaRMS Cycle-operationalization & evaluation

- Mandatory for 6/17 FM Programs
- Psychometric analyses of test and item performance
- Demographic survey and post-test evaluation survey

2023 CaRMS Cycle-operationalization & evaluation

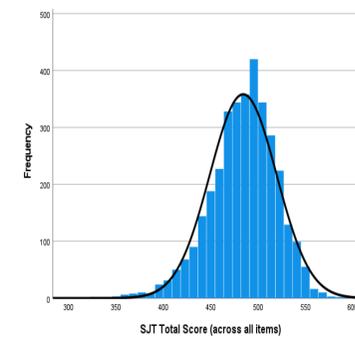
- Mandatory for 13/17 FM Programs
- Psychometric analyses of test and item performance
- Demographic survey and post-test evaluation survey

RESULTS

Test Performance-2022 & 2023 Score distribution, overall and by test version

Version	N	Reliability, α	Mean (SEM)	Max possible score	Difficulty level, % (SD)	Min score	Max score
2023 All Applicants	3478	.82	484.24 (14.93)	629	77.0% (35.21)	150	585
2023 English	2959	.82	484.52 (14.93)	629	77.0% (35.29)	150	585
2023 French	519	.83	482.66 (14.52)	629	76.7% (34.75)	336	585
2022 All Applicants	1835	.78	487.15 (14.55)	654	74.5% (31.10)	316	561
2022 English	1309	.76	490.40 (14.16)	654	75.0% (29.03)	316	561
2022 French	526	.81	479.05 (14.98)	654	73.2% (34.46)	323	555

2023 Overall score distribution (N=3478)



2023 Test item quality

	Rating Items (109 items)	Ranking Items (10 items)
Good %	23.9%	10.0%
Satisfactory %	40.4%	50.0%
Moderate %	14.7%	20.0%
Limited %	21.1%	20.0%

- Item analysis used to assess the effectiveness of each individual rating or ranking test item
- Correlated with mean SJT score
- Analysis led to 3/119 test items being rekeyed

2023 Demographic survey (selected data)

	Category	N	% of respondents	Mean score (SD)	Effect Size (Cohen's d)
Test Language*	English	2947 [†]	85.0%	485.04 (34.14)	Not statistically significant
	French	519	15.0%	482.66 (34.75)	
Gender identity	Man	288	32.9%	482.01 (36.43)	.16 (negligible effect size)
	Woman	568	64.9%	487.59 (35.32)	
Place of Medical Education	Canadian Medical Graduate (CMG)	362	41.1%	492.26 (33.33)	.33 (small effect size)
	International Medical Graduate (IMG)	519	58.3%	480.63 (36.64)	
	United States Medical Graduate (USMG) [‡]	5	0.6%	-	

- Optional survey completed before or after the test
 - Response rate: N=953/3478 (27%)
 - Data linked to candidate test scores
- * Test language information obtained directly from the test
[†] 12 outliers were removed
[‡] USMG candidates were excluded from the analysis due to a small sample size

2023 Candidate evaluation (selected data)

Survey statement	% of respondents who agreed with the statement (total number of respondents)	
	English	French
Test content was relevant to role of a Canadian Family Physician	84% (N=2548)	75% (N=439)
Test content was appropriate level of difficulty for training level	80% (N=2546)	72% (N=437)
Test content was fair to all applicants	69% (N=2524)	75% (N=429)

- Optional anonymous survey completed immediately after the test
- Response rate: N=3006/3478 (86%)
- Qualitative feedback:
 - o Concerns & suggestions related to the functionality of the testing platform
 - o Phrasing of scenarios and scales a little unclear & could benefit with more specificity
 - o Insufficient time allocated to complete the test

DISCUSSION & CONCLUSION

- The Canada FM-SJT demonstrated overall excellent level of internal reliability ($\alpha=0.82$)
- Promising early indications that the Canada FM-SJT is suitable for measuring non-academic attributes & can differentiate between applicants
- Slight differences in test performance observed between demographic groups – women and CMGs scored higher than men and IMGs respectively, but negligible to small differences only
- Consistent & generally positive candidate feedback across English and French test versions
- Candidate feedback to be used in 2024 test version

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Respiratory Virus Trends in Alberta Communities: 2018-2024 Analysis

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¹TARRANT Viral Watch, Department of Family Medicine, University of Calgary

²Alberta Precision Laboratories

Background

- Viral surveillance can detect epidemics and circulating strains in the community.
- COVID-19 disrupted the usual patterns of seasonal respiratory viruses in 2020.
- Have the usual patterns of seasonal respiratory viruses returned to normal since?

Objective: To describe trends in respiratory viruses in the community from 2018 to 2024.

Methods

Design: Community sentinel viral epidemiological study in Alberta.

Participants: volunteer family physicians (“Sentinels”) working in community clinics in Alberta.

- Sentinels obtain swabs from patients presenting with influenza-like illness.

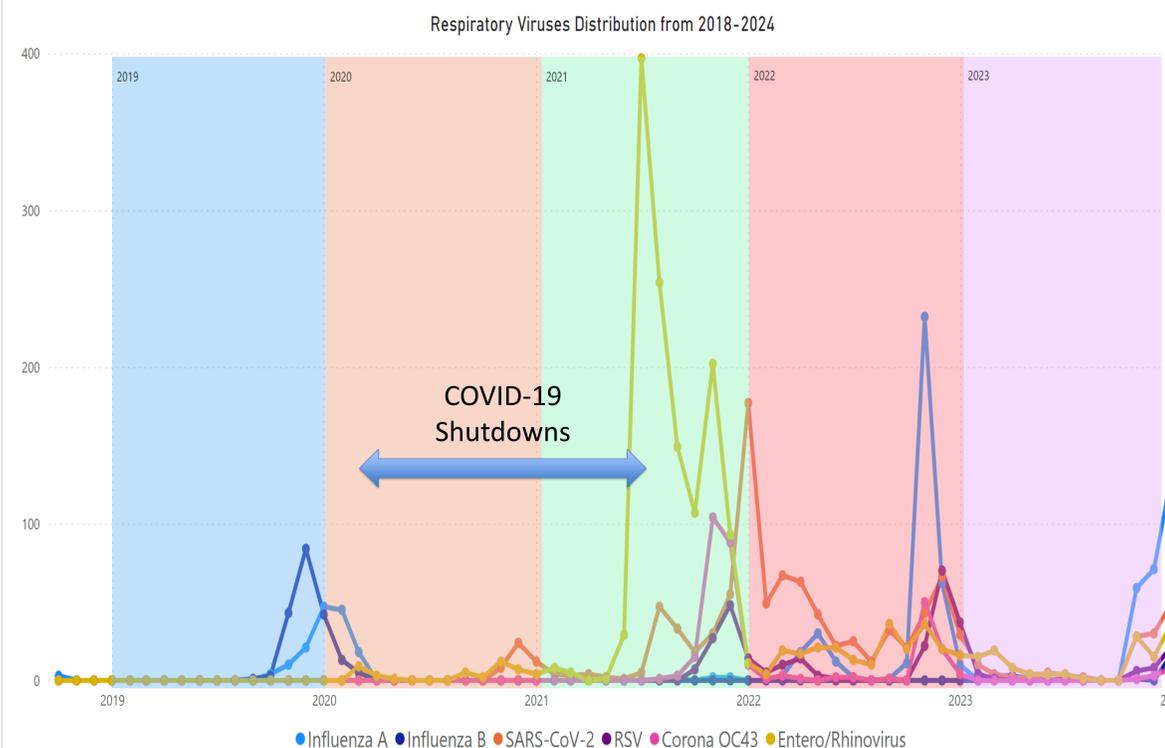
Outcomes: Time-sequence tallies of laboratory-confirmed cases of the most common viruses observed: **Influenza A, Respiratory Syncytial Virus (RSV), Enterovirus/Rhinovirus, Coronavirus OC43, and SARS-CoV-2.**

- The number of cases was compared between males and females over the years (2018 to 2024) using the Chi-squared Test.
- As of January 2024, we have received n=6670 specimens.

Table 1. Study characteristics.

	Total (N=6670)
Sex	
Female	4003 (60)
Male	2658 (39.9)
Other	1 (0)
Age	
< 1 year	38 (0.6)
1-10 years	1073 (16.1)
11-20 years	760 (11.4)
21-60 years	5036 (60.3)
> 61 years	769 (11.5)

Results



- The Winter 2020 rise in SARS-CoV-2 cases in the community disrupted the seasonal influenza A and B patterns (Figure 1).
- TARRANT sentinels were able to capture various COVID-19 waves in Alberta in December 2020, August 2021, and January 2022.
- SARS-CoV-2 has been consistently detected in the community every winter since December 2022, alongside the resurgence of seasonal influenza.
- The number of COVID-19 cases was very low during the summer of 2023 and picked up again in November.
- In this current season, we see the usual rise in Influenza A cases, along with Enterovirus/Rhinovirus, SARS-CoV-2, and RSV.
- Fewer males participated than females.

Table 2. Number of viral cases by sex.

	Influenza A*	Influenza B	SARS-CoV-2	RSV	Enterovirus/Rhinovirus*	Corona OC43
Female	207 (53.6)	119 (59.8)	524 (61.1)	119 (59.5)	895 (57.1)	672 (42.9)
Male	179 (46.4)	80 (40.2)	333 (38.9)	81 (40.5)	155 (57.8)	113 (42.2)
Total	386	199	857	200	1567	268

Data show count and proportion. * indicates statistical significance between sexes (p<0.05).

Discussion

- The pattern of regular winter influenza epidemics was interrupted by the COVID-19 pandemic in winter 2020. No other viral epidemics were detected that year until a rise in influenza in December.
- Our surveillance captured the rise in COVID-19 cases during the successive waves.
- We show the resurgence of other viruses to provide a mix of viral diseases in the community.
- COVID-19 now appears to be endemic, appearing annually and with cases peaking every December.



Aim

- **Scope:** to explore refugee experiences in Calgary and surrounding area, across different COVID-19 vaccine delivery models in 2021-2022.
- **Purpose:** to understand the barriers, strengths, and strategies of various models to support access to COVID-19 vaccination for refugees.

Method

Setting: Calgary and surrounding area, Alberta, Canada

Design: Qualitative interview study.

• **Participants, N=61:**

- Refugees (n=45)
- Private refugee sponsors (n=3)
- Stakeholders from healthcare, community, and settlement organizations (n=13)

Interview data was sorted and analyzed through thematic analysis, with a focus on the research questions.

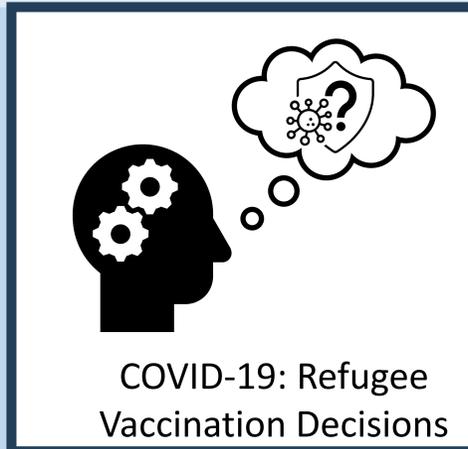
Key Recommendations

- **Embed culturally responsive practices** into models through first-language and same gender staff, community outreach and tailored clinic design.
- **Collaborate equitably with partners** that reflect the diverse needs of community.
- **Advocate for access to flexible funding** streams for outreach and vaccinations that enable multi-targeted approaches.

Diverse Models Available to Refugees in Calgary

I. On-site Vaccination Services
e.g., Urban refugee processing hotel with vaccine services, refugee specialized clinic

II. Mobile or Pop-Up Services
e.g., Temporary vaccine clinics in strategically located community sites



III. Mainstream Vaccination Services
e.g., Pharmacies
Private clinics
Provincial Health Clinics

Factors Affecting Refugee Vaccination Decisions

- Concerns about side effects.
- Beliefs in vaccine necessity and effectiveness.
- Concerns about risks to subpopulations.
- Fear of COVID-19, desire to protect self.
- (Mis)information.
- Desire to protect others.
- Influence of family members.
- Information overload.
- Access to evidence-based information, trusted sources.
- Secondary information sources and personal networks.
- Pre-migration experiences.
- Fatigue, indifference, and booster-specific hesitancy.
- Accessibility and barriers: Appointment times, booking pathways, geography, access to faith accommodations, English bureaucracy.
- Structural factors: Eligibility, mandates, incentives, access to tailored models, public health information.
- Other determinants: time in Canada, language literacy, experiences with health systems, level of education.

Stakeholders said:

- ✓ Have low-barrier, culturally responsive **clinic design**.
- ✓ Provide **cultural interpretation & translation**.
- ✓ Include community **outreach**.
- ✓ Make **partnerships** with healthcare, settlement and community organizations.
- ✓ **Advocate** for funding and autonomy.

To increase COVID-19 vaccine uptake for refugees in the context of diverse models and numerous factors.

Refugees said:

- ✓ Work through **trust and relationships**.

Healthcare provider perceptions of an integrated Community Health Navigator program in Alberta: a qualitative descriptive study



UNIVERSITY OF CALGARY

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Background

- There is growing interest in primary care settings to improve care access and coordination, particularly for patients with complex, chronic health conditions and those experiencing barriers to care (such as social and care access/equity barriers).¹
- Integration of trained, non-clinical team members in the Patient Medical Home (PMH), such as Patient Navigators and Community Health Navigators (CHNs), is increasingly common; however, health care providers' (HCPs) experience with these expanded care programs are not well understood.²
- Objective:** We sought to describe HCP experience, including: **(1)** acceptance, **(2)** barriers/facilitators to HCP engagement, and **(3)** suggestions for improvement, with a CHN program that was implemented in four Primary Care Networks (PCNs) in Alberta, Canada



Methods

- Qualitative descriptive study using semi-structured interviews with HCPs. Interviews were conducted from November 2022 to April 2023.
- We used codebook thematic analysis³ and mapped themes to The Acceptability Framework.⁴
- This study is a sub-study of a provincial evaluation of the CHN intervention.

CHN program eligibility & participation

- Patients were eligible to receive CHN services if they had ≥ 2 of 6 chronic conditions* and were experiencing a barrier to care.
- 422 patients were enrolled** in the CHN program from 2018 to 2023.

*Hypertension, diabetes, chronic kidney disease, heart disease, heart failure, chronic obstructive pulmonary disorder/asthma

Results

1 HCP acceptance:

- HCPs value the addition of CHNs in the PMH, particularly as supports to the multidisciplinary team (Figure 1.1).
- HCPs felt the services provided were appropriate and patients achieved tangible outcomes.

2 Barriers/facilitators to HCP engagement:

- Some HCPs initially had a poor understanding of the CHN program & role, though this generally improved as they had more exposure to the program (Figure 1.2).
- Many HCPs felt the referral criteria were too restrictive.
- Greater CHN integration in the team facilitated communication and program understandability.

3 Suggestions for improvement:

- Improve awareness of the CHN role and communication between CHNs and HCPs (Figure 1.3)
- Broaden program eligibility & streamline referral processes

Table 1. Interview participant characteristics

Participant Characteristic (n=22)	n (%)
HCP Role	Physician 9 (40.9)
	Nurse 6 (27.3)
Multidisciplinary Team (MDT) 7 (31.8)	
Gender	Male* 4 (18.2)
	Female 18 (81.8)
Age (years)	25-40 8 (36.4)
	41-55 7 (31.8)
	> 55 7 (31.8)
Length of time in role (years)	< 5 6 (27.3)
	5-10 9 (40.9)
	> 10 7 (31.8)
Clinic location	Calgary & area 13 (59.1)
	Edmonton & area 9 (40.9)

*Male participants were all physicians

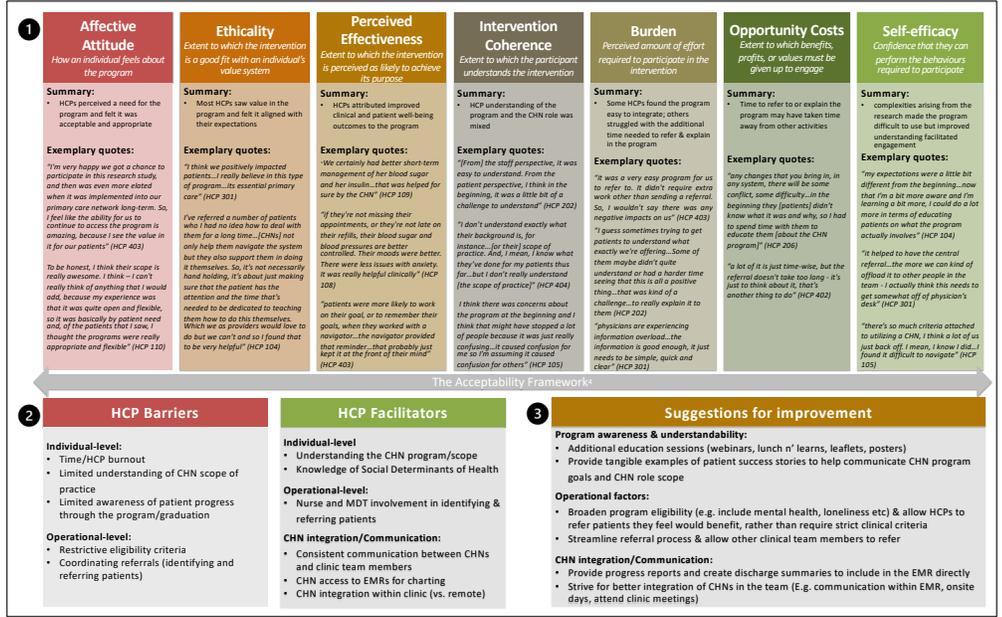


Figure 1: HCP perceptions of the CHN program, including 1) acceptance of the CHN program, 2) barriers/facilitators to engagement, and 3) suggestions for improvement.

Discussion

- Acceptability of the program overlaps with acceptability of the research study.
- There may be an association between constructs – e.g., perceived effectiveness likely influences affective attitude.
- Perceptions of other participants (patients, CHNs, leadership) will add to our overall understanding of acceptability.

Conclusions

- Results of this study will be used to inform potential adaptations to and expansion of the CHN program.
- This study also provides insight relating to HCP experience with non-traditional care roles.

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Implementation of a Community Health Navigator Program in Alberta: Barriers, Facilitators, and Lessons Learned



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BACKGROUND AND OBJECTIVE

Enhancing COMMunity health through Patient navigation, Advocacy and Social Support (ENCOMPASS) is a program of research investigating the use of a community health navigator (CHN) for adults with multiple chronic conditions in primary care. The CHN program aims to support patients in accessing health and social services to improve wellbeing, self-management, and access to needed care.

This study aims to understand barriers and facilitators to implementation of the CHN program in Alberta Primary Care Networks (PCNs) and provide recommendations for program sustainability and expansion.

STUDY DESIGN

Qualitative descriptive study using semi-structured interviews analyzed using codebook Thematic Analysis informed by the RE-AIM framework

METHODS

We partnered with four PCNs in Alberta to conduct randomized control trials of the Community Health Navigator (CHN) innovation (2018 - 2022).

Semi-structured interviews conducted from March 2022 to March 2023 with participants purposely sampled from all impacted groups: leadership and interdisciplinary team members within the PCN; physicians and clinic staff within primary care clinics; CHNs, and patients.

An evidence-based program theory¹ and the RE-AIM framework² guided the implementation and evaluation of the innovation.

Three researchers independently coded transcripts using Codebook Thematic Analysis.³ All authors participated in discussion of findings and interpretation during theme construction.

PARTICIPANTS

CHNs (22)	Healthcare providers (22)	Organizational leaders (13)
Gender		
19 (86 %) Female 3 (14 %) Male	18 (82 %) Female 4 (18 %) Male	10 (77 %) Female 2 (15 %) Male 1 (prefer not to answer)
Years in role		
Median 1.7 years (7 months - 5 years)	Median 8 years (1 - 42 years)	Median 4 years (11 months - 7 years)
Highest level of education		
Bachelor's degree 9 (41 %) non-university Diploma 10 (45 %) Master's degree 3 (14 %)	Bachelor's degree 5 (23 %) non-university Diploma 3 (13 %) Master's degree 5 (23 %) MD 9 (41 %)	Bachelor's degree 5 (39 %) Master's degree 6 (46 %) PhD 2 (15 %)

Figure 1. Characteristics of interview participants

FINDINGS

Facilitators

- PCN and physicians' values align with program
- Awareness of patients' health-related social needs
- Program design and low complexity
- Funding
- CHN training package

No other programme at [PCN, name removed] that we had implemented [...] had received that much support in its design and implementation. And I would say that's a huge asset that's often lost or undervalued from an operational perspective. (L107)

Adoption

- PCN and physicians' competing priorities
- Low understanding of CHN role, capacities
- Organizational and social context (the COVID pandemic)
- Research component of the innovation

Both within our organisation [...] as well as the physician offices didn't quite understand who this person is - who is not a quite unique "professional" [...] There's no degree, there's no certificate [...] these are not medical professionals. So what can the doctors ask them to do? And what can't they ask them to do? (L201)

Reach (patients)

- Established trust with their physicians
- Physician referred/discussed program with patient
- Awareness of their needs for support
- Isolation / loneliness

Cold-calling a patient when they've never heard about the program, we got a lot more declines, whereas like a patient who had already talked to their doctor about it or somebody at the clinic about the program and agreed to be contacted, were more likely to agree because they've already heard about it. (Sup4)

- Patients overwhelmed/stressed by sickness, caregiver demand
- Limited trust
- Unaware of their needs
- Recruitment over a phone without previous knowledge of the program
- Research component of the innovation

I would say it was about 50/50. I think everyone thought that the program could be useful, but only 50 percent of the people we were talking to thought that they needed it or could benefit from it. I think a lot of people thought that they were in better control of their conditions than they actually are. (CHN3)

Implementation

- Well supported physicians (by clinic staff)
- Evidence of benefits: Early successes/experiences with program
- Patient motivation/activation
- Strong CHN - patient connection

When we're looking at projects or QI work, it tends to be the same people stepping up and stepping forward. The ones that are most successful have fairly stable clinical staff, MDs, practice facilitators, they may have a nurse in clinic and typically if they have a nurse in clinic, they're very collaborative with that nurse. (L104)

- Physician burnout
- Narrow referral criteria (research-related)
- Minimal integration with physicians and clinic teams
- Challenging engagement with some patients & unrealistic expectations
- Restrictions on in-person contact during the COVID-19 pandemic

Physicians don't want to talk to anyone right now. It's huge burnout [...] physicians are experiencing information overload. [...] You're just catching up at a time with communications within the PCN. [...] I think it's hard for people to imagine the amounts of different players in primary care. So the amount of different information that comes on a daily basis to physicians about different things. (HCP301)

Effectiveness

- Patient motivation/activation
- Strong connection between CHN and patients, trust.
- CHN supports to access resources/services
- Improved communication with clinicians

They [patients] have to have a certain amount of desire to actually do these things to improve their life. [...] You need to want to do this and be successful at it because it's better for you. You're the one that realizes the better benefit. (Patient 2025)

- Patient motivation/activation
- Complex or deteriorating patient health
- Unmet needs or expectations
- Limited availability and access to long-term supports

They were so engaged, and their adherence to the program was like very strong. And [...] because their situation was so extreme. And there was nothing that exists in the community that can help them. (CHN3)

Maintenance

- PCN values align with program
- Awareness of patients' health-related social needs
- CHN training/expertise gained - low turnover
- Available funding

One of the things that we're seeing with our primary care physicians is challenges with system navigation and patients not knowing where to go, how to access care. Physicians themselves as well are not sure where to refer, how to connect people to those resources, and related to social determinants of health too right. So we found that that's been quite valuable, that was a gap and this program certainly worked to address the gap. (L402)

- Cost
- Evidenced for the innovation still lacking (but expected)
- Organizational context - competing priorities, leadership uncertainties
- Minimal awareness and understanding of program availability and capacity

We've opened the criteria [...] their [CHN] caseloads are still pretty small. I think about like maybe 10 patients each or something at a time. (L401)

I'm not sure that the CHNs are they still doing those things. It's been some time since I heard from PCN regarding CHNs. (HCP308)

DISCUSSION

Three PCNs sustained the innovation with adaptations after the trials concluded.

The COVID pandemic and processes inherent to the research may have impacted perceptions of barriers and facilitators.

Lessons learned from the trials will help leaders and implementers to successfully sustain and uptake the program, informing potential scalability of the CHN program as a PCN health service.

Addressing barriers - intervention strategies

- Barriers: understanding, awareness, time constraints, evidence base, effectiveness

- Strategies:

Promotional activities highlighting the value of the CHN role and program successes (clinic, PCN, presentations, videos (patient stories), patient materials).

Once results of the evaluation study are available, dissemination through workshops, webinars, brochures, and publications.

Involving physicians and other HCP champions, role models to increase provider engagement.

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Figure 2. Facilitators and barriers identified per RE-AIM domain (Adoption, Reach, Implementation, Effectiveness and Maintenance)



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BACKGROUND AND OBJECTIVE

Frozen shoulder (FS) is a common orthopedic disorder characterized by a significant loss in range of motion of the glenohumeral joint with accompanying pain.

Dysfunction and pain tends to resolve spontaneously however, this may take years. To date, there is no established gold standard treatment for FS.

The study objective was to compare outcomes for patients who received FS hydrodilataion + immediate physiotherapy (within 60 minutes; SHIP) protocol to a group of patients with FS who received shoulder hydrodilataion + usual physiotherapy care (7-14 days post -injection; SHUC). We hypothesized that SHIP would lead to improved range of motion, functional outcomes and reduced pain scores at sport and exercise medicine (SEM) follow-up.



SCAN ME



SCAN ME

- Scan for video of hydrodilataion procedure

- Scan for the Upper Extremity Functional Index (UEFI)

STUDY DESIGN

Retrospective chart review of data from electronic medical records retrieved from a University Sports Clinic from May 1, 2018 to March 31, 2023.

Figure 1. Number of Participants Per Group

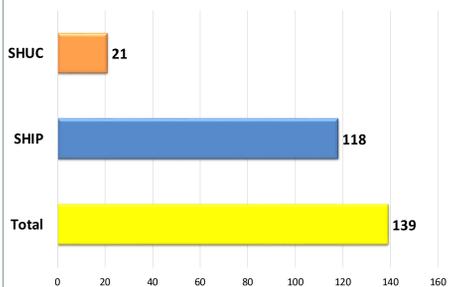
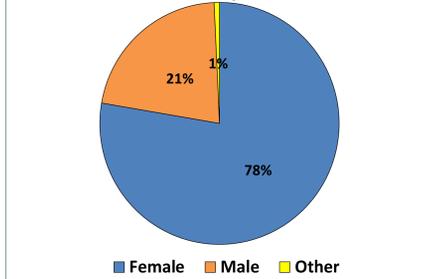


Figure 2. Gender Distribution of Participants



DEMOGRAPHICS

A total of n = 139 patient charts were reviewed and included in the study.

- SHIP: 118
- SHUC: 21

The average age of subjects was 52.1 years (+/- 9.1 years):

- SHIP: 52.5 (+/- 9.3 years)
- SHUC: 49.6 (+/- 7.2 years)

Gender distribution of participants:

- Females: Males: Other gender (108: 30: 1, respectively)

See Figures 1 & 2

Figure 3. Analysis

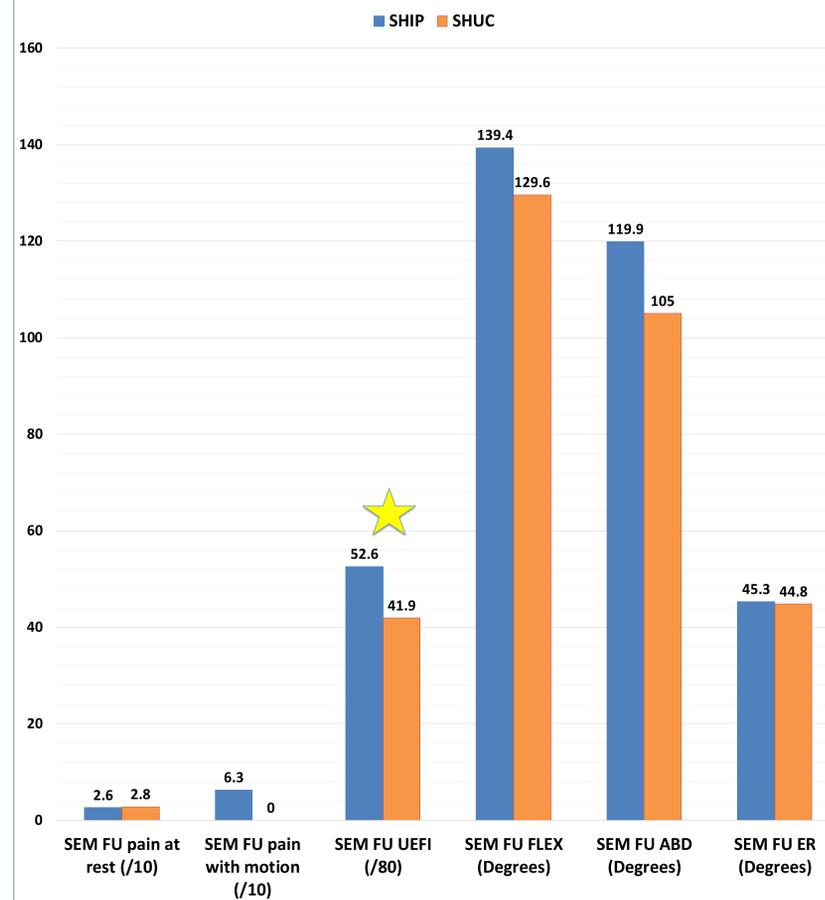


Figure 4. Percentage Of Patients Per Group With Associated Comorbidities

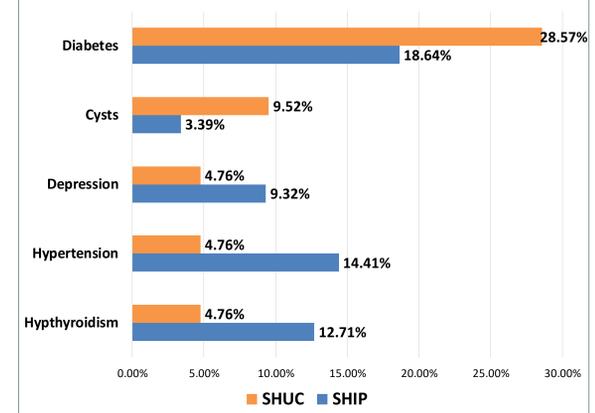
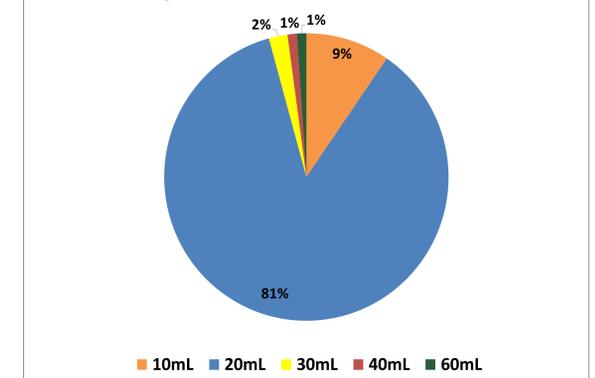


Figure 5. Volume Of Saline Used



KEY STUDY FINDINGS

- The SHIP and SHUC groups were comparable with respect to age, gender, diabetes and associated comorbidities ($p > 0.05$)

KEY PATIENT DEMOGRAPHIC FINDINGS

- See Figure 4 for breakdown of patient demographics with regards to diabetes and other related comorbidities

KEY COMPARISONS BETWEEN SHIP AND SHUC GROUPS (Figure 3)

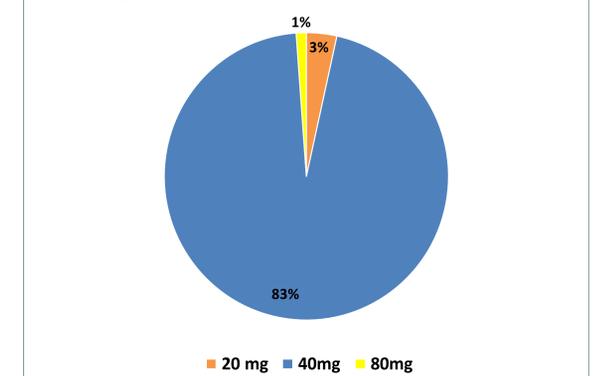
- The improvement in UEFI (baseline 38.7, +/- 15.1) for the SHIP compared to the SHUC (baseline 38.5, +/- 8.4) was statistically significant at SEM follow up appointment (52.6 vs 41.7, +/- 9.5, respectively) ($p < 0.05$)
- Average pain at rest was higher and range of motion was less at SEM follow-up for the SHUC compared to the SHIP group, however these findings were not statistically significant
- Of the UEFI scores in this study, 36/118 (31%) for SHIP and 4/21 (19%) for the SHUC had both baseline and SEM follow-up recorded

KEY PROCEDURAL FINDINGS

- There were no statistically significant differences between groups with regards to procedure performed
- Full, detailed procedures were recorded for SHIP 103/118 (87%) and SHUC 18/21 (86%)
- Volume of Saline used:
 - 113/139 (81%) used 20mL of normal saline
 - 12/139 (9%) used 10mL, 3/139 (2%) 30mL, 2/139 (1%) 60mL
- Volume of corticosteroid used:
 - 116/139 (83%) used 40mg
 - 4/139 (3%) used 20mg, 2/139 (1%) used 80 mg

See figures 5 & 6

Figure 6. Volume of Corticosteroid Used



CONCLUSION

These data suggest that SHIP protocol is beneficial for improving patient reported functional outcomes. Due to differences in factors such as volume of saline and corticosteroid injected by different clinicians and standardization of measuring range of motion and pain, more research is needed to determine the full effectiveness of SHIP for treating frozen shoulder.

LIMITATIONS

Incomplete datasets in chart notes, small sample size for SHUC comparison group, variability with measurements of range of motion and pain.

FROZEN SHOULDER: HOW EFFECTIVE IS ULTRASOUND GUIDED HYDRODILATATION OF THE GLENOHUMERAL JOINT AND IMMEDIATE PHYSICAL THERAPY (SHIP) COMPARED TO USUAL CARE (SHUC)

Teresa L. DeFreitas, MD, Constance Lebrun, MD., Elizabeth Clark, MSc PT, Isabel Hedayat, MD., Olesia Markevych, MD., Anne Boyd, MSc.

BACKGROUND

Frozen shoulder is a disabling condition characterized by shoulder pain and severe loss of range of motion (ROM). Often insidious, the average course of spontaneous remission is 18 months. Ultrasound guided hydrodilatation (U/SG-H) of the glenohumeral joint (GHJ) capsule is an intervention for FS which can improve patients shoulder ROM, function, pain and can shorten the length of disability. The combination of hydrodilatation and immediate physical therapy (within 6hr of the procedure) is frequently recommended but has not undergone rigorous research

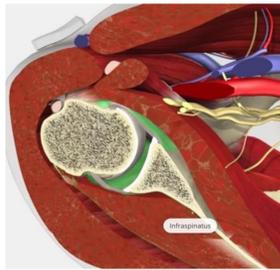


Figure 1: glenohumeral joint is depicted, with the green identifying the capsule. This capsule can be visualized using ultrasound, and the effusion resulting from hydrodilatation can be used as confirmation of correct positioning.

OBJECTIVE

To determine if physiotherapy initiated immediately (within 30 minutes) after a shoulder hydrodilatation injection will improve frozen shoulder symptoms of pain, limited ROM, patient function, and patient well-being more when compared to usual care physiotherapy after hydrodilatation (physiotherapy 7-14 days post-injection).

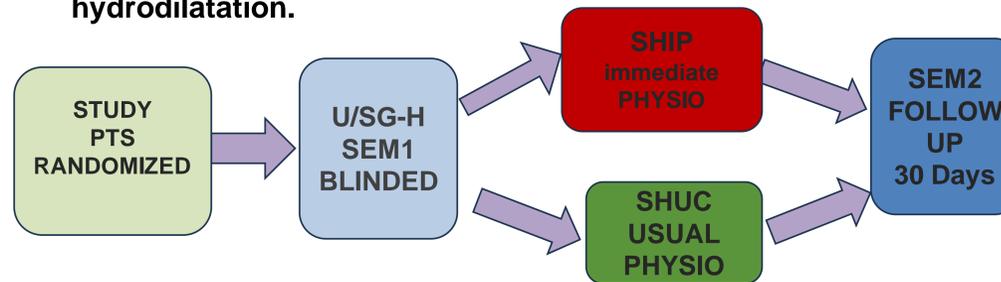
THE PROCEDURE

A standard volume of triamcinolone, 5ml local anaesthetic, and 20ml sterile normal saline was injected into the affected GHJ with ultrasound guidance. One Sport & Exercise Medicine (SEM1) Physician completed the U/SG-H in clinic. The SEM1 was blinded to the pts research group



INTERVENTION

Patients with clinical diagnosis of F/S the shoulder who met the inclusion & exclusion criteria were randomized into an immediate physiotherapy SHIP or usual physiotherapy SHUC group. Each participant had the standardized U/SG-H. SHIP participants then immediately proceeded to physical therapy within 30 minutes of the injection. The SHUC group attended physical therapy one week after the hydrodilatation. All participants had two additional physiotherapy sessions, followed by a second assessment with a second blinded SEM physician 30 days following the hydrodilatation.



OUTCOME MEASURES

- Active and passive shoulder ROM for forward flexion, extension, abduction, external rotation, and internal rotation/reach.
- Visual analog scales (VAS) (0-10) asking participants to indicate their level of pain, ease in completing activities of daily living, and ease in participating in exercise

Standardized questionnaires on shoulder pain, function were completed at the first and last visits. This included the following:

- Upper Extremity Function Scale (UEFS)
- QuickDASH
- Shoulder Pain and Disability Index (SPADI)



Figure 2: a patient with left shoulder adhesive capsulitis performing external rotation of the shoulder is shown both pre- (A) and post- (B) hydrodilatation

REFERENCES + ACKNOWLEDGEMENTS

1. Saltychev et al, 2018. Effectiveness of hydrodilatation in adhesive capsulitis of shoulder: a systematic review and meta-analysis.
2. Park et al, 2018. Comparison of therapeutic effectiveness between shoulder dilatation arthrography with translation mobilization and distanetion alone in patients with frozen shoulder.

Funding support for this research was provided by the University of Alberta Department of Family Medicine and the Alberta SPOR Support Unit.

RESULTS

The average age of all pts was 52.6, 12 pts were female

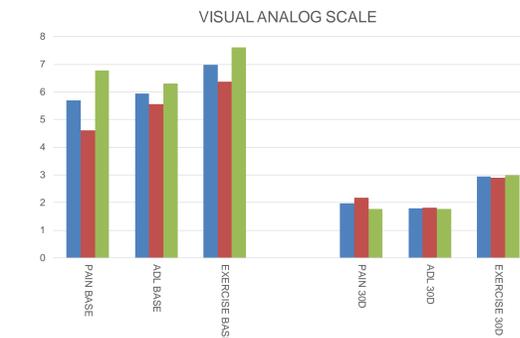


Table 1: Demographics

ALL PTS HAD A REDUCTION IN PAIN AT 30 Days, SHIP change from baseline -2.45, SHUC -4.99 mean difference p value=0.03

ALL PTS HAD A REDUCTION IN PAIN AT 30 Days, SHIP change from baseline -2.45, SHUC -4.99 mean difference p value=0.03

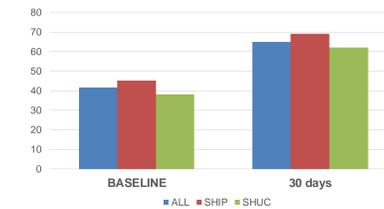
VAS pain 5.70 (2.98) 4.62 (3.24) 6.77 (2.40)
 VAS ADL 5.94 (2.20) 5.57 (2.09) 6.31 (2.37)
 VAS Exercise 6.99 (2.39) 6.37 (2.44) 7.61 (2.29)

MEAN SHOULDER ROM:

THE SHIP GROUP HAD STATISTICALLY SIGNIFICANT IMPROVEMENTS IN FWD ELEVATION & ABDUCTION AT 7 DAYS POST PROCEDURE BUT THIS WAS NOT APPARENT AT 30 DAYS

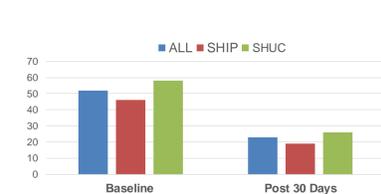
SHIP BASE FWD=108.2, 7D=124.9, 30D=131.9 (p=0.02)
 SHUC BASE FWD=93.0, 7D=122.5, 30D=126.8
 SHIP BASE ABD passive = 67.0, 7D=74.7, 30D=113.5 (p=0.04)
 SHUC BASE ABD passive = 47.9, 7D=82.8, 30D=119.2

UPPER EXTREMITY FUNCTION SCALE 0/80



ALL GROUPS IMPROVED IN UEFS BEYOND the MICD (10 points) NO statistical significance

QUICK DASH



ALL GROUPS IMPROVED IN QUICK DASH BEYOND reported MICD of 16-20 change SHIP BASE=46.2 30D=19.2 SHUC BASE=58.0 30D=26.1 NO Stat diff

CONCLUSION + DISCUSSION

Hydrodilatation is an effective method in improving patients' pain, range of motion, and function in a shoulder with FS. ROM improved more in SHIP group at 7 days but not at 30days. All pts had improvements in UEFS, VAS and QUICK DASH. A larger RCT will be necessary in order to determine the differences if any, in SHIP versus SHUC in improving pts pain function and shoulder ROM

Introduction

- This study explores the journey of obtaining diagnoses and ongoing care for Rheumatoid Arthritis (RA), focusing on patient perspectives, particularly among recently diagnosed individuals.
- The timeline for diagnosis among 33 interviewees ranges from less than a month to over 15 years. Participants highlight the crucial role of Family Physicians (FPs) in RA care, including referral support, symptom management, addressing drug side effects, managing comorbidities, and reproductive health considerations post-specialist attachment.
- Despite their importance, FPs encounter diagnostic challenges, referral barriers, and limited engagement with specialists, indicating the need to address these gaps in RA care access.

Methodology

- Recruitment sources:**
 - Arthritis Research Canada's volunteer noticeboard and Facebook groups of ARC affiliates (n=21)
 - Clinics affiliated with the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) (n=12)
- Ethical clearance:**
 - Obtained from multiple universities
- Interview process:**
 - Semi-structured interview guide developed with input from a national advisory committee of people living with RA
 - Piloted for refinement
 - Interviews conducted via Zoom
 - Duration: 1-2 hours each
 - Recorded and transcribed
- Coding process:**
 - NVivo14® software used for transcription and coding
 - Analysis employed deductive coding informed by the Candidacy Framework and inductive coding derived from the interviews.

Interviewee characteristics

- 33 interviews (8 Dec 2021 – 25 Nov 2023)
 - 31 in English, 2 in French
- Pan-Canadian: 12 AB, 6 BC, 5 MB, 1 NF, 7 ON, 2 QC
- Ethnic/religious affiliation:**
 - None (n=22);
 - Catholic, Dutch, Quebecoise, German Mennonite, S. Asian (Islamic/Sikh), Scottish, part-Aboriginal, Chinese-Canadian (n=11);
 - most indicated limited significance to RA experience.
- Gender/sex:** 30 female, 3 male
 - previous same-sex partners (n=2)
- Age range:** 21-76
 - ~30%: 30-39; ~ 20%: 50-59, 60-69; 15%: 40-49, 70-79; 3%: 20-29
- Education:**
 - High school or less (n=3);
 - some postsecondary (n=18);
 - undergraduate degree (n=6);
 - graduate/professional degree (n=6)
- Current economic status (self-reported):**
 - 'comfortable' (n=26); 'struggling' (n=7)
- Social networks:**
 - extensive/solid/diverse (n=25); limited (n=8)
- Community size & nature:**
 - Large-medium city/suburb (n=28)
 - small rural/remot (n=5)
- Travel time to FP/rheumatologist (greatest):**
 - 30 mins or less (n=23)
 - 30+ mins-1 hour (n=6)
 - more than 2 hours (n=4)
- Time since diagnosis with RA:**
 - less than 5 years (n=25)
 - 6-14 years (n=5)
 - more than 15 years (n=3)
- Time to secure a diagnosis:**
 - less than 1 year (n=16)
 - 1-2 years (n=6)
 - more than 3 years (n=11)

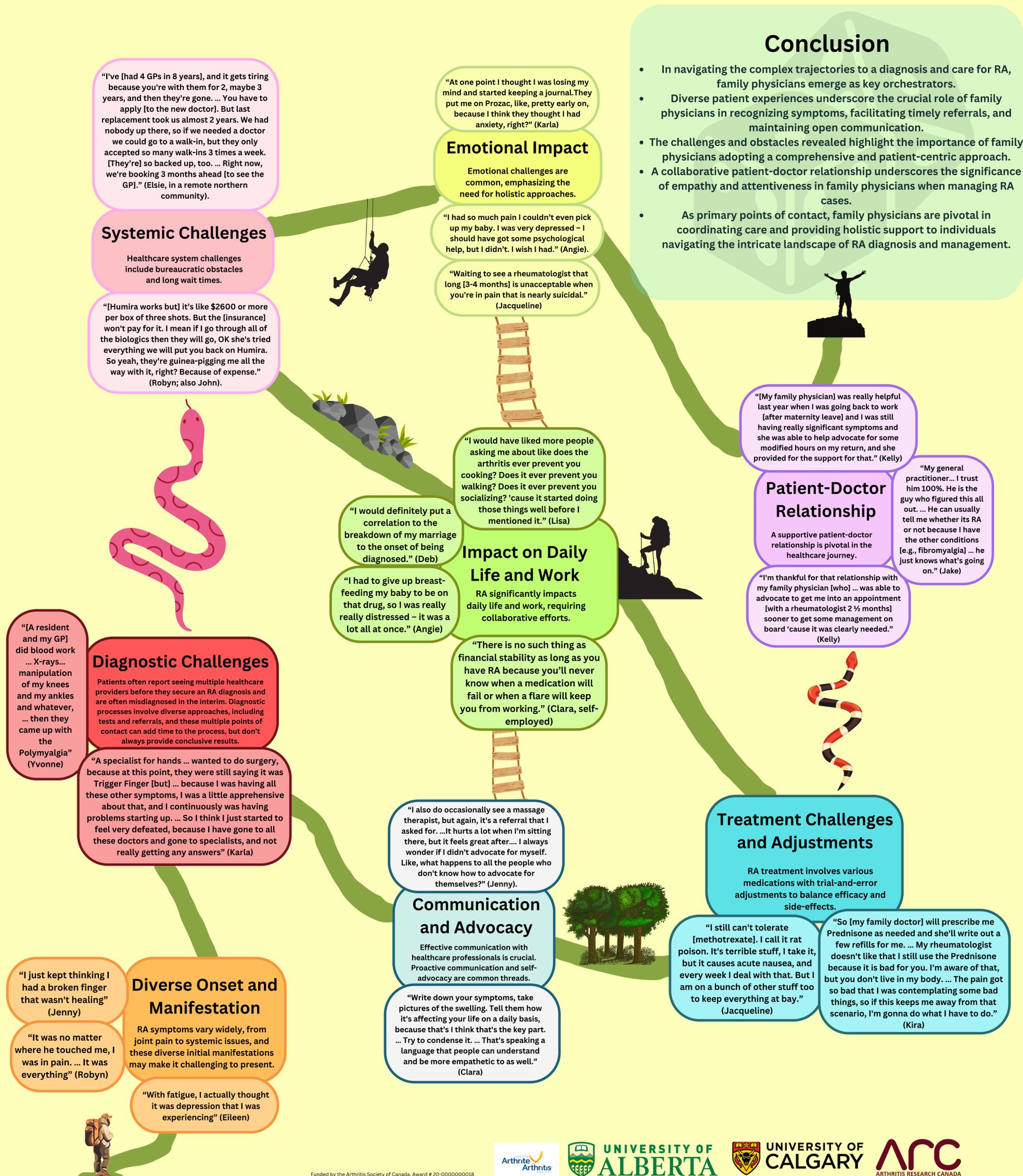
Reference

Dixon-Woods M, Cavers D, Agarwal MS, et al. Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups. BMC Medical Research Methodology. 2006;6(35). doi:10.1186/1471-2288-6-35

Accessing Care for Rheumatoid Arthritis: The Role of Family Physicians

Koehn, S., PhD¹; Klein, D., MD, FCFP, MSc¹; Jones, C.A., PT, PhD¹; Barber, C., MD, FRCPC, PhD²; Jasper, L., PT, PhD; Pham, A., MD, PhD¹; Drummond, N., PhD¹

¹University of Alberta, ²University of Calgary



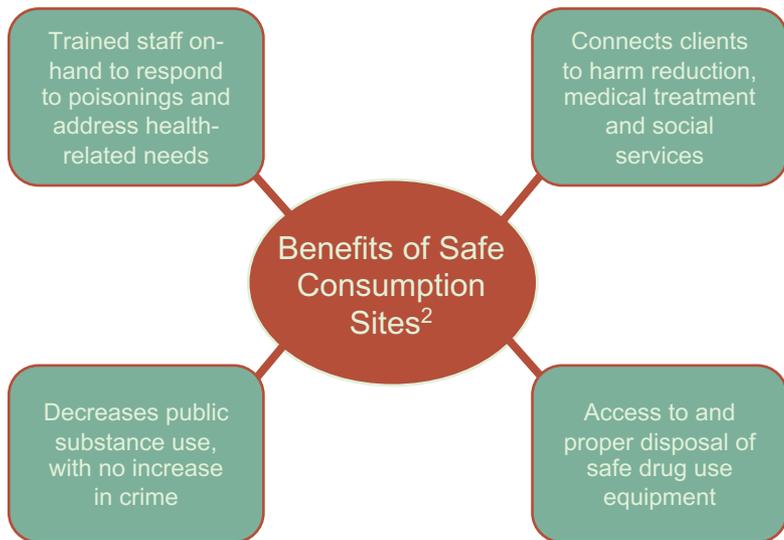
Adjusting Safe Consumption Sites to Meet the Needs of People who Consume Drugs Through Inhalation in Central Edmonton

David Connolly^{1,2}, Heather Morris^{2,3}, Angela Staines^{2,4}, Bethany Piggott^{2,4}, Campion Cottrell-McDermott^{2,4}, Elaine Hyshka^{2,4}, Marliis Taylor⁵, Okan Bulut⁶, Tariq Issa^{2,4}, Zoe Collins^{2,4}, Ginetta Salvalaggio^{1,2}

¹Department of Family Medicine, Faculty of Medicine and Dentistry, University of Alberta, ²Inner City Health and Wellness Program, University of Alberta, ³Faculty of Nursing, University of Alberta, ⁴School of Public Health, University of Alberta, ⁵Boyle Street Community Services, Edmonton, Alberta, ⁶Educational Psychology Department, Faculty of Education, University of Alberta

Background

The COVID-19 pandemic and ongoing drug poisoning emergency have dramatically increased morbidity and mortality related to illegal drug use in Edmonton¹. Community agencies are also observing a higher proportion of people who use drugs (PWUD) who consume via inhalation. Despite this, harm reduction services such as supervised consumption sites (SCS), are currently aimed predominantly at those who inject drugs. **The objective of this study was to characterize the substance use patterns of PWUD in Edmonton's inner city and examine the acceptability of consumption via inhalation (smoking) within a SCS.**



Methods

- 503 PWUD, defined as engaging in regular use of currently illegal drugs at least once a month, were recruited from community organizations in central Edmonton to participate in interviewer-administered surveys from April to September 2023
- Survey questions included sociodemographic information, substance use patterns, health status, use of treatment and harm reduction services, and acceptability of emerging services
- Interviewers were trained appropriately to ensure consistency in administration of surveys
- Participants received a \$30 cash honorarium for their time
- Data was analyzed using descriptive statistics (Figures 1-4)

Figure 1: Demographics of Participants, N=503



Results

- 326 participants (64.8%) of participants identified as male and the average age was 44 (Figure 1)
- 404 (80.3%) of participants were unhoused at the time of interview (Figure 1)
- 470 participants (93.4%) reported smoking drugs (Figure 2) while 177 (35.2%) reported using drugs via injection
- Of those that consume via smoking and inhalation, 96/164 (58.5%) preferred smoking
- 308/486 (63.4%) reported being interested in using SCS if consumption via smoking were permitted on site (Figure 3)
- Of participants who have used drugs at a SCS in the last 6 months, 39/122 (32.0%) reported injecting because they were not allowed to smoke there (Figure 4)
- Of participants that had not accessed a SCS, the number one reason cited was that you cannot smoke there (178/331, 53.8%)

Figure 2: Reported Methods of Consuming Drugs, N=503

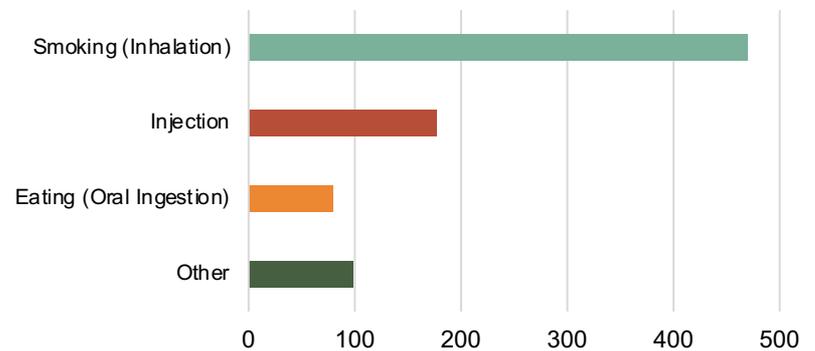


Figure 3: Participants' Interest in Using a SCS for Smoking, n=486

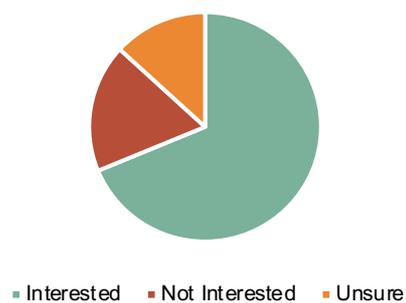
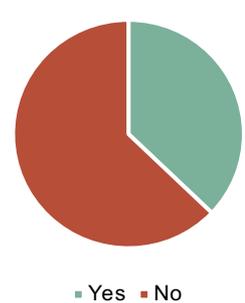


Figure 4: Participants Who Injected Drugs at a SCS Because They Were Not Allowed to Smoke There, n=122



Conclusions

A majority of PWUD from central Edmonton's inner city prefer smoking to injecting, identifying the need to adapt community services to accommodate recent trends. Family physicians can promote harm reduction practices geared towards those who smoke, such as accessing safer smoking supplies and extending similar harm reduction counselling to this group. There is significant interest in accessing a SCS that offers inhalation, where trained staff are present to respond to drug poisonings and make referrals to other social, health, and harm reduction/treatment services. This represents a change in services that would benefit from the advocacy of family physicians and lead to reduced morbidity and mortality related to people who preferentially smoke versus inject drugs.

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- Government of Alberta. Alberta substance use surveillance system. 2023. Available from: https://healthanalytics.alberta.ca/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2F1bbb695d-14b1-4346-b66e-d401a40f53e6§ionIndex=0&sso_guest=true&reportViewOnly=true&reportContextBar=false&sas-welcome=false
- Gehring ND, Speed KA, Launier K, O'Brien D, Campbell S, Hyshka E. The state of science on including inhalation within supervised consumption services: A scoping review of academic and grey literature. International Journal of Drug Policy. 2022;102:103589.

BACKGROUND

Iron Deficiency is a Public Health Problem

- Iron deficiency (ID) is one of the most common and preventable micronutrient deficiencies worldwide¹
- ID can result from diverse etiologies such as insufficient iron intake, impaired absorption, and increased iron loss
- It carries numerous health consequences, including compromised cognitive development², impaired immune function³, fatigue⁴, and an increased risk of adverse maternal and child health outcomes^{5,6}
- Furthermore, it places a significant economic burden on the healthcare system due to increased healthcare utilization, hospitalizations, and productivity losses⁷
- In Canada, ID remains a significant health concern, with recent clinical observations at an Edmonton clinic suggesting an increase in its prevalence over the past decade
- Despite the recognition of ID as a prevalent health concern, there remains a lack of comprehensive and reliable longitudinal data on the trend of ID in Canada, specifically within the context of Alberta

HYPOTHESIS

We hypothesized that there is an upwards trend in the iron deficiency prevalence in Alberta over the past decade based on clinical observation

METHODS

- We analyzed the electronic medical data obtained from the Southern Primary Care Research Networks (SAPCRn) to investigate the prevalence of ID in Alberta from 2010 to 2022
- ID was determined in accordance with the WHO guidelines which defines iron deficiency as a serum ferritin value below 15 µg/mL for individuals aged 6 and older
- Anemia was defined using WHO guidelines as hemoglobin values below 11.5 g/dL for 6-11 years of age, below 12 g/dL for 12-14 years of age, below 12 g/dL for women 15 years of age and older, and below 13 g/dL for men 15 years of age and older



Ferritin
(biomarker for iron deficiency)



Iron deficiency prevalence
From 2010-2022

Patient characteristics:
Age, Sex, Rural vs. Urban,
Material deprivation

Provider characteristics:
Sex, Rural vs. Urban,
Academic vs. Community

FINDINGS

Figure 1. Decreasing trend of ID prevalence with paradoxical increase in anemia prevalence in Alberta

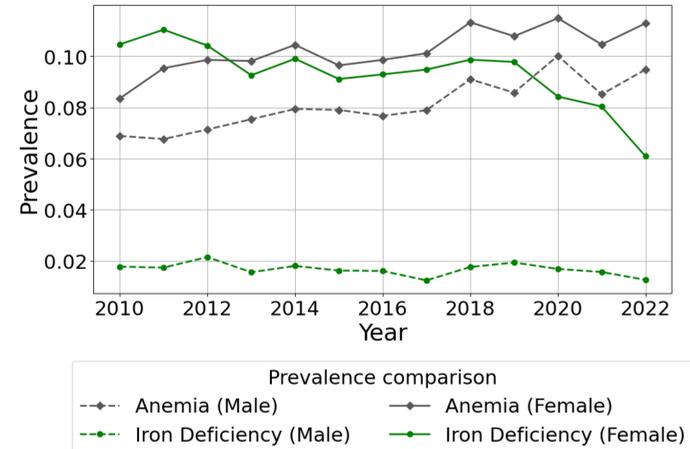


Figure 3. ID prevalence is increased in individuals with a higher estimated material deprivation

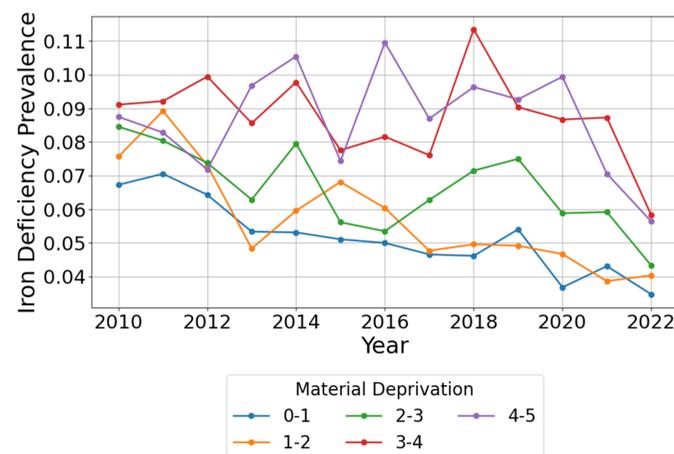
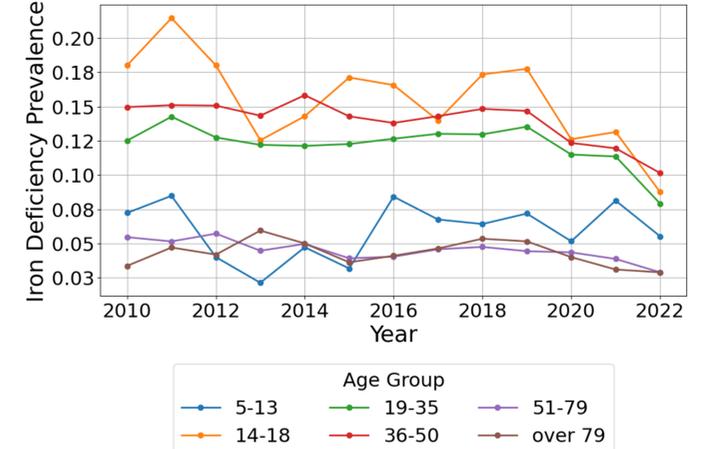
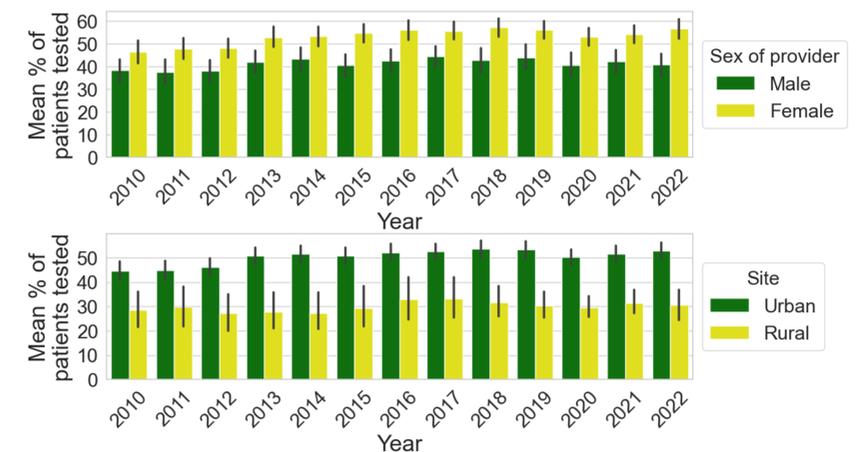


Figure 2. Women of reproductive age (14-50) have a higher ID prevalence compared to other age groups



Patterns of Ferritin Testing: Provider Practices in Focus
Figure 4 and 5. Provider's female sex and urban location are associated with a higher % of ferritin testing



DISCUSSION

- Contrary to our initial hypothesis, our findings revealed a trend of decreasing ID prevalence, particularly during the years affected by the pandemic (2020-2022)
- We observed a paradoxical increase in the prevalence of anemia
 - This divergence raises critical questions about the underlying causes of anemia, suggesting that factors other than ID, such as changes in dietary patterns, healthcare access, or other micronutrient deficiencies, may have played a role in the increase
- Despite this decline, the burden of ID remains substantial, especially among specific groups. Notably, our findings highlight the higher prevalence of ID among women of reproductive age and individuals with high estimated material deprivation, suggesting a need for targeted interventions for these vulnerable populations
- The likelihood of ferritin testing is higher among providers who are female and located in urban sites, which may be due to the patient demographic they serve or testing practices

Pharmacogenomic-Guided Antidepressant Prescribing (PGx-GAP) in Adolescents Trial



PRESENTER:
Meagan Shields
meagan.hayashi@ucalgary.ca

OBJECTIVE

To determine if pharmacogenetic (PGx)-guided prescribing improves efficacy, tolerability, and cost-efficacy of antidepressant treatment in adolescent depression.

METHODS

Design: Multisite, triple-blinded, randomized-controlled trial.

Participants: Adolescents with moderate-to-severe depression, aged 12–17 years, that did not respond or tolerate fluoxetine therapy.

Intervention: Antidepressant recommendations based on the adolescent's CYP2C19, CYP2D6, and CYP2B6 genotype-predicted metabolism phenotype.

Control: Antidepressant recommendations based on the Guidelines for Adolescent Depression in Primary Care (GLAD-PC).

Primary outcome: Remission after 12 weeks using the Quick Inventory of Depressive Symptomatology – Adolescent 17-item – Self-Report (QIDS-A17-SR).

Secondary outcomes: Symptoms, side effects, role-functioning, quality of life at 4, 8, and 12 weeks; overall cost-efficacy, and healthcare utilization.

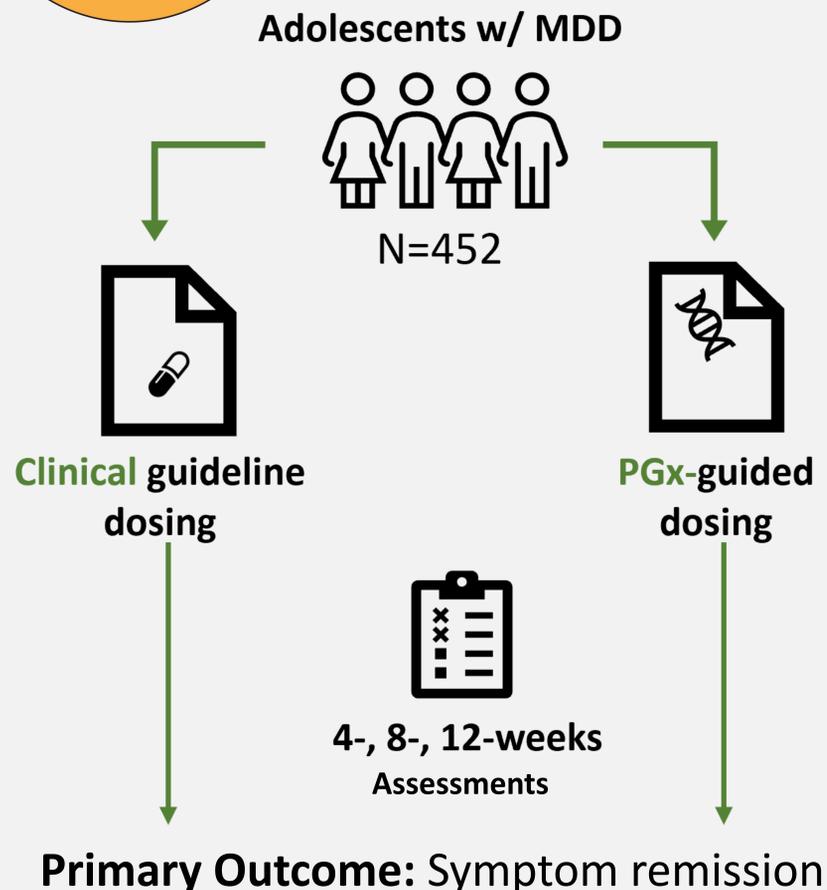
ANTICIPATED RESULTS

Our preliminary work has shown 82% of youth seeking mental health care in Alberta have an actionable genotype for *CYP2C19*, *CYP2D6*, or *CYP2B6* that may affect mental health medication or safety (Bousman et al., unpublished data). We anticipate this high rate of actionability will translate to better outcomes in adolescents receiving PGx-guided treatment compared to those receiving care guided by clinical practice guidelines.

AUTHORS:

Meagan Shields, Laina McAusland, Paul Arnold, Adrian Box, Jon Emery, Katherine Rittenbach, Ross Tsuyuki, Jennifer Zwicker, Amanda Newton, & Chad Bousman

Does Pharmacogenomic-Guided Prescribing Improve Efficacy, Tolerability, and Cost-Efficacy of Antidepressant Treatment in Adolescents?



Prescribing Report

Last name, First name
DOB: Mmm DD, YYYY

Report Date
Mmm DD, YYYY

Patient Name: Last, First

Referring Physician: Dr. _____

Sample Type: Saliva
Date Collected: Mmm DD, YYYY
Date Received: Mmm DD, YYYY

Current Medications
XXXXXXXX
XXXXXXXX
XXXXXXXX

Recommendations

The table below lists selective serotonin reuptake inhibitor (SSRI) options with recommended starting dosages, titration increment dosages, and maximum dosages. We recommend avoiding SSRIs not listed in the table. We encourage you to review and discuss these recommendations with the patient and family alongside possible side effects and patient preferences.

DRUG NAME	RECOMMENDED STARTING DAILY DOSE	RECOMMENDED TITRATION INCREMENTS	RECOMMENDED MAXIMUM DAILY DOSE*
Citalopram (Celexa®)	10 mg	10 mg	40 mg
Escitalopram (Cipralex®)	10 mg	5 mg	20 mg
Fluvoxamine (Luvox®)	50 mg	50 mg	300 mg
Sertraline (Zoloft®)	25 mg	12.5 – 25 mg	200 mg

* If a patient has no response at the maximum dose, consider changing to another medication.

This report was generated as part of a clinical trial approved by the University of Calgary Conjoint Health Research Ethics Board (REB-0532). The information contained in this report is intended to be interpreted by a licensed physician or other licensed healthcare professional. The report was designed as a decision support tool not to substitute for good clinical practice or a replacement for required medical surveillance when delivering care. The healthcare professional has ultimate responsibility for all therapeutic decisions based on the individual characteristics of the patient, of the drugs prescribed, and a comprehensive interpretation of this report.

Page 1 of 1

WE ARE ACCEPTING REFERRALS

Eligibility Criteria

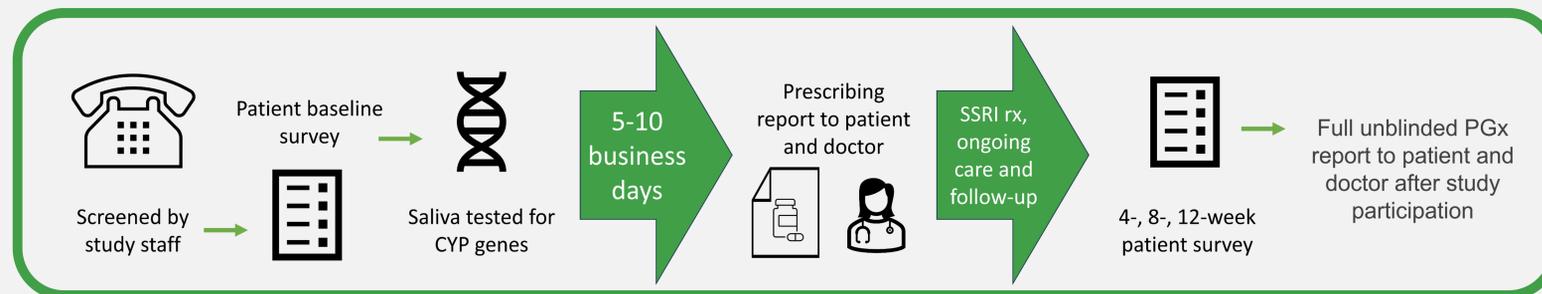
- Age 12 – 17 years old
- Primary diagnosis of depression
- Did not respond or tolerate fluoxetine therapy
- Starting a new SSRI
- Have not had pharmacogenomic testing before

Scan for Referral Form



Or email referrals to:
gap@ucalgary.ca

Study Flow



CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada
Funding Support



UNIVERSITY OF CALGARY
Sponsor



UNIVERSITY OF ALBERTA
Collaborative Partners



Collaborative Partners



ALBERTA PRECISION LABORATORIES
Leaders in Laboratory Medicine

INTRODUCTION

CONTEXT

- Colorectal cancer (CRC) is a leading cause of cancer-related mortality.
- Only ~50% of eligible Albertans participate in screening (fecal immunochemical test [FIT]).
- Primary care clinics in Alberta can now distribute FIT kits directly to patients (in-clinic FIT).
- In-clinic FITs may reduce screening barriers and increase screening participation.

OBJECTIVE

To determine if in-clinic distribution of FITs to patients affiliated with an Edmonton primary care clinic increases CRC screening rates.

METHODS

DESIGN

Prospective cohort study with two cohorts:

1. Overdue: Screening due >1 year ago.
2. Due: Screening due ≤1 year ago.

PARTICIPANTS

- Average-risk patients
- Aged 50 to 74 years
- Overdue or due for screening

Exclusion: ≤30 days between receiving the FIT kit and data extraction.

INTERVENTION

Two physicians provided FIT kits to consecutive patients seen during regular appointments in the fall of 2023.

Variables extracted from clinic EMR:

- Age
- Sex
- Date of prior CRC screening
- Date FIT provided
- Date FIT completed

OUTCOME

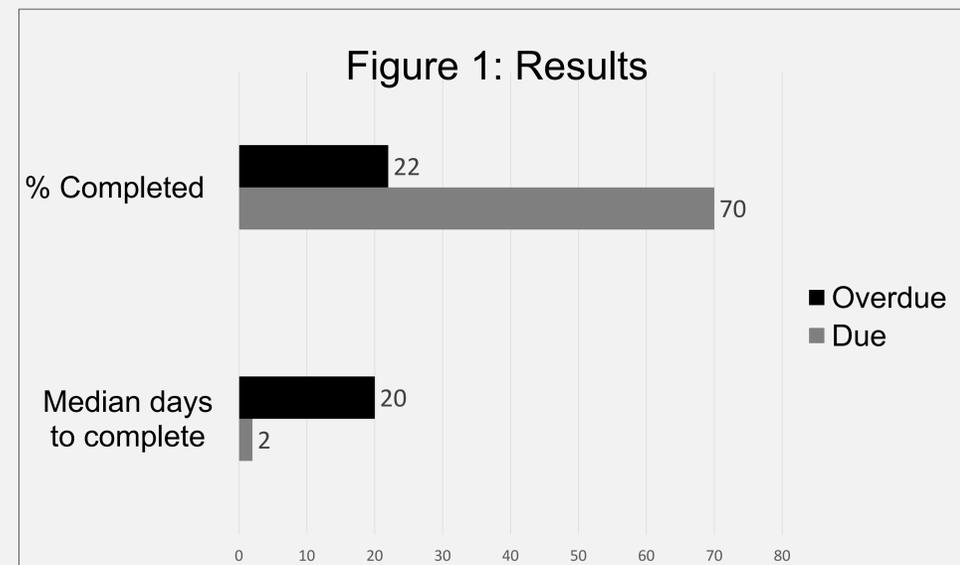
CRC screening % in each cohort.

RESULTS

Table 1: Cohort characteristics

	Overdue (n=9)	Due (n=10)
% Female	56%	80%
Mean age (IQR)	57 (IQR 53-62)	60 (IQR 50-60)
Median time from previous screening (years)	6.0 (IQR 3.6-7.9)	2.0 (IQR 1.6-2.1)

Figure 1: Results



CONCLUSION

- In-clinic FIT improves participation for individuals who do not screen regularly; however, it appears significant barriers still exist.

NEXT STEPS

- Expanding the distribution of in-clinic FITs to all physicians at the clinic.
- Outreach screening for patients without an upcoming appointment.
- Electronic reminders to patients in combination with the in-clinic FITs.



groww

PROGRAMS AND PRACTICES SUPPORTING THE HEALTH OF PREGNANT PEOPLE WHO USE DRUGS IN CANADA: CONSIDERATIONS FOR PRIMARY CARE IN ALBERTA

Holly Mathias¹, Lesley Ann Foster², Ashleigh Rushton³

1. University of Alberta, Edmonton, AB, 2. Queen's University, Kingston, ON, 3. The University of the Fraser Valley, Chilliwack, BC

INTRODUCTION

- 5-6% of pregnant people in North America use unregulated drugs – an urgent public health concern given the ongoing toxic drug crisis.¹
- Substance use during pregnancy can cause a range of health issues (e.g. low birth weight, maternal morbidity).^{2,3}
- Pregnant people who use drugs (PPWUD) face barriers to accessing sexual and reproductive health care during pregnancy (e.g. stigma, lack of availability).^{2,3}
- Supporting maternal health care is a global priority through the Sustainable Development Goals.⁴

What programs and practices exist to support PPWUD's access to sexual and reproductive health services in Canada?

METHODS

We conducted a scoping review using Joanna Briggs Institute (JBI) methodology and reported using PRISMA-ScRV.

Included	Excluded
<ul style="list-style-type: none"> • Primary studies, reviews, text and opinion papers, systematic reviews, dissertation and theses, commentaries, media articles, websites, conference presentations and reports • Illicit drugs (per Health Canada)⁵ • Pre, peri and postnatal • January 2016 - June 2023 • Population or individual-level program in Canada • English or French language 	<ul style="list-style-type: none"> • Conference abstracts, letters, meeting minutes, blog posts, speeches and/or transcripts from legislative assemblies. • Alcohol, cannabis and tobacco • Not available through institutional holdings



RESULTS

Overview

A total of **71 texts** were identified, outlining **46 unique programs**.

8 programs were identified in Alberta

1. Parent-Child Assistance Program (province-wide)
2. Aventa Centre of Excellence for Women with Addiction (Calgary)
3. Rapid Access Addiction Medicine Clinic – Rooming In (Calgary)
4. H.E.R. Pregnancy Program (Edmonton)
5. Health for Two (Edmonton)
6. Aboriginal Prenatal Wellness Program (Maskwacis)
7. EMBRACE (Red Deer)
8. The Women's Program (Red Deer)



Figure 1: Map of Alberta

This map shows where programs identified in this review are located within the province.

Services Provided in Alberta

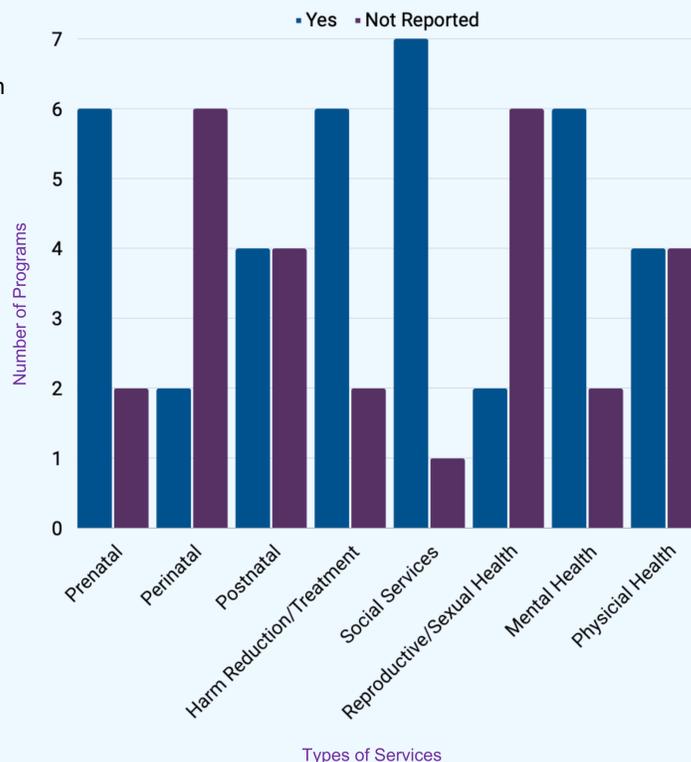


Figure 2: Services Provided by Identified Programs in Alberta

Workforce

3 of the 8 identified programs in Alberta (37.5%) reported employing physicians.

2 of the 8 programs (25%) reported employing people with lived/living experience of substance use.

Service Delivery

Services ranged from being community-based to hospital-based. Most were funded by provincial and federal government agencies (e.g. provincial health authorities, Public Health Agency of Canada).

Helpful Practices

The most reported helpful practices included:

- Providing trauma-informed care
- Utilizing a harm reduction approach
- Integrating cultural practices
- Being non-judgmental
- Providing PPWUD-centered care

Outcomes

Programs reported the following outcomes:

- Keeping mother and baby together
- Supporting parenting skills
- Helping Indigenous women connect to culture
- Reducing substance use

IMPLICATIONS

Most programs in Alberta are in **urban areas** leaving a **large service gap** in rural, remote and Northern communities.

→ There may be increased responsibility for family physicians in underserved communities to manage clients' pregnancies.

Indigenous peoples are disproportionately impacted by the toxic drug crisis and maternal health concerns, yet few services exist for this population.

→ More Indigenous-led services and programs are needed. Family physicians may seek to collaborate with Indigenous communities or undertake cultural safety training to best support this population.

Few programs offer **specific sexual and reproductive health care** (e.g., contraception, family planning, fertility treatment, access to abortion).

→ A greater range of services are needed to support reproductive justice and autonomy. Family physicians may wish to consider how to supplement these gaps in services.

Few of the programs involved **direct care** from a family physician.

→ Programs should consider how best to integrate (and remunerate) family physicians to augment care for PPWUD.

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