35th ANNUAL RESIDENT SCHOLARSHIP DAY

University of Saskatchewan | Department of Academic Family Medicine

ABSTRACT BOOK

June 6, 2025

Department of Academic Family Medicine
College of Medicine | University of Saskatchewan

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UNIVERSITY OF SASKATCHEWAN

Academic Family Medicine
Family Medicine Unit, Regina Centre Crossing
172 - 1621 Albert Street
Regina SK S4P 2S5

May 23, 2025

I am looking forward to celebrating your scholarship achievements at the end of the month. This will be our 35th Annual event.

Asking and answering questions about practice is incredibly important for our patients and colleagues. I hope through the day; you will learn new things and be inspired to ask more questions about how we practice. The diversity of your questions re-enforces the breadth of our discipline.

Skilled evaluation of information, knowledge of and participation in the research process, and implementation, evaluation and adaptation of new processes are critical components of our ability to provide the best possible care to patients and communities.

To our graduating second-year and third-year residents, congratulations and all the best in your future practice. I also want to say thank-you to our team in the Research Division as well as the faculty who have served as supervisors for these projects.

Sincerely,

Kathy Lawrence
Provincial Head
Family Medicine

UNIVERSITY OF SASKATCHEWAN

Department of Academic
Family Medicine

Congratulations on arriving at this stage of your Family Medicine Training!

As a former participant in the Resident Scholarship Day in Saskatchewan, I am aware of the feelings and emotions associated with completing a resident scholarship project. I am grateful we are able to come together to celebrate your success. Please know that your contributions to Family Medicine scholarship are valued and greatly appreciated.

The skills of research, scholarship and critical appraisal are essential and indispensable to all careers in Family Medicine. Medical information expands daily, and the rate of increase can be exponential in times of crisis. Considering this, your investment in your project has exposed you to skills that are crucial to your growth as a Family Physician.

It is my hope that as you read this collection of abstracts you are inspired to ask questions and find the answers to them. Scholarship is not just a list of publications. It is lifelong learning, inquiry, and critical appraisal of information.

Please join me in thanking those people who have made this moment possible: the Research Division, Faculty Advisors, Adjudicators, Operations personnel, and Award Sponsors which are only a partial list of the many important contributors. Thank you to all who make this day happen.

I would like to take this opportunity to wish the graduating FMRs all the best in the future and in your chosen careers.

Sincerely,

Sheila Smith, MD, CCFP (EM), FCFP
Postgraduate Program Director
Department of Academic Family Medicine
University of Saskatchewan

UNIVERSITY OF SASKATCHEWAN

Academic Family Medicine
West Winds Primary Health Centre (Research Division)
3311 Fairlight Drive
Saskatoon SK S7M 3Y5

June 6, 2025

Colleagues

On this occasion, the 35th Annual Resident Scholarship Day, I want to take this opportunity to recognize Residents, Faculty who have been Coaches/Supervisors, Faculty, Staff and members of the research teams for:

- all the hard work that has gone into making this possible;
- your commitment and perseverance given some of the challenges; and,
- for the many contributions that you have brought to these learning endeavours.

Since its inception in 1990, we have gathered together once a year to: celebrate our successes; learn about the scholarly questions that have been systematically answered over the past two years; ask and answer questions that will enhance our knowledge and understanding; and, provide feedback (peer-review). The Annual Scholarship Day in the Department of Academic Family Medicine has evolved and grown over the years providing us with the opportunity to celebrate our academic achievements and to plan for the future.

Over the past 35 years, we have come a long way, but we must continue to transform to meet the needs of the people we serve; as well as the Accreditation Standards set by the College of Family Physicians of Canada.

Mahatma Gandhi stated, "you must be the change you wish to see in the world." Ian McWhinney (1926-2012) who was known as "the father of family medicine" transformed family medicine worldwide from a little-known subject or area of practice into an academic discipline with postgraduate training. Thus, improving practice provides opportunities for learning, answering questions and innovation every day.

I would also like to recognize the support that we receive from: the Department of Academic Family Medicine; the College of Medicine; the University of Saskatchewan; the Saskatchewan College of Family Physicians; and the College of Family Physicians of Canada.

I want to take this opportunity to wish each of you much success and the very best as you move forward in your chosen vocation.

Yours sincerely,

Vivian R Ramsden, RN, PhD, MCFP (Hon.), FCAHS
Distinguished Professor & Director, Research Division
Department of Academic Family Medicine

35th ANNUAL RESIDENT SCHOLARSHIP DAY

DEPARTMENT OF ACADEMIC FAMILY MEDICINE

Friday, June 6, 2025
Prairieland Park – Hall C
Saskatoon, SK

0850 - 0900 Opening Remarks & Introductions
Dr. Vivian R Ramsden, Director, Research Division
Dr. Kathy Lawrence, Provincial Head

0900 – 0910 Understanding the Use of Delayed Antibiotic Prescriptions in a Regional Saskatchewan Centre
Jamie Grunwald, Rishabh Jain, Haylen Langelier, Breanna Davis, Rhonda Bryce

0910 – 0920 Nasal High-Flow Oxygen Therapy in Moose Jaw: An Implementation Analysis
Lucas King, Chelsea Healey, Rob Haver, Adam Clay

0920 - 0930 What's the Problem? Number and Nature of Clinical Concerns Seen by Residents Caring for Patients at West Winds Primary Health Centre
Sebastian Leakos, Morgan Duce, Kyle Ivany, Jason Hosain, Rhonda Bryce

0930 – 0940 Increasing COPD Measurement and Routine Comprehensive Review in a Collaborative Medical Practice
Bogdan Fufezan, Adam Clay, Emmett Harrison

0940 – 0950 Improving rates of STBBI Screening in Moose Jaw by Implementing Opportunistic Risk Stratification at the Time of Pap Test
Caitlyn Kitts, Chidinma Obidegwu, Taylore Lindner, Karissa Brabant, Adam Clay

0950 - 1000 Evaluating the Impact of Gross Hematuria on Patients at the Cypress Regional Hospital
Damien Spilchen, Elizabeth Hansen, Emmett Harrison, Francisco Garcia, Adam Clay

1000 - 1010 Comparing the Accuracy and Clinical Utility of AI Scribes in a Primary Care Clinic
Etienne Vincent, *Rahul Parekh,* Andries Muller, Rhonda Bryce

1010 - 1040 Break

1040 - 1050 Optimal Booking System for Physician Satisfaction in Family Medicine Clinics
Avery Ironside, Benjamin Drung, Jason Bzura, Breanna Davis, Vivian R Ramsden, Rhonda Bryce

1050 - 1100 Cannabis Hyperemesis Syndrome: Presentation and Treatment in a Regional Emergency Department
Manvir Parmar, Jane Fernandes, Carol Yassa, Frederik Engelbrecht, Braden Bouchard, Rhonda Bryce

1100 – 1110 The Impact of Cold Weather on Visits to the Emergency Department among Frequent Users at a Northern Regional Hospital
Carissa McGuin, Raeesa Ebrahim, David Bordun-Slater, Brenna Davis, Rhonda Bryce

1110 - 1120 Assessing Equality in Wait Times Between Male and Female Patients in Emergency Departments in Saskatoon
Emily Harwood-Johnson, Segun Oyedokun, Rashmi Bhargava, Shayan Shirazi (PGY2), Quinn MacDonald (CC3)

1120 – 1130 Enhancing Continuity of Care After Emergency Department Visits and Inpatient Discharge for Patients Reviewed by Family and Emergency Medicine Residents in Swift Current
Richard Ngo, Adam Clay, Brenda Andreas, Emmett Harrison

1130 – 1140 Evaluating Emergency Department Use Among Patients Cared for by the Battlefords Union Hospital Palliative Care Program
Aivy Sarah Cheng, Patricia Campbell, Rhonda Bryce

1140 - 1150 Indigenous Health in the Family Medicine Residency Training Program in Saskatchewan
Cora Mirasty, Kaitlyn Hughes, Vivian R Ramsden, Adam Clay, Lori Schramm

1150 - 1200 Health Needs Perceived by Lac La Ronge Indian Band Community Members
Brody Burnett, Mark Coles, Gol Roberts, Jeffrey DC Irvine, Lisa Mayotte, Rhonda Bryce, Vivian R Ramsden

1200 - 1300 Lunch/Networking

1300 - 1310 Integrating Para-Athlete and Disabled Care into Sports and Exercise Medicine Residency Training: A Quality Improvement Project
Omar Elgazzar, Marty Heroux, Adam Clay

1310 – 1320 MedFest as an Experimental Learning Opportunity to Improve Family Medicine Residents' Comfortability with Individuals with Intellectual and Developmental Disabilities
Shannon Haughian, Kienna Mills, Alicia Thatcher, Nicole Shedden, Danielle Frost, Rhonda Bryce

1320 – 1330 Exploring the Transition Experiences and Challenges of International Medical Graduates in Saskatchewan's Family Medicine Residency Programs
Harriet Kidiavai, Stephanie Asence, Mahmood Beheshti, Udoka Okpalauwaekwe

1330 – 1340 An Evaluation of University of Saskatchewan Family Medicine Resident/Faculty Knowledge and Prescription of Pelvic Floor Physiotherapy
Kelsey Hammond, Khadija Dulymamode, Snigdha Kapoor, Ginger Ruddy, Rhonda Bryce

1340 – 1350 Understanding the Gap: Post CoVID-19 Condition (PCC) Educational Needs of Patients and HCPs
Kholoud Alwan, Jannat Ferdous, Shivali Sood, Rejina Kamrul, Clara Rocha Michaels, Carolyn Hoessler, Donna Goodridge, Adam Clay, Andrea Vasquez Camargo

1350 – 1400 Implementing Naloxone Education in Family Medicine: A Quality Improvement Approach to Optimize Opioid Use Outcomes
Taranveer Toor, Josh Czemeres, Vithusha Coomaran, Debbie Bunka, Adam Clay, Radhika Marwah

1400 – 1410 Assessing the Frequency of Nutritional Therapy and/or Registered Dietician Referral as First-Line Therapy in Patients with Newly Diagnosed Type 2 Diabetes and Pre-Diabetes
Faizan Virji, Jill Kambeitz, Adam Clay

1410 – 1420 Documentation of Advanced Care Planning for Patients Aged 65 and Above at the Family Medicine Unit in Regina: A Quality Improvement Project
G Sayna Sharifian, RoxAnne Digney, Sidra Haque, Adam Clay, Radhika Marwah

1420 – 1430 Improving Documentation and Workflow in Hospital and Community Palliative Care in Saskatoon, SK
Wesley Bedford, Colette Fournier, Kevin Ledding, Rhonda Bryce

1430 – 1500 Break

1500 - 1530 Recognition & Reflections – Dr. Vivian R Ramsden
Reflections – Dr. Nancy Fowler, Dr. Mark Milne, Dr. Jennifer O'Brien
Overall Research Award - Lisa Bagonluri, ED and TBD (SCFP)
Departmental Awards – Dr. Kathy Lawrence and Dr. Sheila Smith
Closing Remarks

Adjudicators

Nancy Fowler – MD, CCFP, FCFP – College of Family Physicians of Canada
Dr. Nancy Fowler is the Executive Director of Academic Family Medicine at the College of Family Physicians of Canada. This CFPC Division oversees the development and implementation of the Standards of Training and Certification for family physicians in Canada, as well as working to advance family medicine education and research with universities and other partner organizations. She graduated with an MD from McMaster University in 1985. She completed a residency in Family Medicine where she developed an interest in refugee medicine. As Residency Program Director at McMaster University, Dr. Fowler led the expansion of the program to meet societal needs for family physicians in Ontario and the implementation of the Triple C Curriculum and more recently the Outcomes of Training. Nancy has a long history of leadership in medical education and refugee health and believes strongly in family medicine as a force for good in the world.

Mark Milne, MSc, PhD – University of Saskatchewan, Saskatoon, SK
Dr. Mark Milne is the Research Facilitator for six departments in the College of Medicine at the University of Saskatchewan including the Department of Academic Family Medicine. His role as a Research Facilitator ranges from meeting with students and faculty to discuss research ideas all the way to helping find and apply for grants. He has a MSc in Chemistry from the University of Saskatchewan, and a PhD in Chemistry and Medical Imaging from the University of Western Ontario. His PhD and research focused on the development and use of novel contrast agents for medical imaging along with the development of therapeutics for cancer treatment. Mark has been an adjudicator for the Department's Scholarship Day for the past three years and is excited to continue in this role at the 34th Annual Resident Scholarship Day.

Jennifer O'Brien, PhD – University of Saskatchewan, Saskatoon, SK
Dr. Jennifer O'Brien is a Research Associate with the Department of Anesthesiology and a Sessional Instructor in the Master of Health Professions Education Graduate Program at the University of Saskatchewan. Dr. O'Brien earned her Master's degree in Critical Disability Studies from York University, exploring the construct of hope in first-person narratives of people living with dementia. She obtained a PhD at the University of Saskatchewan by applying action research methodology to the problem of delivering research training within postgraduate medical education. Jennifer has co-led seven successful Saskatchewan Health Research Foundation (SHRF) grants totalling over $300,000. She has guided over 60 postgraduate learners, three MPH Practicum Students, and 15 medical students through their research proposals; data collection and analysis — including seven winners of the SCPOR-PGME Traineeship Award for patient-oriented research. She is passionate about patient-oriented health services research, with a particular focus on implementation of technology solutions to facilitate pre-operative care and improve access to healthcare.

Acknowledgements

The Research Division of the Department of Family Medicine, University of Saskatchewan gratefully acknowledges the **Saskatchewan College of Family Physicians** and the **Department of Family Medicine**, University of Saskatchewan for the Resident Scholarship Awards.

Master of Ceremonies – Dr. Breanna Davis

Dr. Breanna Davis graduated from the University of Saskatchewan and completed her Family Medicine Residency in Prince Albert, Saskatchewan. She continued her involvement with the Residency Training Program as Faculty (2009-present): Residency Training Coordinator (2011-2012), and Resident Research Coordinator/Site Scholarship Lead (2011-present.) She practices family medicine, obstetrics and hospitalist medicine in Prince Albert. Breanna has had both a clinical and a research collaboration with Sturgeon Lake First Nation since 2010. Her research interests include qualitative research, community-based research and practice improvement. She has served as a member of the Editorial Advisory Board of the CFP.

Research Support

Dr. Rhonda Bryce, Adam Clay, Nicole Jacobson, Dr. Udoka Okpalauwaekwe, Dr. Katrina Sawchuk, Brenda Andreas and the Site Scholarship Leads (Drs. Jeff Irvine, Breanna Davis, Mike Barnett, Mark Lees, Andrea Vasquez Camargo, Emmett Harrison, Amanda Waldner, & Mahmood Beheshti).

Administrative Support

Adriana Cashwell, Jaime Markowski, Jaclyn Randall & the Program Administrators (Jalene Jepson, Lise LeBlanc, Janice Skilliter, Heidi Brown, Kristen Huebner, Georgie Blackwell, Taryn Ashbee, Tracy Arnold, Robyn Claypool, Jackie Powell, and Bobbie McLaughlin).

Prairieland Park

Kim Ferguson, Staff and Technical Support.

Understanding the Use of Delayed Antibiotic Prescriptions in a Regional Saskatchewan Centre

Jamie Grunwald, FMR II; Rishabh Jain, FMR I; Haylen Langelier, FMR I
Breanna Davis, MD, CCFP, FCFP; Rhonda Bryce, MD, MSc

Department of Academic Family Medicine, College of Medicine, University of Saskatchewan

ABSTRACT

Background: Delayed antibiotic prescribing (i.e., providing a prescription to a patient with instruction to delay filling it until specific criteria are present) is an alternative to immediate antibiotic use for numerous common family physician presentations, with the primary goal of reducing antibiotic overuse. The success of delayed antibiotic prescribing depends on a family physician's ability to apply and educate the patient about this management option.

Questions:

1. Does delayed antibiotic prescribing in primary care clinics in our regional centre lead to reduced antibiotic use?
2. For what reasons do patients ultimately choose to fill, or not fill, the delayed antibiotic prescription?
3. Are patients who receive a delayed antibiotic prescription generally satisfied with the practice?

Methods/Methodology: We facilitated a prospective, cross-sectional study over 6 months conducted at five medical clinics in Prince Albert, Saskatchewan. Data was collected via phone call surveys for participants who received a delayed antibiotic prescription and completed an interest form. Our study (application ID: 4639) was approved by the University of Saskatchewan's Behavioural Ethics Board.

Results/Findings: We recruited 23 patients for the study. Approximately half (47.8%) of the participants who received a delayed prescription filled it. Reasons for filling the prescription included worsening symptoms, lack of improvement, or worry of worsening. The primary reason for not filling the prescription was due to symptom improvement. Satisfaction rates were similar between those who filled and those who did not fill their prescription.

Discussion: Our study results support delayed antibiotic prescribing as an effective method of reducing antibiotic use while maintaining patient satisfaction. Participants tended to adhere to physician instructions and filled their prescription when symptoms worsened or failed to improve over a specified period.

Conclusions: Our project results support the growing evidence of delayed antibiotic prescribing as a meaningful technique to promote antibiotic stewardship while maintaining sufficient patient satisfaction.

Recommendations: Primary care physicians are encouraged to consider using delayed antibiotic prescribing within their practice alongside other antibiotic stewardship principles. Future directions of this project could include studying physician perspectives about and techniques for implementing delayed antibiotic prescribing.

References:

1. Merlin C. Reducing the Consumption of Antibiotics: Would That Be Enough to Slow Down the Dissemination of Resistances in the Downstream Environment? Front Microbiol [Internet]. 2020 Jan 28 [cited 2025 May 21];11(1):[4 p.]. Available from: https://doi.org/10.3389/fmicb.2020.00033.
2. Stuart B, Hounkpatin H, Becque T, Yao G, Zhu S, Alonso-Coello P, et al. Delayed Antibiotic Prescribing for Respiratory Tract Infections: Individual Patient Data Meta-Analysis. BMJ [Internet]. 2021 Apr 28 [cited 2025 May 21];373(1):[16 p.]. Available from: https://doi.org/10.1136/bmj.n808.
3. Llor C, Bjerrum L. Antimicrobial Resistance: Risk Associated with Antibiotic Overuse and Initiatives to Reduce the Problem. Ther Adv Drug Saf. 2014 Dec;5(6):229-41.
4. Little P, Stuart B, Smith S, Thompson MJ, Knox K, van den Bruel A, et al. Antibiotic Prescription Strategies and Adverse Outcome for Uncomplicated Lower Respiratory Tract Infections: Prospective Cough Complication Cohort (3C) study. BMJ [Internet]. 2017 May 22 [cited 2025 May 21];357(1):[7 p.]. Available from: https://doi.org/10.1136/bmj.j2148.
5. Spurling GK, Dooley L, Clark J, Askew DA. Immediate Versus Delayed Versus No Antibiotics for Respiratory Infections. 2003 Oct 20 [amended 2023 Oct 4; cited 2025 May 21]. In: The Cochrane Database of Systematic Reviews [Internet]. Hoboken (NJ): John Wiley & Sons. c1999-2025. Available from: https://doi.org/10.1002/14651858.cd004417.pub6. Record No.: CD004417.
6. McNulty CA, Lecky DM, Hawking MK, Quigley A, Butler CC. Delayed/Back Up Antibiotic Prescriptions: What Do the Public Think? BMJ Open [Internet]. 2015 Nov 27 [cited 2025 May 21];5(11):[7 p.]. Available from: https://doi.org/10.1136/bmjopen-2015-009748.
7. van Staa TP, Palin V, Brown B, Welfare W, Li Y, Ashcroft DM. The Safety of Delayed Versus Immediate Antibiotic Prescribing for Upper Respiratory Tract Infections. Clin Infect Dis. 2021 Jul;73(2):e394-401.
8. Llor C, Moragas A, Cots JM. Implementation of the Delayed Antibiotic Prescribing Strategy. Prospective Observation Study in Primary Care. Rev Esp Quimioter. 2022 Apr;35(2):213-7.
9. Cooper E, Read B, Sanyaolu L, Ahmed H, Lecky D. Impact of Sociodemographic Status and UTI Symptoms on Women's Health-Care Seeking and Management in England: Findings from an E-survey Conducted During the First Year of the COVID-19 Pandemic. BJGP Open [Internet]. 2023 Dec 19 [cited 2025 May 21];7(4):[13 p.]. Available from: https://doi.org/10.3399/bjgpo.2023.0039.

10. Morrell L, Buchanan J, Roope LS, Pouwels KB, Butler CC, Hayhoe B, et al. Public Preferences for Delayed or Immediate Antibiotic Prescriptions in UK Primary Care: A Choice Experiment. PLoS Med [Internet]. 2021 Aug 30 [cited 2025 May 21];18(8):[20 p.]. Available from: https://doi.org/10.1371/journal.pmed.1003737.
11. Rinaldi A, Petrocchi S, Gabutti L, Bullo A, Schulz PJ. Barriers and Facilitators for the Implementation of Delayed-Prescription of Antibiotics in Family Medicine: A Qualitative Study. BMC Health Serv Res [Internet]. 2025 Jan 9 [cited 2025 May 21];25(1):[11 p.]. Available from: https://doi.org/10.1186/s12913-024-12200-8.
12. Davey A, Tapley A, Mulquiney KJ, van Driel M, Fielding A, Holliday E, et al. Immediate and Delayed Antibiotic Prescribing Strategies Used by Australian Early-Career GPs: A Cross-Sectional Analysis. Br J Gen Pract. 2021 Nov;71(713):e895-903.
13. Agnew J, Taaffe M, Darker C, O'Shea B, Clarke J. Delayed Prescribing of Antibiotics for Respiratory Tract Infections: Use of Information Leaflets. Ir Med J. 2013 Sep;106(8):243–4.
14. Cioffi L, Limauro R, Sassi R, Boccazzi A, del Gaizo D. Decreased Antibiotic Prescription in an Italian Pediatric Population with Nonspecific and Persistent Upper Respiratory Tract Infections by Use of a Point-of-Care White Blood Cell Count, in Addition to Antibiotic Delayed Prescription Strategy. Glob Pediatr Health [Internet]. 2016 Feb 8 [cited 2025 May 21];3(1):[6 p.]. Available from: https://doi.org/10.1177/2333794x15615771.
15. Little P, Turner S, Rumsby K, Warner G, Moore M, Lowes J, et al. Dipsticks and Diagnostic Algorithms in Urinary Tract Infection: Development and Validation, Randomised Trial, Economic Analysis, Observational Cohort and Qualitative Study. Health Tech Assess. 2009 Mar;13(19):1-71.

Nasal High-Flow Oxygen Therapy in Moose Jaw: An Implementation Analysis

Lucas King, FMR I; Chelsea Healey, FMR II;
Robert Haver, BSc (High Hon), MD, CCFP; Adam Clay, MSc

Department of Academic Family Medicine, College of Medicine, University of Saskatchewan

ABSTRACT

Background: Nasal high-flow oxygen therapy (NHFOT) provides heated, humidified oxygen at high flow rates, offering clinically significant benefits for acute hypoxemic respiratory failure. Initially deployed in Intensive Care Units (ICU), NHFOT has increasingly moved into emergency and ward settings, potentially reducing invasive ventilation and interfacility transfers. In early 2020, Dr. F.H. Wigmore Regional Hospital in Moose Jaw, Saskatchewan, began regularly using NHFOT, creating an opportunity to evaluate its implementation in a resource-limited regional center.

Question(s): How did NHFOT usage in Moose Jaw evolve from January 2020–July 2024? What were the effects on patient outcomes and the key barriers/facilitators of implementation? What best practices can be recommended to similar hospitals?

Methods/Methodology: A mixed-methods approach combined a retrospective review of Respiratory Therapy (RT) equipment workload data with a qualitative group interview of the hospital's RT team. Quantitative elements included date of therapy initiation, total hours used, ward locations, and COVID-19 status. A focus group explored implementation processes, challenges, staff experiences, and protocol adaptations. Ethical approval was granted by the University of Saskatchewan Behavioural Research Ethics Board (REB #5213) and Operational Approval by the Saskatchewan Health Authority (OA-UofS-5213).

Results/Findings: NHFOT usage grew by over 600% from 2020 to 2023, expanding beyond the ICU into medical, surgical, pediatric, and emergency wards. Although causation cannot be definitively concluded, RTs described observing fewer intubations and patient transfers since NHFOT adoption. Reported barriers included limited staffing, training demands, and equipment availability; facilitators were strong interprofessional collaboration, leadership, training modules, and evolving local protocols.

Discussion: NHFOT became an integral respiratory support modality in Moose Jaw, bridging the gap between standard oxygen therapy and invasive ventilation. Ongoing education, clear inclusion criteria, and multidisciplinary buy-in were critical to successful integration. Staff turnover remains a challenge, necessitating periodic refresher training.

Conclusions: NHFOT in Moose Jaw has shown promise for reducing invasive ventilation and transferring fewer patients to tertiary care centres. With adequate planning, resources, and training, NHFOT can be implemented safely and effectively in other resource-limited centers.

Recommendations: Regular hands-on education, leadership, consultation networks, well-defined protocols, sufficient equipment, and continuous evaluation are advised to maximize NHFOT's benefits in similar settings.

References:

1. Nishimura M. High-Flow Nasal Cannula Oxygen Therapy in Adults: Physiological Benefits, Indication, Clinical Benefits, and Adverse Effects. Respir Care. 2016 Apr;61(4):529-41.
2. Roca O, Riera J, Torres F, Masclans JR. High-Flow Oxygen Therapy in Acute Respiratory Failure. Respir Care. 2010 Apr;55(4):408-13.
3. Frat JP, Thille AW, Mercat A, Girault C, Ragot S, Perbet S, et al. High-Flow Oxygen Through Nasal Cannula in Acute Hypoxemic Respiratory Failure. N Engl J Med. 2015 Jun;372(23):2185-96.
4. Ospina-Tascón GA, Calderón-Tapia LE, García AF, Zarama V, Gomez-Alvarez F, Alvarez-Saa T, et al. Effect of High-Flow Oxygen Therapy vs. Conventional Oxygen Therapy on Invasive Mechanical Ventilation and Clinical Recovery in Patients with Severe COVID-19: A Randomized Clinical Trial. JAMA. 2021 Dec;326(21):2161-71.
5. Ricard JD, Roca O, Lemiale V, Corley A, Braunlich J, Jones P, et al. Use of Nasal High Flow Oxygen During Acute Respiratory Failure. Intensive Care Med. 2020 Dec;46(12):2238-47.

What's the Problem? Number and Nature of Clinical Concerns seen by Residents Caring for Patients at West Winds Primary Health Centre

Sebastian Leakos, FMR II; Morgan Duce, FMR II; Kyle Ivany, FMR II;
Jason Hosain, MD, CCFP; Rhonda Bryce, MD, MSc

Department of Academic Family Medicine, College of Medicine, University of Saskatchewan

ABSTRACT

Background: Family medicine residents often manage multiple health concerns in each appointment, reflecting the complexity of primary care. Being able to analyze the number and types of issues addressed could provide insight into the type of training exposure and clinical workload, in particular the 105 priority topics as outlined by the College of Family Physicians of Canada.

Question(s): This study aimed to quantify the clinical issues addressed by first and second year residents during patient encounters at West Winds Primary Health Centre to determine how many of these issues align with the priority topics. Comparing clinical issue volume by resident gender and year of training were secondary objectives.

Methods/Methodology: This study is a retrospective chart review of 449 patient encounters from July 2023 to June 2024 involving 32 family medicine residents at West Winds Primary Health Centre. The clinical notes were reviewed in these 449 appointments to assess the number of issues addressed and if they pertain to the 105 priority topics. The data was stratified by postgraduate year of training (PGY1 vs PGY2) and gender for comparative analysis.

Results/Findings: Of the 449 encounters recorded, 431 (96% included at least one of the 105 priority topics. The range of issues address was 1 to 6, with the median being 2. The vast majority of encounters (90.5%) addressed 3 or fewer issues: 15.6% addressed three, 34.1% addressed two, and 40.8% addressed one. The most addressed priority topics were: 1) skin disorders (14.5%), 2) anxiety (10%), and 3) hypertension (8.4%).

Discussion: At West Winds Primary Health Centre, family medicine residents are regularly addressing multiple issues with nearly every encounter addressing at least one priority topic. These findings show that residents are primarily addressing the core clinical areas as outlined by the 105 priority topics.

Conclusions: This study reflects the correlation between clinical training and objectives as outlined by the College of Family Physicians of Canada, emphasizing the importance of the priority topics in everyday practice.

References:

1. Beasley JW, Hankey TH, Erickson R, Stange KC, Mundt M, Elliott M, et al. How Many Problems Do Family Physicians Manage at Each Encounter? A WReN study. Ann Fam Med. 2004 Sep-Oct;2(5):405–10.
2. Bélanger SA, Andrews D, Gray C, Korczak D. ADHD in Children and Youth: Part 1-Etiology, Diagnosis, and Comorbidity. Paediatr Child Health. 2018 Nov;23(7):447-53.
3. Crichton T, Schultz K, Lawrence K, Donoff M, Laughlin T, Brailovsky C, et al. Assessment Objectives for Certification in Family Medicine [Internet]. Mississauga (ON): College of Family Physicians of Canada; 2020 May [cited 2025 May 21]. 232 p. Available from: https://www.cfpc.ca/CFPC/media/Resources/Examinations/ Assessment-Objectives-for-Certification-in-FM-full-document.pdf.
4. Iglar K, Murdoch S, Meaney C, Krueger P. Does Clinical Exposure Matter? Pilot Assessment of Patient Visits in an Urban Family Medicine Residency Program. Can Fam Physician. 2018 Jan;64(1):e42-8.
5. McCoy CP, Stenerson MB, Halvorsen AJ, Homme JH, McDonald FS. Association of Volume of Patient Encounters with Residents' In-Training Examination Performance. J Gen Intern Med. 2013 Aug;28(8):1035-41.
6. Polanczyk GV, Salum GA, Sugaya LS, Caye A, Rohde LA. Annual Research Review: A Meta-Analysis of the Worldwide Prevalence of Mental Disorders in Children and Adolescents. J Child Psychol Psychiatry. 2015 Mar;56(3):345-65.
7. Saskatchewan Bureau of Statistics. Saskatchewan Population by Age, Sex and Gender Report 2021 Census of Canada [Internet]. Regina (SK): Government of Saskatchewan; 2022 Apr. 5 p. Available from: https://www.saskatchewan.ca/government/government-data/bureau-of-statistics/population-and-census.

Increasing COPD Measurement and Routine Comprehensive Review in a Collaborative Medical Practice

Bogdan Fufezan, FMR II; Adam Clay, MSc; Emmett Harrison, MD, CCFP(EM)

Department of Academic Family Medicine, College of Medicine, University of Saskatchewan

ABSTRACT

Background: Patients with a missed diagnosis of chronic obstructive pulmonary disease (COPD) or lacking guideline-based interventions may be disproportionately affected by the burden of their disease. Routine comprehensive chronic disease reviews in the primary care setting ensure quality of care. The Associate Family Physicians Clinic's (AFPC) patient population, in Swift Current, Saskatchewan, require improved COPD identification and frequency of documented comprehensive COPD reviews.

Question(s): The aim was to increase the frequency of Chronic Disease Management – Quality Improvement Program (CDM-QIP) COPD forms utilized for routine COPD visits at the AFPC from twenty-nine (29/147; 20%) to fifty over a nine-month period (July 2024 – April 2025) and increase the monthly average comprehensive indicator rate within the CDM-QIP forms from 54% (6.5/12) to 80% (9.6/12).

Methods/Methodology: The Model of Improvement was used. Data was extracted from Accuro©, an electronic medical record, via reports using the COPD ICD-9 diagnostic code (491). Pre-intervention data (July 2023 – July 2024) was extracted and plotted on a run chart, then post-intervention data (July 2024 – April 2025) was added monthly. Plan-Do-Study-Act cycles included audit and feedback, team education, opportunistic reviews, and hiring a dedicated chronic disease registered nurse. University of Saskatchewan's Biomedical Research Ethics Board deemed this project exempt from ethical review (E-Bio-004).

Results/Findings: The total frequency of CDM-QIP COPD reviews during the 9-month period was 31 (31/238; 13%) and the monthly average comprehensive indicator rate was 87% (10.4/12) in April 2025. The run chart showed a shift in the median monthly CDM-QIP COPD review frequency prior to the initial intervention that was sustained throughout the 9-month intervention.

Discussion: Co-booked visits with nursing for comprehensive COPD reviews is an effective way to increase the thoroughness of comprehensive reviews at the AFPC. This is likely due to the nurse's ability to spend the time required for a comprehensive review.

Conclusions: The quality improvement team fell short of their goal of 50 CDM-QIP COPD reviews but met the goal of 80% monthly average comprehensive indicator rate.

Recommendations: Future improvement interventions could focus on patient factors, such as a routine patient recall processes or educational patient infographics.

References:

1. Freeman S, Peach L, Ross C, Marchal K, Meyer A, Skinner K. Development and Evaluation of the Rural and Northern Community Focused Model of COPD Care (RaNCom). BMC Pulm Med [Internet]. 2023 Oct 20 [cited 2025 May 16];23(1):[10 p.]. Available from: https://doi.org/10.1186/s12890-023-02683-2.
2. Mehanni S, Jha D, Kumar A, Choudhury N, Dangal B, Deukmedjian G, et al. Implementing a Quality Improvement Initiative for the Management of Chronic Obstructive Pulmonary Disease in Rural Nepal. BMJ Open Qual [Internet]. 2019 Mar 1 [cited 2025 May 16];8(1):[8 p.]. Available from: https://doi.org/10.1136/bmjoq-2018-000408.
3. Sibbald SL, Misra V, da Silva M, Licsaki C. A Framework to Support the Progressive Implementation of Integrated Team-Based Care for the Management of COPD: A Collective Case Study. BMC Health Serv Res [Internet]. 2022 Mar 30 [2025 May 16];22(1):[11 p.]. Available from: https://doi.org/10.1186/s12913-022-07785-x.
4. Gay E, Desai S, McNeil D. A Multidisciplinary Intervention to Improve Care for High-Risk COPD Patients. Am J Med Qual. 2020 May-Jun;35(3):231-5.
5. Pullen R, Miravitlles M, Sharma A, Singh D, Martinez F, Hurst JR, et al. Conquest Quality Standards: For the Collaboration on Quality Improvement Initiative for Achieving Excellence in Stands of COPD Care. Int J Chron Obstruct Pulmon Dis. 2021 Aug;16(8):2301-22.
6. Harrison E, Mansell H, Blackburn D, Fufezan B, Erickson D, Hennig J, et al. Increasing the Uptake of Annual Preventative Chronic Obstructive Pulmonary Disease Assessments by Utilizing a Collaborative Practice Agreement between Family Physicians and Pharmacists. Poster presented at: Department of Academic Family Medicine's Research & Scholarship Showcase; 2024 May 2; Saskatoon, SK.

Improving Rates of STBBI Screening in Moose Jaw by Implementing Opportunistic Risk Stratification at the Time of Pap Test

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ABSTRACT

Background: Sexually transmitted and blood-borne infections (STBBIs) are rising across Canada, with Saskatchewan reporting a 1,444% syphilis diagnoses increase since 2018. Missed opportunities for screening in primary care contribute to delayed diagnosis and treatment, especially among vulnerable populations. Although antenatal screening has proven effective, routine STBBI screening outside of pregnancy remains inconsistent. This project explored whether opportunistic risk stratification at the time of Pap testing could enhance STBBI screening rates among patients assigned female at birth (AFAB).

Question(s): Will implementing risk stratification for STBBIs increase screening rates during Pap tests and subsequent STBBI test completion among AFAB patients aged 25–69?

Methods/Methodology: The study was conducted over six months in two Moose Jaw family medicine clinics. A standardized template based on Public Health Agency of Canada STBBI guidelines was integrated into the Accuro electronic medical record (EMR) and used during Pap test visits. Eligible participants were AFAB patients aged 25–69, excluding those who were pregnant. Data collected included template use, screening indication assessment, acceptance, and completion. Ethical approval was obtained from the University of Saskatchewan Biomedical Research Ethics Board (Bio ID 4873).

Results/Findings: Screening indication assessment during Pap appointment increased from 33.7% pre-intervention to 78.0% post-intervention ($p < .001$). Screening acceptance rose from 1.0% to 22.0% ($p < .001$), and completion increased from 1.0% to 18.0% ($p < .001$). Among patients assessed for screening eligibility, the proportion identified as requiring testing increased from 8.6% to 28.2% ($p = .040$).

Discussion: While the intervention improved screening uptake, limitations included exclusion of patients who are pregnant, assigned male at birth (AMAB), under 25, and who do not partake in periodic health screening. The infrequency of Pap testing (every three years) also limits the intervention's reach.

Conclusions: Opportunistic integration of STBBI screening during Pap tests significantly improved provider adherence to screening guidelines and patient uptake of testing. This approach is feasible and effective in increasing STBBI screening in primary care.

Recommendations: We recommend expanding this EMR-integrated opportunistic screening model across primary care settings. Additional interventions should target under-screened populations, including individuals under 25 and those AMAB, to ensure equitable access to STBBI prevention.

References:

1. Saskatchewan Prevention Institute. STBBIs Newsletter: Sexually Transmitted and Blood-Borne Infections (STBBIs) and Reproductive Health [Internet]. Saskatoon (SK): Saskatchewan Prevention Institute; 2022 [cited 2025 May 20]. 4 p. Available from: https://skprevention.ca/wp-content/uploads/2022/07/STBBI-Summer-2022-Newsletter.pdf.
2. Brandenburger D, Ambrosino E. The Impact of Antenatal Syphilis Point of Care Testing on Pregnancy Outcomes: A Systematic Review. PLoS One [Internet]. 2021 Mar 25 [2025 May 20];16(3):[28 p.]. Available from: https://doi.org/10.1371/journal.pone.0247649.
3. Public Health Agency of Canada [Internet]. Ottawa (ON): Government of Canada; c2025. STBBI Prevention Guide: Screening and Diagnostic Testing; 2021 Dec 9 [cited 2025 May 20];[about 6 screens]. Available from: https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/stbbi-prevention-guide/screening-diagnostic-testing.html.
4. Zur R, Casson M, Bellaire J, Yudin M. Unintended Consequences: The Impact of Cervical Cancer Screening Guidelines on Rates of STI Screening in Primary Care. J Obstet Gynecol Can. 2021 Mar;43(3):344-51.
5. Moore A, Traversy G, Reynolds D, Riva J, Thériault G, Wilson B, et al. Recommendation on Screening for Chlamydia and Gonorrhea in Primary Care for Individuals Not Known to Be at High Risk. CMAJ. 2021 Apr 19;193(16):E549-59.
6. National Academies of Sciences, Engineering, and Medicine. Sexually Transmitted Infections: Adopting a Sexual Health Paradigm. Washington (DC): The National Academies Press; 2021. 722 p.

Evaluating the Impact of Gross Hematuria on Patients at the Cypress Regional Hospital

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ABSTRACT

Background: Studies demonstrate that intravesicular instillation of tranexamic acid (TXA) with continuous bladder irrigation (CBI) is superior to CBI alone in the management of gross hematuria (1,2). Current recommendations for managing gross hematuria suggest performing manual bladder irrigation first, then initiating CBI (3). A retrospective chart review of gross hematuria to identify local practice patterns and patient outcomes in Swift Current, Saskatchewan, could determine the feasibility of a local RCT comparing different management strategies for gross hematuria.

Question(s):

1. Does treatment vary among patients presenting with gross hematuria at the Cypress Regional Hospital (CRH)?
2. Does gross hematuria treatment variation have implications for patient outcomes?

Methods/Methodology: A retrospective chart review of emergency room and inpatient documentation was conducted at the CRH from September 2018 - September 2023 to quantify the treatment and outcomes of patients over 18 years presenting with gross hematuria to the emergency department (ED) or inpatient ward. IBM SPSS version 28 was used to perform descriptive statistics and intergroup comparisons. Approval was provided by the University of Saskatchewan Biomedical Research Ethics Board (REB-4731) and the Saskatchewan Health Authority (OA-UofS-4731).

Results/Findings: 125 charts with 212 separate visits were reviewed, 53 charts with 90 separate visits were included. Of the 53 patients in this retrospective chart review, 41(77%) were male, and the average age was 75 (range 59-86). CBI was performed more commonly (51%) than manual irrigation (25%), and CBI was performed for male patients more often than female patients (63% vs 8%, P = <0.001). There was no significant difference in outcomes between patients that received CBI compared to those that received CBI and manual irrigation.

Discussion: Differences in the number of patients receiving CBI compared to manual irrigation may reflect time limitations in the ED, provider comfort, or provider education. Manual irrigation may not be documented consistently in the patient's chart. Our study did not have enough power to detect any differences in outcomes.

Conclusions: Future research should review the association between urological consultation and manual irrigation and determine whether ED staff education plays a role before conducting a RCT at the CRH.

References:

1. Willis GC, Tewelde SZ. The Approach to the Patient with Hematuria. Emerg Med Clin North Am. 2019 Nov;37(4):755–69.
2. Choi H, Kim DW, Jung E, Kye YC, Lee J, Jo S, et al. Impact of Intravesical Administration of Tranexamic Acid on Gross Hematuria in the Emergency Department: A Before-and-After Study. Am J Emerg Med. 2023 Jun;68(1):68–72.
3. Hicks D, Li C. Management of Macroscopic Haematuria in the Emergency Department. Emerg Med J. 2007 Jun;24(6):385–90.
4. Relke N, Chornenki NLJ, Sholzberg M. Tranexamic Acid Evidence and Controversies: An Illustrated Review. Res Pract Thromb Haemost [Internet]. 2021 Jul 1 [cited 2024 Jan 30];5(5):[14 p.]. Available from: https://doi.org/10.1002/rth2.12546.
5. Lee SG, Fralick J, Wallis CJD, Boctor M, Sholzberg M, Fralick M. Systematic Review of Hematuria and Acute Renal Failure with Tranexamic Acid. Eur J Haematol. 2022 Jun;108(6):510–7.
6. Vujkovac B, Sabovic M. A Successful Treatment of Life-Threatening Bleeding from Polycystic Kidneys with Antifibrinolytic Agent Tranexamic Acid. Blood Coag Fibrinolysis. 2006 Oct;17(7):589-91.
7. Alameel T, West M. Tranexamic Acid Treatment of Life-Threatening Hematuria in Polycystic Kidney Disease. Int J Nephrol [Internet]. 2011 Jun 1 [cited 2025 May 22];2011(1):[3 p.]. Available from: https://doi.org/10.4061/2011/203579.
8. Moharamzadeh P, Ojaghihaghighi S, Amjadi M, Rahmani F, Farjamnia A. Effect of Tranexamic Acid on Gross Hematuria: A Pilot Randomized Clinical Trial Study. Am J Emerg Med. 2017 Dec;35(12):1922–5.
9. Avellino GJ, Bose S, Wang DS. Diagnosis and Management of Hematuria. Surg Clin North Am. 2016 Jun;96(3):503–15.
10. ud Din N, Sajjad A, Hashmi SH, Malik MH, Zein-El-Amir, Qadeer Z. Cause of Gross Hematuria in Patient at a Tertiary Care Hospital. J Islamabad Med Dent Coll. 2018 Jul;7(4):269-73.
11. Dobruch J, Daneshmand S, Fisch M, Lotan Y, Noon AP, Resnick MJ, et al. Gender and Bladder Cancer: A Collaborative Review of Etiology, Biology, and Outcomes. Eur Urol. 2016 Feb;69(2):300-10.

Comparing the Accuracy and Clinical Utility of AI Scribes in a Primary Care Clinic

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ABSTRACT

Background: Clinical documentation is a leading contributor to physician burnout and detracts from time available for patient care. Artificial intelligence (AI) scribes offer a potential solution by transcribing encounter audio into clinical notes. However, their real-world performance in primary care remains poorly characterized.

Question(s): How accurate and clinically acceptable are SOAP notes generated by AI scribes in an academic family medicine clinic?

Methods/Methodology: This pilot mixed-methods study was conducted at West Winds Primary Health Centre. Faculty physicians and second-year residents recorded outpatient encounters, which were transcribed by three AI scribe platforms: GetFreed, Heidi, and Scriberry. The resulting SOAP notes were assessed by blinded faculty reviewers using a modified Physician Documentation Quality Instrument (PDQI-9). Ethics approval was obtained from the University of Saskatchewan Biomedical Research Ethics Board (Bio 5312), and all participants provided informed consent.

Results/Findings: Fifteen AI-generated notes were reviewed. Scriberry scored highest for completeness (4.88), relevance (4.50), and content accuracy (4.88). Heidi led in factual accuracy (4.86), consistency (5.0), and absence of hallucinations (4.86). GetFreed performed lower, particularly in organization and succinctness. Reviewers found the notes generally clear and clinically useful, though documentation errors and formatting inconsistencies were noted. Point-form documentation was preferred for readability.

Discussion: AI scribes can produce documentation that meets clinical standards, although variation in performance exists among platforms. Reviewers emphasized the need for human oversight to catch inaccuracies and improve structure.

Conclusions: AI scribes show promise in reducing the documentation burden in family medicine. Their effectiveness depends on the capabilities of the platform and the degree of clinical workflow integration.

Recommendations: Future improvement initiatives should include resident physicians to assess educational impact, expand comparison of AI platforms, and explore optimization strategies to enhance note structure and reduce errors.

References:

1. van Buchem MM, Boosman H, Bauer MP, van der Hage JA, Linskens RK, Schijven MP. The Digital Scribe in Clinical Practice: A Scoping Review and Research Agenda. NPJ Digit Med [Internet]. 2021 Mar 26 [cited 2025 May 23];4(1):[8 p.]. Available from: https://doi.org/10.1038/s41746-021-00432-5.
2. Gidwani R, Nguyen C, Kofoed A, Carragee C, Rydel T, Nelligan I, et al. Impact of Scribes on Physician Satisfaction, Patient Satisfaction, and Charting Efficiency: A Randomized Controlled Trial. Ann Fam Med. 2017 Sep;15(5):427-33.
3. Forbes [Internet]. Jersey City (NJ): Forbes Media; c2025. InnovationRx: Battle of the AI medical scribes; 2024 May 15 [cited 2025 May 14];[about 7 screens]. Available from: https://www.forbes.com/sites/katiejennings/2024/05/15/innovationrx-battle-of-the-ai-medical-scribes/.
4. Fierce Healthcare [Internet]. New York (NY): Questex; c2025. Most doctors have not yet tried AI but are cautiously optimistic about its benefits; 2024 Apr 18 [cited 2025 May 14];[about 6 screens]. Available from: https://www.fiercehealthcare.com/ai-and-machine-learning/most-doctors-have-not-yet-tried-ai-are-cautiously-optimistic-about-benefits.
5. Tierney AA, Gayre G, Hoberman B, Mattern B, Ballesca M, Kipnis P, et al. Ambient Artificial Intelligence Scribes to Alleviate the Burden of Clinical Documentation. NEJM Catalyst Innov Care Deliv [Internet]. 2024 Feb 21 [cited 2025 May 23];5(3):[15 p.]. Available from: https://catalyst.nejm.org/doi/full/10.1056/ CAT.23.0404.

Optimal Booking System for Physician Satisfaction in Family Medicine Clinics

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ABSTRACT

Background: As the Canadian family physician shortage becomes ever more apparent, minimizing physician burnout matters. Although studies have evaluated patient satisfaction regarding appointment booking systems, there is rarely assessment of physician satisfaction. We investigate physician satisfaction in relation to clinic booking systems to see if an optimal booking system exists that may keep family physicians happy and more likely to remain rural.

Question(s): This project seeks to describe family medicine booking systems that are associated with physician satisfaction. As a secondary objective, we will evaluate accessibility via time to third-next available appointment and how this relates to both booking arrangements and physician satisfaction.

Methods/Methodology: Upon approval from the University of Saskatchewan Behavioural Ethics Board (Beh 5192), a cross-sectional study, utilizing a researcher-administered survey was undertaken at four large group practices in Prince Albert, Saskatchewan. Demographics, actual and preferred percentages of booked patients, satisfaction with five main practice aspects, and time to third-next available appointment were requested, in addition to open-ended responses regarding advantages/disadvantages of current and preferred systems, along with booking advice for new graduates. Comparisons were made between participants who were and were not satisfied, including booking arrangements.

Results/Findings: Among 21 participants, physician satisfaction seems to favor those who have more flexibility, such as 80% booked to 20% open. Regarding change among those less than satisfied in certain aspects, participants preferred to decrease their booked percentage by a median value of ten points. Shorter time to third-next available appointment was also associated with improved physician satisfaction, which may infer again that more booking flexibility leads to more satisfied family physicians while improving care access.

Discussion: Our findings align with studies that support increased flexibility resulting in increased physician satisfaction[1]. Those physicians that had purely booked appointments were the least satisfied, often in more than one aspect.

Conclusions: Physicians tend to be most satisfied when there is a more flexible scheduling system that allow for same-day/walk-in appointments. Physicians who are satisfied with practice overall are typically content with their current booking ratio, while those less than satisfied would prefer to slightly decrease their number of booked appointments.

References:

1. Mitchell V. Same-Day Booking: Success in a Canadian Family Practice. Can Fam Physician. 2008 Mar;54(3):379-83.
2. Oliver D, Deal K, Howard M, Qian H, Agarwal G, Guenter D. Patient Trade-Offs Between Continuity and Access in Primary Care Interprofessional Teaching Clinics in Canada: A Cross-Sectional Survey Using Discrete Choice Experiment. BMJ Open [Internet]. 2019 Mar 23 [cited 2025 May 22];9(3):[8 p.]. Available from: https://doi.org/10.1136/bmjopen-2018-023578.
3. Garth B, Temple-Smith M, Clark M, Hutton C, Deveny E, Biezen R, et al. Managing Same Day Appointments--A Qualitative Study in Australian General Practice. Aust Fam Physician. 2013 Apr;42(4):238-43.
4. Cameron S, Sadler L, Lawson B. Adoption of Open-Access Scheduling in an Academic Family Practice. Can Fam Physician. 2010 Sep;56(9):906-11.
5. Hudec JC, MacDougall S, Rankin E. Advanced Access Appointments: Effects on Family Physician Satisfaction, Physicians' Office Income, and Emergency Department Use. Can Fam Physician. 2010 Oct;56(10):e361-7.
6. Phan K, Brown SR. Decreased Continuity in a Residency Clinic: A Consequence of Open Access Scheduling. Fam Med. 2009 Jan;41(1):46-50.
7. Pope C, Banks J, Salisbury C, Lattimer V. Improving Access to Primary Care: Eight Case Studies of Introducing Advanced Access in England. J Health Serv Res Policy. 2008 Jan;13(1):33-9.
8. Sampson F, Pickin M, O'Cathain A, Goodall S, Salisbury C. Impact of Same-Day Appointments on Patient Satisfaction with General Practice Appointment Systems. Br J Gen Pract. 2008 Sep;58(554):641-3.

Cannabis Hyperemesis Syndrome: Presentation and Treatment in a Regional Emergency Department

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ABSTRACT

Background: Cannabis Hyperemesis Syndrome (CHS) is an increasingly recognized condition characterized by cyclic nausea, vomiting, and abdominal pain in chronic cannabis users, frequently leading to emergency department (ED) visits. Although current research surrounding this illness is limited, the authors aim to further explore presentation and management of CHS in a local ED setting.

Question(s):

1. How do patients with CHS present in a regional ED?
2. How do physicians in a regional ED currently treat CHS?

Methods/Methodology: A retrospective review of charts was conducted at the Battleford Union Hospital (BUH) between November 1, 2018, and November 1, 2024. Data was collected on symptoms, investigations, treatments, disposition, and other relevant clinical variables. Descriptive statistics were applied. This study was approved by the University of Saskatchewan Biomedical Research Ethics Board and granted Operational Approval by the Saskatchewan Health Authority (OA-UofS 5161).

Results/Findings: We identified one hundred twenty-four (N=124) eligible patients with a total of two hundred eight (N=208) visits. Common presenting symptoms included vomiting (93.7%), nausea (89.4%), and abdominal pain (83.1%), while 24.5% reported symptom relief from hot showers. Regarding treatment, 77.8% received IV fluids, 64.3% received haloperidol, 43.8% received dimenhydrinate and 42.8% received ondansetron. Only 17.4% were advised to follow-up with their family physician on discharge.

Discussion: The HaVOC Trial (2021) showed that intravenous haloperidol is superior to ondansetron in managing symptoms. This study highlights current treatment patterns to guide clinicians toward haloperidol as first-line therapy. While generally well tolerated, it may cause extrapyramidal symptoms, as observed in one case. Low family physician follow-up rate indicates the need to incorporate structured cannabis cessation counselling to improve long-term outcomes and prevent recurrence.

Conclusions: Cannabis hyperemesis syndrome is a common presentation in the ED with haloperidol as the preferred medication of choice for management. Practitioners must be cognizant of comorbidities and complications of the illness as well as treatment.

Recommendations: ED physicians could benefit from standardized protocols for treating CHS, with haloperidol as first-line treatment. We also suggest referrals to family doctors for preventive care counseling. Additionally, quantifying cannabis use in the ED could improve understanding of symptom presentation and recurrence.

References:

1. Attout H, Amichi S, Josse F, Appavoupoule V, Randriajohany A, Thirapathi Y. Cannabis Hyperemesis Syndrome: A Still Under-Recognized Syndrome. Eur J Case Rep Intern Med [Internet]. 2020 Mar 27 [2025 May 22];7(3):[3 p.]. Available from: https://doi.org/10.12890/2020_001588.
2. Statistics Canada [Internet]. Ottawa (ON): Government of Canada; c2025. Research to Insights: Cannabis in Canada; 2023 Oct 16 [cited 2025 May 22];[about 10 screens]. Available from: https://www150.statcan.gc.ca/n1/pub/11-631-x/11-631-x2023006-eng.htm.
3. Ruberto AJ, Sivilotti MLA, Forrester S, Hall AK, Crawford FM, Day AG. Intravenous Haloperidol versus Ondansetron for Cannabis Hyperemesis Syndrome (HaVOC): A Randomized, Controlled Trial. Ann Emerg Med. 2021 Jun;77(6):613-9.
4. Yusuf HM, Geier C, Staidle A, Montoy JCC. Efficacy of Topical Capsaicin for the Treatment of Cannabinoid Hyperemesis Syndrome: A Retrospective Cohort Study. Am J Emerg Med. 2021 May;43(5):142–8.
5. Perisetti A, Gajendran M, Dasari CS, Bansal P, Aziz M, Inamdar S, et al. Cannabis Hyperemesis Syndrome: An Update on the Pathophysiology and Management. Ann Gastroenterol. 2020 Nov-Dec;33(6):571–8.
6. Myran DT, Roberts R, Pugliese M, Taljaard M, Tanuseputro P, Pacula RL. Changes in Emergency Department Visits for Cannabis Hyperemesis Syndrome Following Recreational Cannabis Legalization and Subsequent Commercialization in Ontario, Canada. JAMA Netw Open [Internet]. 2022 Sep 1 [cited 2025 May 22];5(9):[13 p.]. Available from: https://doi.org/10.1001/jamanetworkopen.2022.31937.
7. Moussa G, Genest M, Villeneuve E, Wang JJ. Intravenous Haloperidol versus Ondansetron for Cannabis Hyperemesis Syndrome (HaVOC): A Randomized, Controlled Trial [Letter]. Ann Emerg Med. 2021 May;77(5):555.
8. Simonetto DA, Oxentenko AS, Herman ML, Szostek JH. Cannabinoid Hyperemesis: A Case Series of 98 Patients. Mayo Clin Proc. 2012 Feb;87(2):114–9.
9. Elnagar A, Kgomo M, Mokone M, Yousif B. Cannabinoid Hyperemesis Syndrome. BMJ Case Rep [Internet]. 2024 Apr 30 [cited 2025 May 22];17(4):[3 p.]. Available from: https://doi.org/10.1136/bcr-2023-256921.
10. National Library of Medicine [Internet]. Bethesda (MD): National Institutes of Health; c2025. Dystonic Reactions; [updated 2023 May 1; cited 2025 May 27];[about 5 screens]. Available from: https://ncbi.nlm.nih.gov/books/NBK531466.

The Impact of Cold Weather on Visits to the ED Among Frequent Users at a Northern Regional Hospital

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ABSTRACT

Background: Long wait times in Emergency Departments (EDs) remain a concern across Canada. Previous studies have shown that a small number of frequent ED users account for a disproportionate share of visits.[1,2,3] This project explores whether that pattern holds true at a northern regional hospital in Saskatchewan.

Question(s):

1) Among frequent users of the emergency department (ED) at a northern regional hospital, does cold weather impact the likelihood of visiting the ED?
2) Does housing status play a role in the relationship between cold weather and frequency of ED use in this group?

Methods/Methodology: This study received ethics approval from the University of Saskatchewan Biomedical Research Ethics Board (Bio-5204). The study population included adults aged 18 and over who visited the ED seven or more times between October 1, 2022, and September 30, 2023. Data collected included age, date of visit, housing status (stable vs. underhoused), substance use, and the day's low temperature based on Environment Canada records. Analysis focused on identifying patterns related to weather, housing, and substance use.

Results/Findings: A total of 488 patients made 7,244 ED visits. Of these, 77 (15.8%) were underhoused and accounted for 36.2% (2,622) of the visits. Substance use was identified in 228 individuals (46.7%). ED visits among the underhoused rose in early March, though this was not clearly linked to temperature changes. However, modeling revealed a significant interaction between sub-zero temperatures, housing status, and substance use. Underhoused patients were 73% more likely to visit during freezing temperatures, while those with substance use were 90% more likely to present.

Discussion: The findings suggest that cold weather increases ED use among underhoused individuals, highlighting their heightened vulnerability. Substance use further elevates this risk,

with housing status influencing the extent of that effect. The early March spike may reflect disruptions in shelter access, emphasizing the importance of consistent community supports.

Conclusions: Cold weather increases the likelihood of ED use among the underhoused but not those with stable housing. Housing status also modifies the impact of substance use. These findings support the need for targeted housing, addiction services, and timely cold weather interventions.

References:

1. Canadian Institute for Health Information [Internet]. Ottawa (ON): Canadian Institute for Health Information; c1996-2025. NACRS emergency department visits and lengths of stay; [cited 2025 Apr 22];[about 3 screens]. Available from: https://www.cihi.ca/en/nacrs-emergency-department-visits-and-lengths-of-stay.
2. CBC News [Internet]. Toronto (ON): CBC; c2025. ER wait times in Sask. bogged down by addiction, long stays, says health minister; 2019 May 15 [cited 2025 Apr 22]. Available from: https://www.cbc.ca/news/canada/saskatchewan/er-wait-times-in-sask-bogged-down-by-addiction-long-stays-says-health-minister-1.5136548.
3. Chen A, Ospina M, McRae A, McLane P, Hu JX, Fielding S, et al. Characteristics of Frequent Users of Emergency Departments in Alberta and Ontario, Canada: An Administrative Data Study. CJEM. 2021 Mar;23(2):206–13.
4. Moe J, O'Sullivan F, McGregor M, Schull M, Dong K, Holroyd B, et al. Characteristics of Frequent Emergency Department Users in British Columbia, Canada: A Retrospective Analysis. CMAJ Open. 2021 Mar 2;9(1):E134–41.
5. LaCalle E, Rabin E. Frequent Users of Emergency Departments: The Myths, The Data, and The Policy Implications. Ann Emerg Med. 2010 Jul;56(1):42–8.
6. Doupe M, Palatnik W, Day S, Chateau D, Soodeen RA, Burchil C, et al. Frequent Users of Emergency Departments: Developing Standard Definitions and Defining Prominent Risk Factors. Ann Emerg Med. 2012 Jul;60(1):24-32.
7. Environmental and Natural Resources [Internet]. Ottawa (ON): Government of Canada; c2025. Historical climate data: 2025 Mar 20 [cited 2025 May 20];[about 3 screens]. Available from: http://climate.weather.gc.ca/index_e.html.
8. Richard L, Golding H, Saskin R, Shariff SZ, Jenkinson JIR, Pridham KF, et al. Trends in Emergency Department Visits During Cold Weather Seasons Among Patients Experiencing Homelessness in Ontario, Canada: A Retrospective Population-Based Cohort Study. CJEM. 2024 May;26(5):339-48.
9. Richard L, Golding H, Saskin R, Jenkinson JIR, Pridham KF, Gogosis E, et al. Cold-Related Injuries Among Patients Experiencing Homelessness in Toronto: A Descriptive Analysis of Emergency Department Visits. CJEM. 2023 Aug;25(8):695-703.
10. City of Prince Albert [Internet]. Prince Albert (SK): City of Prince Albert; c2025. Warm up location in Prince Albert open every night; 2025 Feb 10 [cited 2025 May 22];[about 2

screens]. Available from: https://www.citypa.ca/en/news/overnight-warm-up-location-open-every-night.aspx.
11. YWCA Prince Albert [Internet]. Prince Albert (SK): YWCA Prince Albert; c2025. Our House; [cited 2025 May 22];[about 6 screens]. Available from: https://www.ywcaprincealbert.ca/our-house.
12. YWCA Prince Albert [Internet]. Prince Albert (SK): YWCA Prince Albert; c2025. Central Avenue; [cited 2025 May 22];[about 7 screens]. Available from: https://www.ywcaprincealbert.ca/central-avenue.
13. paNOW [Internet]. Prince Albert (SK): Pattison Media; c2025. Homeless population in Prince Albert doubles as city works on services; 2025 Feb 13 [cited 2025 May 22];[about 7 screens]. Available from: https://panow.com/2025/02/13/homeless-population-in-prince-albert-doubles-as-city-works-on-services/.
14. paNOW [Internet]. Prince Albert (SK): Pattison Media; c2025. YWCA announces closing date for Stepping Stones homeless shelter; 2025 Mar 31 [cited 2025 May 22];[about 6 screens]. Available from: https://panow.com/2025/03/31/ywca-announces-closing-date-for-stepping-stones-homeless-shelter/.
15. saskNOW [Internet]. Prince Albert (SK): Pattison Media; c2025. P.A. Homeless shelter helps 445 people during winter, had to turn away around 14 daily; 3 May 2023 [cited 2025 May 22];[about 6 screens]. Available from: https://sasknow.com/2023/05/03/p-a-homeless-shelter-helps-445-people-during-winter-had-to-turn-away-around-14-daily/.

Assessing Equality in Wait Times Between Male and Female Patients in Emergency Departments in Saskatoon

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ABSTRACT

Background:
Across Canadian emergency departments, patients are triaged according to the Canadian Triage and Acuity Scale (CTAS). Ideally, the CTAS score ensures consistency in wait times; however, in practice, patients with the exact same CTAS score experience significantly different wait times. Longer wait times have been associated with increased mortality and worsened outcomes. Currently, there is no existing Canadian literature that investigates whether patients at the same CTAS score experience different wait times depending on their sex.

Question(s):
This study examines if Emergency Department patients experience inequitable wait times dependent on sex, when triaged at the same CTAS score. A secondary outcome was to determine whether wait times, investigation ordering practices and patient disposition varied by the gender of the attending physician.

Methods/Methodology:
We performed a retrospective chart review of male and female patients who presented to any Emergency Department in Saskatoon, Saskatchewan with abdominal pain or a gynecologic complaint with a CTAS score of 3. This project received REB approval from the University of Saskatchewan.

Results/Findings:
Female patients with gynecologic complaints waited a median of 71.0 minutes compared to 108.0 minutes and 130.5 minutes for female and male patients with abdominal pain respectively ($p < 0.003$). Of female gynecologic patients, 3.4% were admitted compared to 11.7% and 17.6% for female and male abdominal pain patients respectively ($p < 0.001$). There were no differences in wait time, investigation ordering patterns, or patient disposition compared to physician gender.

Discussion:
Male patients with abdominal pain wait longer to see an emergency department physician compared to female patients with abdominal pain or gynecologic complaints respectively. In comparison, male patients with abdominal pain were more likely to be admitted compared to either group of female patients.

Conclusions:
In Saskatoon, male patients wait significantly longer than female patients to see an emergency department physician when triaged at the same level of acuity.

References:

1. Canadian Association of Emergency Physicians. The Canadian Emergency Department Triage and Acuity Scale (CTAS): Education Manual [Internet]. Ottawa (ON): Canadian Association of Emergency Physicians; 2012. 38 p. Available from: https://caep.ca/wp-content/uploads/2017/06/module_1_slides_v2.5_2012.pdf.
2. Guttmann A, Schull MJ, Vermeulen MJ, Stukel TA. Association Between Waiting Times and Short-Term Mortality and Hospital Admission After Departure from Emergency Department: Population Based Cohort Study from Ontario, Canada. BMJ [Internet]. 2011 Jun 1 [cited 2025 May 23];342(1):[8 p.]. Available from: https://doi.org/10.1136/bmj.d2983.
3. Wong MKY, Wang JT, Czarnecki A, Koh M, Tu JV, Scuhll MJ, et al. Factors Associated with Physician Follow-Up Among Patients with Chest Pain Discharged from the Emergency Department. CMAJ. 2017 Mar 5;187(5):E160-8.
4. Tsugawa Y, Jena AB, Figueroa JF, Orav EJ, Blumenthal DM, Jha AK. Comparison of Hospital Mortality and Readmission Rates for Medicare Patients Treated by Male vs. Female Physicians. JAMA Intern Med. 2017 Feb;177(2):206–13.
5. Canadian Medical Association. Addressing Gender Equity and Diversity in Canada's Medical Profession: A Review [Internet]. Ottawa (ON): Canadian Medical Association; 2018. 16 p. Available from: https://www.cma.ca/sites/default/files/pdf/ Ethics/report-2018-equity-diversity-medicine-e.pdf.
6. Hamberg K. Gender Bias in Medicine. Womens Health (Lond). 2008 May;4(3):237–43.
7. Roter DL, Hall JA, Aoki Y. Physician Gender Effects in Medical Communication: A Meta-Analytic Review. JAMA. 2002 Aug 14;288(6):756–64.
8. Sinsky C, Colligan L, Li L, Prgomet M, Reynolds S, Goeders L, et al. Allocation of Physician Time in Ambulatory Practice: A Time and Motion Study in 4 Specialties. Ann Intern Med. 2016 Dec;165(11):753–60.
9. Canadian Institutes of Health Research [Internet]. Ottawa (ON): Government of Canada; c2025. How to integrate sex and gender into research; 2019 Aug 21 [cited 2025 May 23];[about 3 screens]. Available from: https://cihr-irsc.gc.ca/e/50836.html.

Enhancing Continuity of Care After Emergency Department Visits and Inpatient Discharge for Patients Reviewed by Family and Emergency Medicine Residents in Swift Current

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ABSTRACT

Background: Continuity of care following emergency room (ER) visits or inpatient stays is essential for patient outcomes, yet it often lacks effective follow-up, leading to readmissions or worsened health. This issue is challenging in smaller settings like the Associate Family Physicians Clinic (AFPC) in Swift Current, where barriers include limited healthcare resources, scheduling issues, and a lack of continuity for medical learners. Resident learners would benefit from improved patient continuity during their training.

Question(s): We aim to increase the Resident Provider Continuity Index (RPC) for outpatient urgent follow-ups after ER and inpatient care transitions at AFPC to 0.40 within 12 months.

Methods/Methodology: Using the Model for Improvement, the study collects quantitative data from the clinic's EMR (Accuro). Baseline and quarterly reports track follow-up visits after ER or inpatient discharges. RPC was introduced to measure continuity among resident physicians. Interventions to increase resident continuity included patient education, resident education, and follow-up reminder business cards. Ethics exemption was granted by the University of Saskatchewan's Biomedical Research Ethics Board (E-Bio-001).

Results/Findings: Preliminary findings show baseline RPC at 0.17 for ER follow-ups and 0.33 for inpatient follow-ups. Interventions with business cards and pamphlets in November resulted in RPC changes. For ER follow-ups, RPC peaked at 0.67 in August, dropped to zero in October, and recovered to 0.50 in November. Inpatient follow-ups followed a similar trend, rising to 0.67 in August, increasing to 0.50 in December, but then dropping again.

Discussion: The increase in RPC post-intervention was expected, but the subsequent drop was not. This may be due to the absence of most resident physicians from October to March, leaving only four available. While interventions initially improved continuity, their effects were not sustained, highlighting the impact of provider availability and operational factors. This aligns with literature suggesting that continuity can be disrupted by varying workforce availability in smaller, resource-limited settings.

Conclusions: Improvements in patient continuity were observed after the interventions. Although the target RPC of 0.40 was initially met, results were not sustained.

Recommendations: Future interventions should focus on sustaining patient continuity. Direct booking of follow-ups has proven effective and should continue.

References:

1. Gill JM, Mainous AG 3rd, Nsereko M. The Effect of Continuity of Care on Emergency Department Use. Arch Fam Med. 2000 Apr;9(4):333-8.
2. Lee A, Kennett S, Khera S, Ross S. Perceptions, Practice, and "Ownership": Experiences in Continuity of the Patient-Doctor Relationship in a Family Medicine Residency. Can Med Educ J. 2017 Dec 20;8(4):e74-85.
3. Canadian Institute of Health Information. Continuity of Care with Family Medicine Physicians: Why It Matters [Internet]. Ottawa (ON): Canadian Institute of Health Information; 2015. 35 p. Available from: https://www.cihi.ca/sites/default/files/document/continuity-care-family-medicine-physicians-why-it-matters-en.pdf.
4. Flores-Mateo G, Violán C, Carrillo-Santisteve P, Peiró S, Argimon JM. Effectiveness of Organizational Interventions to Reduce Emergency Department Utilization: A Systematic Review. PLoS One [Internet]. 2012 May 2 [cited 2025 May 22];7(5):[7 p.]. Available from: https://doi.org/10.1371/journal.pone.0035903.
5. Atzema CL, Maclagan LC. The Transition of Care Between Emergency Department and Primary Care: A Scoping Study. Acad Emerg Med. 2017 Feb;24(2):201-15.
6. Sklar MR, Seijo CR, Goldman R, Eaton CB. Beyond Checkboxes: A Qualitative Assessment of Physicians' Experiences Providing Care in a Patient-Centered Medical Home. J Eval Clin Pract. 2019 Dec;25(6):1142-51.
7. Carek SM, Farrow BL, Nelson V. Enhanced Scheduling to Improve Resident Continuity in a Family Medicine Teaching Clinic. Fam Med. 2024 Feb;56(2):115-9.
8. Dowdy DW, Horton CK, Lau B, Ferrer R, Chen AH. Patient Follow-Up in an Urban Resident Continuity Clinic: An Initiative to Improve Scheduling Practices. J Grad Med Educ. 2011 Feb;3(2):256-60.
9. Dubé K, Gupta R, Kong M, Knox M, Bodenheimer T. Continuity of Care in Residency Teaching Practices: Lessons from “Bright Spots.” Perm J [Internet]. 2018 Sep 1 [cited 2025 May 22];22(1):[3 p.]. Available from: https://doi.org/10.7812/tpp/18-028.

Evaluating emergency department use among patients cared for by the Battlefords Union Hospital Palliative Care Program

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ABSTRACT

Background: Emergency department (ED) visits among palliative patients often signal unmet needs, especially in rural areas with limited access to timely, coordinated care. This quality improvement project evaluated a rural palliative care outreach program's impact on ED utilization and patient function over time. By identifying patterns of ED use and changes in the Palliative Performance Scale (PPS), the study aims to inform more effective, patient-centered care. The primary quality dimension addressed is effectiveness, with relevance to efficiency and patient-centeredness.

Question(s):

1. Does enrollment in the rural palliative care outreach program reduce the frequency of ED visits in the first two months post-enrollment compared to the two months prior?
2. How does patient functional status, as measured by the Palliative Performance Scale (PPS), change over time while enrolled in the program?

Methods/Methodology: A retrospective cohort study was conducted on 65 patients (37 community-dwelling and 28 in long-term care) supported by the program on August 1, 2024. Data on demographics, diagnoses, PPS scores, and ED visits were collected. Time-to-event and negative binomial regression analyses evaluated predictors of ED use. This project was exempted from ethical review by the University of Saskatchewan Research Ethics Board (OA-UofS-E-BIO-035 Exempt).

Results/Findings: No patients had ED visits in the two months prior to enrollment, while 7.7% had visits within two months after. Over the full follow-up, 55.4% had at least one ED visit. Frequent program visits predicted earlier ED use (HR 1.71, p=0.02). Most patients (62.9%) maintained or improved their PPS. Those who declined started with higher PPS and had longer program durations.

Discussion: The program showed strong effectiveness in supporting functional stability, with nearly two-thirds maintaining or improving their PPS. Increased visit frequency likely reflects appropriate clinical responsiveness rather than preventable escalation. The outreach model delivers adaptable, patient-centered care in rural settings.

Conclusions: The rural palliative care program helps maintain or improve patient function and limits early ED use. PPS trends are valuable for anticipating care needs and guiding responsive service delivery.

Recommendations: PPS trends should be systematically integrated into risk stratification, with visit intensity tailored to proactively address anticipated functional decline.

References:

1. Grudzen CR, Richardson LD, Johnson PN, Hu M, Wang B, Ortiz JM, et al. Emergency Department-Initiated Palliative Care in Advanced Cancer: A Randomized Clinical Trial. JAMA Oncol. 2016 May;2(5):591-8.
2. Seow H, Brazil K, Sussman J, Pereira J, Marshall D, Austin PC, et al. Impact of Community-Based, Specialist Palliative Care Teams on Hospitalisations and Emergency Department Visits Late in Life and Hospital Deaths: A Pooled Analysis. BMJ [Internet]. 2014 Jun 6 [cited 2025 May 16];348(1):[10 p.]. Available from: https://doi.org/10.1136/bmj.g3496.
3. Barbera L, Taylor C, Dudgeon D. Why Do Patients with Cancer Visit the Emergency Department Near the End of Life? CMAJ. 2010 Apr 6;182(6):563–8.
4. Henson LA, Higginson IJ, Gao W. Emergency Department Attendance by Patients with Cancer in Their Last Month of Life: A Systematic Review and Meta-Analysis. J Clin Oncol. 2015 Sep;33(30):370–6.
5. Canadian Hospice Palliative Care Association. Report: Number of Beds in Hospice Residences in Canada, Spring 2022 [Internet]. Ottawa (ON): Canadian Cancer Society; 2023 Oct. 10 p. Available from: https://www.chpca.ca/wp-content/uploads/2024/03/FINAL-CHPCA-Hospice-Beds-Report-as-of-Spring-2022-1.pdf.
6. Canadian Institute for Health Information [Internet]. Ottawa (ON): Canadian Institute for Health Information; c1996-2025. Long-term care homes in Canada: How many and who owns them?; 2021 Jun 10 [cited 2025 May 22];[about 4 screens]. Available from: https://www.cihi.ca/en/long-term-care-homes-in-canada-how-many-and-who-owns-them.
7. Anderson F, Downing GM, Hill J, Casorso L, Lerch N. Palliative Performance Scale (PPS): A New Tool. J Palliat Care. 1996 Spring;12(1):5-11.
8. Wiese CH, Bartels UE, Ruppert D, Marung HU, Graf BM, Hanekop GG. Quality of Out-of-Hospital Palliative Emergency Care Depends on the Expertise of the Emergency Medical Team—A Prospective Multi-Centre Analysis. Support Care Cancer. 2009 Dec;17(2):1499-506.
9. Wallace EM, Cooney MC, Walsh J, Conroy M, Twomey F. Why Do Palliative Care Patients Present to the Emergency Department? Avoidable or Unavoidable? Am J Hosp Palliat Care. 2013 May;30(3):253–6.
10. Cotogni P, De Luca A, Saini A, Brazzi L. Unplanned Hospital Admissions of Palliative Care Patients: A Great Challenge for Internal and Emergency Medicine Physicians. Intern Emerg Med. 2017 Aug;12(5):569–71.

Indigenous Health in the Family Medicine Residency Training Program in Saskatchewan

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ABSTRACT

Background: Given the number of First Nations, Metis and Inuit residents in Saskatchewan, physicians will be offering care to Indigenous peoples. The Indigenous Health Supplement is a supplement to CanMeds – FM 2017 competency framework; helping family physicians provide care that aligns with the needs and circumstances of Canada's Indigenous peoples. Therefore, it is important for Residents and Faculty in the University of Saskatchewan's Department of Family Medicine to understand what Indigenous health content is currently delivered.

Question(s): What elements of the Indigenous Health Supplement are taught to residents at University of Saskatchewan's Family Medicine Residency Training sites and how are elements delivered?

Methods/Methodology: Site directors at University of Saskatchewan Family Medicine sites were surveyed in January 2025. The survey asked about information taught, who is teaching it, promoters and barriers to integration and Indigenous community involvement. This project was exempted by the University of Saskatchewan Behavioural Research Ethics Board (E440).

Results/Findings: All sites completed the survey. Content delivered varied by site but included clinical exposure, SHA cultural responsiveness training modules, lectures on non-insured health benefits and communication strategies, history teachings, among others. Content was primarily delivered by local Indigenous physicians and content experts, but certain sites engaged Elders and Band members. Barriers included lack of academic time, cultural differences and languages in each region, limited access to patients in the local community, lack of Advisory Committees guiding development, and discomfort due to lack of knowledge.

Discussion: There is a need for more guidance on the delivery of content, local contextualization and meaningful community engagement. There are different cultures of Indigenous peoples in Saskatchewan which may impact what is acceptable in an area. Sites expressed interest in engaging in this work and some uncertainty about how to proceed. The current curriculum is predominantly informal and clinical, with wide variation across sites.

Conclusions: Academic and clinical Indigenous Health and Wellness curriculum development is needed for residents and faculty, which should be co-created with local peoples.

Recommendations: The content needs to take into consideration the First Nations, Metis and Inuit surrounding each site and base their teachings around the culture.

References:

1. Statistics Canada [Internet]. Ottawa (ON): Government of Canada; c2025. Focus on Geography Series, 2021 Census – Saskatchewan, Province; 2022 Dec 16 [cited 2025 May 22];[about 6 screens]. Available from: https://www12.statcan.gc.ca/census-recensement/2021/as-sa/fogs-spg/page.cfm?lang=E&topic=8&dguid=2021A000247.
2. Nguyen NH, Subhan FB, Williams K, Chan CB. Barriers and Mitigating Strategies to Healthcare Access in Indigenous Communities of Canada: A Narrative Review. Healthcare (Basel) [Internet]. 2020 Apr 26 [cited 2025 May 22];8(2):[16 p.]. Available from: https://doi.org/10.3390/healthcare8020112.
3. Little L, Smith J. Indigenous Health Content in Postgraduate Medical Education: An Environmental Scan [Internet]. Ottawa (ON): Royal College of Physicians and Surgeons of Canada; 2021 May. 73 p. Available from: https://www.royalcollege.ca/content/dam/document/about/indigenous-health-content-postgraduate-medical-education-an-environmental-scan-e.pdf.
4. Kitty D, Funnell S. CanMEDS-FM Indigenous Health Supplement [Internet]. Mississauga (ON): College of Family Physicians of Canada; 2020. 56 p. Available from: https://www.cfpc.ca/CFPC/media/PDF/CanMEDS-IndigenousHS-ENG-web.pdf.
5. Truth and Reconciliation Commission of Canada [Internet]. Ottawa (ON): Government of Canada; c2025. Delivering on Truth and Reconciliation Commission Calls to Action; 2024 Nov 13 [cited 2025 May 22];[about 3 screens]. Available from: https://www.rcaanc-cirnac.gc.ca/eng/1524494530110/1557511412801.
6. Royal College of Physicians and Surgeons of Canada. Indigenous Health Primer [Internet]. Ottawa (ON): Royal College of Physicians and Surgeons of Canada; 2019. 85 p. Available from: https://www.royalcollege.ca/content/dam/document/about/indigenous-health-primer-e.pdf.

Health Needs Perceived by Lac La Ronge Indian Band Community Members

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ABSTRACT

Background: Indigenous Peoples of Canada face barriers to accessing healthcare and experience health inequities (Nguyen et al., 2020). In response, Lac La Ronge Indian Band (LLRIB) Health Services requested a focused health needs assessment to inform future planning and service development in Grandmother's Bay, Hall Lake, and Sucker River—three remote LLRIB communities with no physician services, although they receive periodic visits from family medicine residents. The questionnaire and study design were co-developed with LLRIB Health Services to ensure relevance and alignment with community priorities.

Question(s): What are the health priorities, barriers to healthcare, and perspectives on existing services among community members in Grandmother's Bay, Hall Lake, and Sucker River?

Methods/Methodology: This quality improvement study was deemed exempt from ethics review by the University of Saskatchewan Research Ethics Board (E585). A community-informed questionnaire developed with LLRIB Health Services was used to collect responses via interviews and written submissions. Reflexive Thematic Analysis guided qualitative analysis.

Results/Findings: Eighty-three community members contributed. Key themes discussed included transportation barriers, limited in-community services, mental health needs, and access issues. Seventy-seven percent of participants were open to virtual care. All expressed interest in local physician visits; 95% of those with prior experience in resident-led clinics would attend again. No major differences were noted across communities or age groups.

Discussion: Barriers to care remain pervasive in these LLRIB communities. Respondents expressed a strong desire for more robust in-community health services and culturally safe care. While virtual care offers potential, trust and relationship-building remain essential to care delivery. Community-driven planning and collaboration are critical to addressing systemic gaps.

Conclusions: Community members prioritized improvements to medical transport, primary care availability within their communities, and better access to services through La Ronge Medical Clinic. While resident-led clinics have improved access for some, additional efforts are required to meet the broader health needs identified in this assessment.

Recommendations:
- Improve transportation services.
- Expand in-person primary care access.

- Launch pilot virtual care initiatives.
- Increase access to language interpretation services.
- Enhance mental health and addictions care pathways.
- Optimize scheduling and continuity for resident-led clinics.

References:

1. Nguyen N, Subhan F, Williams K, Chan C. Barriers and Mitigating Strategies to Healthcare Access in Indigenous Communities of Canada: A Narrative Review. Healthcare (Basel) [Internet]. 2020 Apr 26 [cited 2025 May 22];8(2):[16 p.]. Available from: https://doi.org/10.3390/healthcare8020112.
2. Kim P. Social Determinants of Health Inequities in Indigenous Canadians Through a Life Course Approach to Colonialism and the Residential School System. Health Equity. 2019 Jul;3(1):378–81.
3. Lac La Ronge Indian Band [Internet]. La Ronge (SK): Lac La Ronge Indian Band; c2025. Community development plan; 2019 [cited 2025 May 10];[about 4 screens]. Available from: https://llrib.com/community-development-plan/.
4. Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada. Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans: TCPS2 2022 [Internet]. Ottawa (ON): Government of Canada; 2022. 288 p. Available from: https://ethics.gc.ca/eng/documents/tcps2-2022-en.pdf.
5. Braun V, Clarke V. Using Thematic Analysis in Psychology. Qual Res Psychol. 2006 Jul;3(2):77-101.
6. Braun V, Clarke V. Thematic Analysis: A Practical Guide. Thousand Oaks (CA): Sage Publications Inc; 2022. 338 p.
7. Fitzpatrick KM, Ody M, Goveas D, Montesanti S, Campbell P, MacDonald K, et al. Understanding Virtual Primary Healthcare with Indigenous Populations: A Rapid Evidence Review. BMC Health Serv Res [Internet]. 2023 Mar 29 [cited 2025 May 22];23(1):[13 p.]. Available from: https://doi.org/10.1186/s12913-023-09299-6.

Integrating Para-athlete and Disabled Care into Sports and Exercise Medicine Residency Training: A Quality Improvement Project

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ABSTRACT

Background: Residency training in Sports and Exercise Medicine (SEM) often lacks structured exposure to para-athlete and disabled populations, creating educational gaps in handling these patients' unique sports-related healthcare needs.

Question(s): Can integrating a structured clinic session focused on para-athlete and disabled patients into the SEM residency curriculum enhance resident training and increase SEM-specific patient encounters effectively?

Methods/Methodology: Monthly half-day clinic sessions were conducted at First Steps Wellness Centre (FSWC). Using the Model for Improvement, iterative Plan-Do-Study-Act cycles refined referral criteria emphasizing structured exercise prescription and SEM relevance. Referrals were graded based on criteria focused on the patients' need for structured exercise prescription, engagement level in competitive or recreational sport, disability-specific risk management, and injury or condition impact on sports functionality.

Exemption from UofS REB obtained (REB Exempt #E-Bio-057).

Results/Findings: Initial criteria (Feb-Mar 2025) resulted in limited SEM-specific consults (60% SEM-specific, average rubric score 3.6/6). Revised criteria (implemented March, evaluated May 2025) improved SEM-specific consults (80% SEM-specific, average rubric score 8.2/10).

Discussion: Adjusting referral criteria towards structured exercise prescription markedly enhanced resident educational experiences. This project demonstrated the effectiveness of targeted criteria in achieving quality SEM education within para-athlete and disabled patient populations.

Conclusions: Implementing structured referral criteria improved SEM-focused patient encounters, increased resident confidence, and better met training objectives.

Recommendations: Future SEM curricula should maintain the established program at the FSWC, continue use of the structured criteria, periodically reassessing patient relevance and continuing to address resident feedback to sustain quality improvements.

MedFest as an Experiential Learning Opportunity to Improve Family Medicine Residents' Comfortability with Individuals with Intellectual and Developmental Disabilities

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ABSTRACT

Background: People with intellectual and developmental disabilities (IDD) often face stigma and barriers to healthcare, partly due to limited provider training and exposure. Integrated sport programs foster positive social interaction and have been shown to improve attitudes toward individuals with IDD (1).

Question(s): This quality improvement initiative assessed whether participation in a Special Olympics MedFest event, as an experiential learning model, improved family medicine residents' comfort and attitudes toward individuals with intellectual and developmental disabilities (IDD).

Methods/Methodology: An ethics exemption was granted by the University of Saskatchewan Research Ethics Office. Thirteen family medicine residents participated in the pre-event survey; twelve completed post-event assessments. Five athletes were recruited via Special Olympics. Residents completed a pre-reading assignment and survey assessing baseline knowledge and attitudes. At the event, residents conducted full physical exams on athletes. The surveys showed baseline perceptions towards individuals with IDD, as well as changes in perception after the MedFest event.

Results/Findings: Analyzing baseline perceptions, it was apparent that residents consistently agreed on the importance of equitable care and acknowledged access barriers. High variability in responses regarding training and competence suggested differing prior experiences. Post-MedFest, residents showed a reduced preference for specialist referral. Residents were more likely to view physical exams as challenging post-event. Neutral responses related to substance use and lifestyle behaviors reflected uncertainty and gaps in knowledge.

Discussion: MedFest participation increased residents' confidence in managing IDD care, reflected by reduced preference for specialist referral. Greater perceived difficulty with physical exams after the event suggests a need for targeted instruction in this area. Shifts in perceptions about mental health, substance use, and lifestyle behaviors suggest both improved understanding and areas needing further education. Qualitative feedback highlighted a positive, safe learning environment.

Conclusions: Integrated experiences can shift resident perspectives and promote comfort in providing care for individuals with IDD. Recognizing healthcare disparities and practical challenges is an important step toward more equitable, competent care.

Recommendations: Future initiatives should include an opportunity for family medicine residents to have hands-on integrated interactions with individuals with IDD. Offering experiential learning opportunities may enhance preparedness and patient outcomes for practitioners working with IDD populations.

References:

1. Albaum C, Mills A, Morin D, Weiss JA. Attitudes Toward People with Intellectual Disability Associated with Integrated Sport Participation. Adapt Phys Activ Q. 2022 Jan;39(1):86-108.
2. Maltais J, Morin D, Tassé MJ. Healthcare Services Utilization Among People with Intellectual Disability and Comparison with the General Population. J Appl Res Intellect Disabil. 2020 May;33(3):552-64.
3. McManus JL, Feyes KJ, Saucier DA. Contact and Knowledge as Predictors of Attitudes Toward Individuals with Intellectual Disabilities. J Soc Pers Relat. 2010 Dec;28(5):579-90.
4. Morin D, Valois P, Rivard M, Bardon C, Faust C, et al. Impact of Participation in Special Olympics Healthy Athletes® on Attitudes of Health Professionals Through Direct Contact with People with Intellectual Disability. Int J Dev Disabil. 2023 Apr;70(8):1490-9.
5. Ouellette-Kuntz H, Cobigo V, Balogh R, Wilton A, Lunsky Y. The Uptake of Secondary Prevention by Adults with Intellectual and Developmental Disabilities. J Appl Res Intellect Disabil. 2015 Jan;28(1):43-54.
6. Roll AE. Health Promotion for People with Intellectual Disabilities - A Concept Analysis. Scand J Caring Sci. 2018 Mar;32(1):422-9.
7. Selick A, Durbin J, Casson I, Green L, Abells D, Bruni A, et al. Improving Capacity to Care for Patients with Intellectual and Developmental Disabilities: The Value of an Experiential Learning Model for Family Medicine Residents. Disabil Health J [Internet]. 2022 Jul 1 [cited 2025 May 22];15(3):[n.p.]. Available from: https://doi.org/10.1016/j.dhjo.2022.101282.
8. Special Olympics. Special Olympics MedFest: Clinical Director and Program Staff Guide [Internet]. Washington (DC): Special Olympics; 2017 Nov. 18 p. Available from: https://media.specialolympics.org/resources/health/disciplines/medfest/MedFest_Manual_2017_Updated_November2017.pdf.
9. Statistics Canada [Internet]. Ottawa (ON): Government of Canada; c2025. Canadians with learning, developmental and memory disabilities, 2022; 2024 Oct 8 [cited 2025 May 22];[about 5 screens]. Available from: https://www150.statcan.gc.ca/n1/daily-quotidien/241008/dq241008d-eng.htm.

Exploring the Transition Experiences and Challenges of International Medical Graduates in Saskatchewan's Family Medicine Residency Programs

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ABSTRACT

Background: International Medical Graduates (IMGs) are integral to healthcare delivery in Saskatchewan, particularly in rural and remote areas. However, transitioning from international training to Canadian family medicine (FM) residency programs presents unique challenges. These include adapting to different healthcare systems, cultural expectations, and clinical workflows. IMGs often face more integration barriers than their Canadian Medical Graduate (CMG) counterparts due to systemic, cultural, and educational differences.

Question(s):
This study seeks to answer the following:

1. What are the challenges IMGs encounter during their transition in comparison to their Canadian Medical Graduate (CMG) counterparts?
2. What are the factors that facilitate or challenge integration?
3. What are the recommendations from IMGs on how the onboarding process can be tailored or enhanced to better support their needs?

Methods/Methodology: A cross-sectional survey was conducted across all eight FM training sites at the University of Saskatchewan. A semi-structured, self-administered questionnaire captured both quantitative and qualitative data on clinical, cultural, and social transition experiences. Statistical comparisons between IMGs and CMGs were performed. The study was approved by the University of Saskatchewan Behavioral Ethics Board (Beh #5180).

Results/Findings: Out of 33 participants (21 IMGs and 10 CMGs, 2 undeclared), IMGs reported significantly more challenges, particularly in understanding the healthcare system ($p=0.004$), applying clinical guidelines ($p=0.026$), and using documentation/charting systems ($p=0.05$). Qualitative responses highlighted procedural and contextual knowledge gaps. Social challenges, such as winter driving and access to childcare, also disproportionately affected IMGs.

Discussion: Our findings suggest that the IMG transition experience is not solely a function of educational equivalency, but a multilayered process shaped by institutional infrastructure, social context, and lived experience. While IMGs show remarkable adaptability and commitment in our study, their integration was uneven, often impacted by the interaction between clinical systems, hidden cultural expectations, and practical community-level barriers.

Conclusions: IMGs face complex, multi-dimensional challenges in transitioning into FM residency in Saskatchewan. Effective integration requires more than clinical remediation—it demands system-specific orientation, mentorship, and community support.

Recommendations: We recommend enhanced procedural orientation, formalized mentorship, community integration tools, context-sensitive feedback systems, and continued research to enhance transitions of IMGs into residency.

References:

1. Moneypenny CR. Understanding the Experiences of International Medical Graduates (IMGs) in Ontario, Canada: A Qualitative Study [dissertation]. Toronto (ON): University of Toronto; 2018. 145 p.
2. Neiterman E, Bourgeault IL. Integrating International Medical Graduates: The Canadian Approach to the "Brain Waste" Problem. In: Triadaphilopoulous P, editor. Wanted and Welcomed? Policies for Highly Skilled Immigrants in Comparative Perspective. New York (NY): Springer; 2013. p. 119-28.
3. Triscott J, Szafran O, Waugh E, Torti J, Barton M. Cultural Transition of International Medical Graduate Residents into Family Practice in Canada. Int J Med Educ. 2016 May;7(5):131–41.
4. Bartman I, Touchie C, Topps M, Boulet J. Facilitating the Path to Licensure and Practice: International Medical Graduates in Canada. J Med Regul. 2022 Nov;108(2):19–26.
5. Martin D, Nasmith L, Glover Takahashi S, Harvey B. Exploring the Experience of Residents During the First Six Months of Family Medicine Residency Training. Can Med Educ J. 2017 Feb;8(2):22–36.
6. Duncan A, Poddar M. Preparation of IMGs for Residency Training in Canada. Can Med Educ J. 2012 Mar;3(2):78–9.
7. Najeeb U, Wong B, Hollenberg E, Stroud K, Edwards S, Kuper A. Moving Beyond Orientations: A Multiple Case Study of the Residency Experiences of Canadian-Born and Immigrant International Medical Graduates. Adv Health Sci Educ Theory Pract. 2019 Mar;24(1):103-23.
8. Cavett T. The Stigmatization of Internationally Educated Family Medicine Residents at the University of Manitoba [thesis]. Winnipeg (MB): University of Manitoba; 2015. 232 p.
9. Blackmore C, Austin J, Lopushinsky S, Donnon T. Effects of Postgraduate Medical Education "Boot Camps" on Clinical Skills, Knowledge, and Confidence: A Meta-Analysis. J Grad Med Educ. 2014 Dec;6(4):643–52.
10. Vogel L. Pre-Residency Boot Camps Calm Medical Graduate Jitters. CMAJ. 2018 Aug 13;190(31):E967–8.
11. CMAJ Blogs [Internet]. Ottawa (ON): CMA Impact; c2025. Ontario's Pre-Residency Program for International Medical Graduates Could Be Designed to Be More Effective; 2018 Feb 14 [cited 2025 May 16];[about 4 screens]. Available from: https://cmajblogs.com/ontarios-pre-residency-program-imgs/.

An Evaluation of University of Saskatchewan Family Medicine Resident/Faculty Knowledge and Prescription of Pelvic Floor Physiotherapy

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ABSTRACT

Background: When appropriately and promptly referred, pelvic floor physiotherapy (PFPT) can be beneficial for several conditions beyond urinary incontinence and in the post-partum period. Awareness of the indications and applications of PFPT can assist healthcare professionals in recommending evidence-based and effective treatment for the many patients that experience pelvic floor dysfunction.

Question(s): This study's primary goal was to determine the foundational knowledge that faculty and residents possess around indications for PFPT, as well as the frequency with which they recommend PFPT within our family medicine training program. We sought to identify gaps in education and practice that could enhance both training and patient outcomes.

Methods/Methodology: We conducted an electronic survey of current family medicine residents and staff in Saskatchewan (Saskatoon, Regina, and six rural/remote sites) in February 2025. Data was analyzed using descriptive statistics. This study was Exempted by the Biomedical Ethics Research Board (E-Bio 053)**.**

Results/Findings: We received 56 responses: 10 FMR-1s; 14 FMR-2s; and 32 faculty members. Forty-six participants (82%) saw patients with pelvic floor concerns at least once per month. Twenty-nine (53%) were "somewhat familiar" with PFPT and 37 (66%) expressed that they had not received any PFPT education. Ten (18%) indicated that they were "not so confident" with PFPT referral, and 31 (57.4%) at least sometimes prescribed pelvic exercises rather than referring. The conditions participants listed most frequently as PFPT-treatable were urinary incontinence, pelvic organ prolapse, and myofascial pain. Additionally, 33 (59%) addressed the need for PFPT in the prenatal/postpartum period. Lack of insurance was the most frequent barrier identified for PFPT referral.

Discussion: Many factors seem to play into learner/provider confidence and ability to provide timely PFPT in patients presenting with pelvic floor dysfunction and its various symptoms. Our study was possibly limited by selection bias, with individuals having prior familiarity with PFPT participating.

Conclusions: While there seems to be adequate knowledge on the uro-gynecological conditions that benefit from PFPT, there was less awareness of its other applications. Education on PFPT and reduction of barriers are needed.

Recommendations: We propose that formal education regarding the assessment and management of pelvic floor dysfunction with PFPT should be incorporated within our residency curriculum.

References:

1. Harm-Ernandes I, Boyle V, Hartmann D, Fitzgerald CM, Lowder JL, Kotarinos R, et al. Assessment of the Pelvic Floor and Associated Musculoskeletal System: Guide for Medical Practitioners. Female Pelvic Med Reconstr Surg. 2021 Dec;27(12):711-8.
2. Fullerton ME, Mwesigwa PJ, Tandel MD, Kwan L, Grisales T, Tarnay CM. Comparison of Pelvic Floor Physical Therapy Attendance Based on Referring Provider Specialty. Female Pelvic Med Reconstr Surg. 2022 Jan;28(1):57-63.
3. Brown HW, Barnes HC, Lim A, Giles DL, McAchran SE. Better Together: Multidisciplinary Approach Improves Adherence to Pelvic Floor Physical Therapy. Int Urogynecol J. 2020 May;31(5):887-93.
4. Washington BB, Raker CA, Sung VW. Barriers to Pelvic Floor Physical Therapy Utilization for Treatment of Female Urinary Incontinence. Am J Obstet Gynecol. 2011 Aug;205(2):152.e1-9.
5. Kotarinos RK. Pelvic Floor Physical Therapy in Urogynecologic Disorders. Curr Womens Health Rep. 2003 Aug;3(4):334-9.
6. van Reijn-Baggen DA, Elzevier HW, Putter H, Pelger RCM, Han-Geurts IJM. Pelvic Floor Physical Therapy in Patients with Chronic Anal Fissure: Long-Term Follow-Up of a Randomized Controlled Trial. Int J Colorectal Dis [Internet]. 2023 Jan 5 [cited 2025 May 20];38(1):[10 p.]. Available from: https://dx.doi.org/10.1007/s00384-022-04292-7.
7. van Reijn-Baggen DA, Han-Geurts IJM, Voorham-van der Zalm PJ, Pelger RCM, Hagenaars-van Miert CHAC, Laan ETM. Pelvic Floor Physical Therapy for Pelvic Floor Hypertonicity: A Systematic Review of Treatment Efficacy. Sex Med Rev. 2022 Apr;10(2):209-30.
8. Bittelbrunn CC, de Fraga R, Martins C, Romano R, Massaneiro T, Mello GVP, et al. Pelvic Floor Physical Therapy and Mindfulness: Approaches for Chronic Pelvic Pain in Women: A Systematic Review and Meta-Analysis. Arch Gynecol Obstet. 2023 Mar;307(3):663-72.
9. Tracey A. Pelvic Floor Physical Therapy and Its Merit in the Treatment of Female Urogenital Pain. Curr Pain Headache Rep. 2022 Oct;26(10):775-82.
10. Wallace SL, Miller LD, Mishra K. Pelvic Floor Physical Therapy in the Treatment of Pelvic Floor Dysfunction in Women. Curr Opin Obstet Gynecol. 2019 Dec;31(6):485-93.
11. Lawson S, Sacks A. Pelvic Floor Physical Therapy and Women's Health Promotion. J Midwifery Womens Health. 2018 Jul;63(4):410-7.
12. Shannon MB, Adams W, Fitzgerald CM, Mueller ER, Brubaker L, Brincat C. Does Patient Education Augment Pelvic Floor Physical Therapy Preparedness and Attendance? A Randomized Controlled Trial. Female Pelvic Med Reconstr Surg. 2018 Mar-Apr;24(2):155-60.
13. Prendergast SA. Pelvic Floor Physical Therapy for Vulvodynia: A Clinician's Guide. Obstet Gynecol Clin North Am. 2017 Sep;44(3):509-22.
14. Rosenbaum TY, Owens A. The Role of Pelvic Floor Physical Therapy in the Treatment of Pelvic and Genital Pain-Related Sexual Dysfunction (CME). J Sex Med. 2008 Mar;5(3):513-23.

15. Shah ED, Curley MA, Ostler TL, Martinez-Camblor P, Chey WD. Clinical History Does Not Reliably Predict Clinical Outcomes with Pelvic Floor Physical Therapy to Treat Chronic Constipation. Clin Gastroenterol Hepatol. 2023 Oct;21(11):2960-4.
16. Scott KM, Fisher LW, Bernstein IH, Bradley MH. The Treatment of Chronic Coccydynia and Postcoccygectomy Pain with Pelvic Floor Physical Therapy. PM R. 2017 Apr;9(4):367-76.
17. Azuri J, Kafri R, Ziv-Baran T, Stav K. Outcomes of Different Protocols of Pelvic Floor Physical Therapy and Anti-Cholinergics in Women with Wet Over-Active Bladder: A 4-Year Follow-Up. Neurourol Urodyn. 2017 Mar;36(3):755-8.
18. Farrell MR, Dugan SA, Levine LA. Physical Therapy for Chronic Scrotal Content Pain with Associated Pelvic Floor Pain on Digital Rectal Exam. Can J Urol. 2016 Dec;23(6):8546-50.
19. Bedaiwy MA, Patterson B, Mahajan S. Prevalence of Myofascial Chronic Pelvic Pain and the Effectiveness of Pelvic Floor Physical Therapy. J Reprod Med. 2013 Nov-Dec;58(11-12):504-10.
20. Reissing ED, Armstrong HL, Allen C. Pelvic Floor Physical Therapy for Lifelong Vaginismus: A Retrospective Chart Review and Interview Study. J Sex Marital Ther. 2013 Apr;39(4):306-20.
21. Killinger KA, Henrichsen JL, Han E, Dai YL, Nguyen L, Gilleran J, et al. Symptom and Quality of Life Improvements After Pelvic Floor Physical Therapy in a Clinical Population of Women with Pelvic Pain and Other Symptoms. Female Pelvic Med Reconstr Surg. 2021 Jan;27(1):e18-e21.
22. Riaz H, Nadeem H, Rathore FA. Recent Advances in the Pelvic Floor Assessment and Rehabilitation of Women with Pelvic Floor Dysfunction. J Pak Med Assoc. 2022 Jul;72(7):1456-9.
23. Yaacov D, Nelinger G, Kalichman L. The Effect of Pelvic Floor Rehabilitation on Males with Sexual Dysfunction: A Narrative Review. Sex Med Rev. 2022 Jan;10(1):162-7.
24. Vesentini G, Prior J, Ferreira PH, Hodges PW, Rudge M, Ferreira ML. Pelvic Floor Muscle Training for Women with Lumbopelvic Pain: A Systematic Review and Meta-Analysis. Eur J Pain. 2020 Nov;24(10):1865-79.
25. Mercier J, Morin M, Zaki D, Reichetzer B, Lemieux MC, Khalife S, et al. Pelvic Floor Muscle Training as a Treatment for Genitourinary Syndrome of Menopause: A Single-Arm Feasibility Study. Maturitas. 2019 Jul;125(7):57-62.
26. Teymuri Z, Hosseinifar M, Sirousi M. The Effect of Stabilization Exercises on Pain, Disability, and Pelvic Floor Muscle Function in Postpartum Lumbopelvic Pain: A Randomized Controlled Trial. Am J Phys Med Rehabil. 2018 Dec;97(12):885-91.
27. Cohen D, Gonzalez J, Goldstein I. The Role of Pelvic Floor Muscles in Male Sexual Dysfunction and Pelvic Pain. Sex Med Rev. 2016 Jan;4(1):53-62.
28. Ghaderi F, Mohammadi K, Sasan RA, Kheslat SN, Oskouei AE. Effects of Stabilization Exercises Focusing on Pelvic Floor Muscles on Low Back Pain and Urinary Incontinence in Women. Urology. 2016 Jul;93(7):50-4.
29. Dumoulin C, Hay-Smith J, Habee-Seguin GM, Mercier J. Pelvic Floor Muscle Training Versus No Treatment, or Inactive Control Treatments, for Urinary Incontinence in Women: A Short Version Cochrane Systematic Review with Meta-Analysis. Neurourol Urodyn. 2015 Apr;34(4):300-8.

30. Fitzpatrick M, O'Herlihy C. The Effects of Labour and Delivery on the Pelvic Floor. Best Pract Res Clin Obstet Gynaecol. 2001 Feb;15(1):63-79.
31. Deodato M, Grosso G, Drago A, Martini M, Dudine E, Murena L, et al. Efficacy of Manual Therapy and Pelvic Floor Exercises for Pain Reduction in Primary Dysmenorrhea: A Prospective Observational Study. J Bodyw Mov Ther. 2023 Oct;36(10):185-91.
32. Neville CE, Carrubba AR, Li Z, Ma Y, Chen AH. Association of Coccygodynia with Pelvic Floor Symptoms in Women with Pelvic Pain. PM R. 2022 Nov;14(11):1351-9.
33. Berghmans B. Physiotherapy for Pelvic Pain and Female Sexual Dysfunction: An Untapped Resource. Int Urogynecol J. 2018 May;29(5):631-8.
34. Rosenbaum TY. Physiotherapy Treatment of Sexual Pain Disorders. J Sex Marital Ther. 2005 Jul-Sep;31(4):329-40.
35. Bo K, Naess K, Staer-Jensen J, Siafarikas F, Ellstrom Engh M, Hilde G. Recovery of Pelvic Floor Muscle Strength and Endurance 6 and 12 Months Postpartum in Primiparous Women: A Prospective Cohort Study. Int Urogynecol J. 2022 Dec;33(12):3455-64.

Understanding the Gap: Post COVID-19 Condition (PCC) Educational Needs of Patients and HCPs

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ABSTRACT

Background: Post COVID-19 Condition (PCC), also known as Long-COVID, occurs when symptoms of an acute COVID-19 infection persist beyond three months. Many healthcare professionals (HCPs) are unfamiliar with this emerging condition, and lack the training to diagnose and manage it. Though effective management of patients with PCC inherently relies on continuity of care, multidisciplinary team approach, and recognition and validation of symptoms, it is limited as the mechanism of PCC's pathophysiology and subsequent impact on patients is not completely understood. This study bridges the knowledge gap regarding both patient and HCPs knowledge about PCC including diagnosis, and management, and educational delivery needs.

Question(s): What additional tools are needed to bridge the PCC knowledge gap for both patients and healthcare providers?

Methods/Methodology: Patients and HCPs participated in separate focus groups or individual interviews to evaluate the knowledge gap related to PCC and identify areas for further development. Data were thematically analyzed to identify key patterns and themes. Informed consent was obtained from all participants, and confidentiality was maintained. Ethics approval was obtained from the University of Saskatchewan Research Ethics Board.

Results/Findings: 9 patients and 4 HCPs participated in separate focus groups, and 2 HCPs were interviewed. Participants identified the following as priorities: the need for increased resources and awareness of PCC and clear terminology, diagnostic criteria and management guidelines. Participants preferred educational resources to be delivered in a short, multi-format, digestible, and re-accessible way. Patients wanted shorter videos and resources and wanted HCPs to provide validation when interacting with patients.

Discussion: Easily accessible and universally available educational tools are needed regarding PCC symptoms, diagnosis and management.

Conclusions: The identified learning needs and knowledge gaps will inform the development of educational tools to improve both patients' and HCPs' understanding of PCC to improve diagnosis, management, and patient outcomes.

Recommendations: Based on the outcome of this study, the development of standardized multidisciplinary guidelines, educational tools and opportunities for continuing medical education, and public awareness campaigns are required to bridge the knowledge gap regarding PCC for both patients and HCPs.

References:

1. Davis HE, Assaf GS, McCorkell L, Wei H, Low RJ, Re'em Y, et al. Characterizing Long COVID in an International Cohort: 7 Months of Symptoms and Their Impact. EClinicalMedicine [Internet]. 2021 Aug 1 [cited 2025 May 22];38(1):[19 p.]. Available from: https://doi.org/10.1016/j.eclinm.2021.101019.
2. Greenhalgh T, Sivan M, Perlowski A, Nikolich JŽ. Long COVID: A Clinical Update. Lancet. 2024 Aug 17;404(10453):707-24.
3. Gheorghita R, Soldanescu I, Lobiuc A, Sturdza OAC, Filip R, Constantinescu-Bercu A, et al. The Knowns and Unknowns of Long COVID-19: From Mechanisms to Therapeutical Approaches. Front Immunol [Internet]. 2024 Mar 4 [cited 2022 May 22];15(1):[21 p.]. Available from: https://doi.org/10.3389/fimmu.2024.1344086.
4. Ahmed S, Ahmad E, Ahmad B, Arif MH, Ilyas HMA, Hashmi N, et al. Long COVID-19 and Primary Care: Challenges, Management and Recommendations. Semergen [Internet]. 2024 Apr 1 [cited 2025 May 22];50(3):[n.p.]. Available from: https://doi.org/10.1016/j.semerg.2023.102188.
5. Mullard J, Mir G, Herbert C, Evans S; LOCOMOTION Consortium. 'You're Just a Guinea Pig': Exploring the Barriers and Impacts of Living with Long COVID-19: A View from the Undiagnosed. Sociol Health Illn. 2024 Nov;46(8):1602-25.
6. Munblit D, Sigfrid L, Warner JO. Setting Priorities to Address Research Gaps in Long-Term COVID-19 Outcomes in Children. JAMA Pediatr. 2021 Nov;175(11):1095-6.
7. Al-Aly Z, Davis H, McCorkell L, Soares L, Wulf-Hanson S, Iwasaki A, et al. Long COVID Science, Research and Policy. Nat Med. 2024 Aug;30(8):2148-64.
8. Routen A, O'Mahoney L, Ayoubkhani D, Banerjee A, Brightling C, Calvert M, et al. Understanding and Tracking the Impact of long COVID in the United Kingdom. Nat Med. 2022 Jan;28(1):11-15.
9. Bosman L, van Dijk L, Verheij RA, Bos I. Care Needs of Patients with the Post-COVID Syndrome in Dutch General Practice: An Interview Study Among Patients and General Practitioners. BMC Prim Care [Internet]. 2024 Sep 28 [cited 2025 May 22];25(1):[13 p.]. Available from: https://doi.org/10.1186/s12875-024-02597-w.
10. College of Family Physicians of Canada. MAINPRO CFPC Planning Committee Job Aid [Internet]. Mississauga (ON): College of Family Physicians of Canada; 2015 Dec. 2 p. Available from: https://www.cfpc.ca/CFPC/media/Resources/Continuing-Professional-Development/Planning_Committee_Job_Aid-ENG.pdf.

Implementing Naloxone Education in Family Medicine: A Quality Improvement Approach to Optimize Opioid Use Outcomes

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ABSTRACT

Background: The opioid crisis remains a serious public health challenge. While naloxone can prevent overdose deaths, many patients on chronic opioids lack the knowledge or confidence to use it effectively. Our project explored naloxone education and kit distribution in a family medicine setting to improve patient preparedness and response.

Question(s): To improve the safety and effectiveness of chronic opioid therapy at the Family Medicine Unit by introducing a naloxone education and distribution program by providing structured in-person education to improve access to overdose prevention tools.

Methods/Methodology: The Model for Improvement was used. During the first PDSA cycle, patients at highest risk of overdose were identified based on total daily morphine equivalents and recruitment was attempted via phone. As engagement was unsuccessful, the strategy was revised: physicians informed potential participants on the project at the time of re-prescribing opioids and sent follow-up tasks to our team, who then contacted patients. The project was exempted by the University of Saskatchewan Research Ethics Board (ID 2465) and received Operational Approval from the Saskatchewan Health Authority (OA-UofS-2465).

Results/Findings: In the first PDSA cycle, 0 of 208 eligible patients were recruited. After our process change, 7 of 208 were engaged. Although we initially planned to use Likert-scale surveys to evaluate teaching quality and understanding, data was not analyzed due to low recruitment and confidentiality concerns. The primary outcome was revised to focus on total patient recruitment.

Discussion: This project highlights the difficulty of engaging patients on chronic opioid therapy in proactive overdose education. Many patients face socioeconomic challenges that limit engagement in preventative care; it was interpreted that what little engagement these patients had were dedicated to addressing active concerns. Administrative policies limited who could extract data from the EMR, which hampered timely progression of the project. This highlighted the need for a more integrated approaches during routine care.

Conclusions: Our findings emphasize the importance of flexible, embedded strategies to improve naloxone access and education. Stand-alone teaching visits were poorly attended.

Recommendations: Future cycles should integrate naloxone education into routine prescription visits. Virtual delivery methods may enhance accessibility and engagement.

References:

1. Behar E, Bagnulo R, Coffin PO. Acceptability and Feasibility of Naloxone Prescribing in Primary Care Settings: A Systematic Review. Prev Med. 2018 Sep;114(9):79–87.
2. Behar E, Rowe C, Santos GM, Coffa D, Turner C, Santos NC, et al. Acceptability of Naloxone Co-Prescription Among Primary Care Providers Treating Patients on Long-Term Opioid Therapy for Pain. J Gen Intern Med. 2017;32(3):291–5.
3. dos Santos B, Nipun RF, Subic AM, Kubica A, Rondinelli N, Marentette D, et al. Virtual Opioid Poisoning Education and Naloxone Distribution Programs: A Scoping Review. PLOS Digit Health [Internet]. 2024 Jun 7 [cited 2025 May 16];3(5):[22 p.]. Available from: https://doi.org/10.1371/journal.pdig.0000412.
4. Drainoni ML, Koppelman EA, Feldman JA, Walley AY, Mitchell PM, Ellison J, et al. Why Is It So Hard to Implement Change? A Qualitative Examination of Barriers and Facilitators to Distribution of Naloxone for Overdose Prevention in a Safety Net Environment. BMC Res Notes [Internet]. 2016 Oct 18 [cited 2025 May 16];9(1):[14 p.]. Available from: https://doi.org/10.1186/s13104-016-2268-z.
5. Mueller SR, Koester S, Glanz JM, Gardner EM, Binswanger IA. Attitudes Toward Naloxone Prescribing in Clinical Settings: A Qualitative Study of Patients Prescribed High-Dose Opioids for Chronic Non-Cancer Pain. J Gen Intern Med. 2017 Mar;32(3):277–83.
6. Train MK, Patel N, Thapa K, Pasho M, Acquisto NM. Dispensing a Naloxone Kit at Hospital Discharge: A Retrospective QI Project. Am J Nurs. 2020 Dec;120(12):48–52.

Assessing the Frequency of Nutritional Therapy and/or Registered Dietician Referral as First-Line Therapy in Patients with Newly Diagnosed Type 2 Diabetes and Pre-Diabetes

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ABSTRACT

Background: Diet adjustments are the first-line treatment for type 2 diabetes mellitus (T2DM) and pre-diabetes, with research showing their benefit to health outcomes. Understanding the frequency of nutritional therapy and registered dietician (RD) referrals for these patients may allow a clinic to identify potential improvements in patient care.

Question(s): What is the frequency of nutritional therapy and/or referral to RD in patients with newly diagnosed T2DM or pre-diabetes at the Family Medicine Unit (FMU)?

Methods/Methodology: Patients ≥12 years with T2DM or prediabetes diagnosed between January 1 and December 31, 2023, at the FMU were identified based on hemoglobin A1c (HbA1c) levels. A subset of 50 eligible charts in the clinic's EMR were reviewed to determine if patients received nutritional therapy and/or an RD referral within 6-months of a new diagnosis, as were follow-up HbA1c levels. This study received approval from the University of Saskatchewan's Biomedical Research Ethics Board (Bio-5477) and the Saskatchewan Health Authority (OA-UofS-5477).

Results/Findings: RD referral occurred within 6-months of diagnosis for 10/25 (40.0%) of patients with T2DM and 5/25 (20.0%) of patients with prediabetes. Nutritional therapy was performed by a family physician within 6-months of diagnosis for 8/25 (32.0%) of patients with T2DM and 3/25 (12.0%) patients with prediabetes. There was no significant difference in HbA1c levels at 1-year follow-up between those who received therapy/referral compared to those who did not.

Discussion: These findings highlight a gap in the delivery of first-line dietary management at the FMU, despite the well-established benefits in improving glycemic control and overall diabetes outcomes. The lower referral and counseling rates in prediabetes patients are particularly concerning, given the potential to prevent progression to diabetes through early diet modifications. The study may have been limited by insufficient documentation, patient refusal for RD referral, and low power to detect significant difference in the HbA1c levels at follow-up.

Conclusions: Nutritional therapy and RD referrals are underutilized for patients with newly diagnosed T2DM and prediabetes at the FMU.

Recommendations: Training may increase awareness among healthcare providers. Standardized protocols or audit-and-feedback cycles may be used to increase the frequency of nutritional therapy and RD referrals.

References:

1. Look AHEAD Research Group; Wing RR. Long-Term Effects of a Lifestyle Intervention on Weight and Cardiovascular Risk Factors in Individuals with T2DM Mellitus: Four-Year Results of the Look AHEAD Trial. Arch Intern Med. 2010 Sep;170(17):1566-75.
2. Galendi JSC, Leite RGOF, Banzato LR, Nunes-Nogueira VDS. Effectiveness of Strategies for Nutritional Therapy for Patients with T2DM and/or Hypertension in Primary Care: A Systematic Review and Meta-Analysis. Int J Environ Res Public Health [Internet]. 2022 Apr 2 [cited 2025 May 21];19(7):[21 p.]. Available from: https://doi.org/10.3390/ijerph19074243.
3. Nikbina M, Mamaneh M, Bakaeian M, Dehcheshmeh NF, Moradi A, Jalilian H, et al. Effectiveness of Nutrition Education and Counseling on Metabolic Control Parameters of Diabetes Mellitus Type 2 Patients in Primary Health Care Centers. Clin Diabetol. 2020 Aug;9(5):293-9.
4. Marrero DG, Kraft SK, Mayfield J, Wheeler ML, Fineberg N. Nutrition Management of T2DM by Primary Care Physicians: Reported Use and Barriers. J Gen Intern Med. 2000 Nov;15(11):818-21.
5. Pastors JG, Warshaw H, Daly A, Franz M, Kulkarni K. The Evidence for the Effectiveness of Medical Nutrition Therapy in Diabetes Management. Diabetes Care. 2002 Mar;25(3):608–13.
6. Gaetke LM, Stuart MA, Truszczynska H. A Single Nutrition Counseling Session with a Registered Dietitian Improves Short-Term Clinical Outcomes for Rural Kentucky Patients with Chronic Diseases. J Am Diet Assoc. 2006 Jan;106(1):109-12.
7. Yusof BNM, Hasbullah FY, Shahar ASM, Omar N, Zaid ZA, Mukhtar F, et al. Changes in Dietary Intake Improve Glycemic Control Following a Structured Nutrition Therapy During Ramadan in Individuals with T2DM. Clin Nutr ESPEN. 2021 Dec;46(12):314-24.
8. Shafto K, Shah A, Smith J, Wang Q, Devries S, Kreitzer MJ, et al. Impact of an Online Nutrition Course to Address a Gap in Medical Education: A Feasibility Study. PRiMER [Internet]. 2020 Apr 20 [cited 2025 May 21];4(4):[6 p.]. Available from: https://doi.org/10.22454/primer.2020.368659.
9. Willaing I, Ladelund S, Jørgensen T, Simonsen T, Nielsen LM. Nutritional Counselling in Primary Health Care: A Randomized Comparison of an Intervention by General Practitioner or Dietician. Eur J Cardiovasc Prev Rehabil. 2004 Dec;11(6):513-20.
10. Wilson C, Brown T, Acton K, Gilliland S. Effects of Clinical Nutrition Education and Educator Discipline on Glycemic Control Outcomes in the Indian Health Service. Diabetes Care. 2003 Sep;26(9):2500-4.
11. Tharakan A, Hinz EM, Zhu E, Denmeade B, German J, Haung WA, et al. Accessibility of Diabetes Education in the United States: Barriers, Policy Implications, and the Road

Ahead. Health Aff Sch [Internet]. 2024 Aug 21 [cited 2025 May 21];2(8):[7 p.]. Available from: https://doi.org/10.1093/haschl/qxae097.
12. Bryant GC, Keck J, Lacy ME. Trends in Diabetes Self-Management Education and Support Referrals in Kentucky: 2016–2019. Diabetes [Internet]. 2022 Jun 1 [cited 2025 May 21];71(Suppl 1):[1 p.]. Available from: https://doi.org/10.2337/db22-509-P.
13. Krall JS, Kanter JE, Ruppert KM, Arena VC, Solano FX, Siminerio LM. Effect of a Primary Care-Based Diabetes Education Model on Provider Referrals and Patient Participation. Sci Diabetes Self Manag Care. 2021 Feb;47(1):74-84.
14. Young LA, Halladay J, Chen P, Mottus KM, Goeke-Austin KK, Richman EL, et al. Use of Electronic Best Practice Advisories (BPA) to Increase Referral to Diabetes Self-Management Education and Support (DSMES) Services. Diabetes [Internet]. 2024 Jun 14 [cited 2025 May 21];73(Suppl 1):[1 p.]. Available from: https://doi.org/10.2337/db24-21-OR.
15. Wynn K, Trudeau JD, Taunton K, Gowans M, Scott I. Nutrition in Primary Care: Current Practices, Attitudes, and Barriers. Can Fam Physician. 2010 Mar;56(3):109-16.
16. Gucciardi E, Chan VWS, Fortungo M, Khan S, Horodezny S, Swartzack SJ. Primary Care Physician Referral Patterns to Diabetes Education Programs in Southern Ontario, Canada. Can J Diabetes. 2011 Mar;35(3):262-8.
17. Kahn DJ, Hubbard JL, Dunn S, Hoyt A. Impact of a Nutrition and Diabetes Continuing Education Program on Primary Care Provider's Knowledge, Attitude, and Clinical Practice. Adv Med Educ Pract. 2024 Oct;15(5):981-90.
18. Abbott S, Parretti HM, Greenfield S. Experiences and Perceptions of Dietitians for Obesity Management: A General Practice Qualitative Study. J Hum Nutr Diet. 2021 Jun;34(3):494-503.

Documentation of Advanced Care Planning for Patients aged 65 and above at the Family Medicine Unit in Reigna: A Quality Improvement Project

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ABSTRACT

Background: Advance Care Planning (ACP) helps individuals document future healthcare preferences. However, it is underutilized. At the Regina Centre Crossing Family Medicine Unit (FMU), a previous project improved ACP documentation from a baseline of 7.6% to 14.5% through provider education and an electronic medical record template (EMR). However, documentation rates remained suboptimal, prompting the project's continuation.

Question(s): To have standardized ACP discussions and increase documentation rates in the EMR template for patients aged 65 years and above at the FMU from 14.5% to 20-30% in one year with the aim to improve effectiveness and patient-centeredness.

Methods/Methodology: Using the Model for Improvement framework, two additional interventions were implemented: 1) provider and patient surveys (May–November 2024) intended to increase awareness and assess barriers and preferences, and 2) ACP informational posters (December 2024–February 2025) in exam rooms and waiting areas. Surveys were distributed via SurveyMonkey to providers and by telephone to 100 randomly selected patients. The project measured the percentage of patients with documented ACP. Ethical exemption was granted by the University of Saskatchewan Research Ethics Board (E404) and Operational Approval from the Saskatchewan Health Authority (OA-UofS-E404).

Results/Findings: Provider surveys showed 90.5% were familiar with ACP (n=19), but only 23.8% felt confident documenting it (n=4); 57.1% had limited training (n=12), and 14.3% initiated discussions a few times weekly (n=3), with time constraints (95.2%) as the top barrier (n=20).

Patient surveys showed 76.1% ACP awareness (n=68), yet 67.8% had never discussed it with a provider (n=61). Barriers included lack of time (34.7%, n=31) and knowledge (32.7%, n=29). Only 6.9% received materials (n=6), 89.4% wanted more (n=77), preferring booklets (54.5%, n=49) and in-person discussions (38.6%, n=34). Prior to the new intervention, ACP documentation increased 1.3%, and by 1.2% after surveys (n=13) and 0.3% after poster (n=8).

Discussion: The project showed a multi-component approach modestly improved ACP, reaching a total of 17.3% across two project phases.

Conclusions: This structured approach improved ACP documentation and patient-centered care at FMU.

Recommendations: Future efforts should include ongoing provider training, standardized discussion tools, enhanced EMR prompts, patient education, addressing system-level barriers, and scaling interventions to other clinics.

References:

1. Brinkman-Stoppelenburg A, Rietjens JA, van der Heide A. The Effects of Advance Care Planning on End-of-Life Care: A Systematic Review. Palliat Med. 2014 Sep;28(8):1000–25.
2. Ami NB, Shvartzman P. [Oncologists' Approaches and Barriers for Discussing Advanced Care Planning with Severely Ill Cancer Patients]. Harefuah. 2022 May;161(5):316-21. Hebrew.
3. Myers J, Cosby R, Gzik D, Harle I, Harrold D, Incardona N, et al. Provider Tools for Advance Care Planning and Goals of Care Discussions: A Systematic Review. Am J Hosp Palliat Med. 2018 Aug;35(8):1123-32.
4. Hall A, Rowland C, Grande G. How Should End-of-Life Advance Care Planning Discussions Be Implemented According to Patients and Informal Carers? A Qualitative Review of Reviews. J Pain Sym Man. 2019 Apr;58(2):311-35.
5. Poveda-Moral S, Falcó-Pegueroles A, Ballesteros-Silva MP, Bosch-Alcaraz A. Barriers to Advance Care Planning Implementation in Health Care: An Umbrella Review with Implications of Evidence-Based Practice. Worldviews Evid Based Nurs. 2021 Sep;18(5):254-63.
6. Massheder-Dollman I, Wright J, Scullion E, Hockley D, Beaumont C. The Challenges of a Modern Nurse-Led Palliative and End of Life Care Unit. Paper presented at: Leading, Learning and Innovating, Hospice UK 2017 National Conference; 2017 Nov 22-24; Liverpool, UK.
7. Huggins M, McGregor MJ, Cox MB, Bauder K, Slater J, Yap C, et al. Advance Care Planning and Decision-Making in a Home-Based Primary Care Service in a Canadian Urban Centre. Can Geriatr J. 2019 Dec;22(4):182-9.
8. Rose BL, Leung S, Gustin J, Childers J. Initiating Advance Care Planning in Primary Care: A Model for Success. J Palliat Med. 2019 Apr;22(4):427-31.
9. Huber MT, Highland JD, Krishnamoorthi VR, Tang JW. Utilizing the Electronic Health Record to Improve Advance Care Planning: A Systematic Review. Am J Hosp Palliat Care. 2018 Mar;35(3):532-41.
10. Cox MB, McGregor MJ, Huggins M, Moorhouse P, Mallery L, Bauder K. Evaluation of an Initiative to Improve Advance Care Planning for a Home-Based Primary Care Service. BMC Geriatr [Internet]. 2021 Feb 2 [cited 2025 May 21];21(1):[10 p.]. Available from: https://doi.org/10.1186/s12877-021-02035-x.
11. Gill G, Saini S, Pietrzyk J, Beaurivage B, Clay A, Marwah M. The Role of Educational Intervention and Implementation of a Standardized ACP EMR Template in Improving ACP Discussion and Documentation with Geriatric Patients at Regina Centre Crossing's Family

Medicine Unit. Paper presented at: Department of Academic Family Medicine's 34th Annual Resident Scholarship Day; 2024 May 31; Saskatoon, SK.

Improving Documentation and Workflow in Hospital and Community Palliative Care in Saskatoon

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ABSTRACT

Background: As Canada's population ages, the demand for accessible, high-quality palliative care continues to grow. Effective documentation and communication within palliative care are essential for safe, coordinated, and patient-centred care. In Saskatoon, outdated manual processes for patient rosters and consult documentation created inefficiencies and increased the risk of errors, especially for community-based care.

Question(s): This quality improvement initiative aimed to enhance the accuracy, accessibility, and timeliness of palliative care documentation in both hospital and community settings by modernizing workflow processes and integrating them into the Saskatchewan Health Authority's (SHA) electronic medical record (EMR) system.

Methods/Methodology: Interventions were piloted by the principal investigator and then introduced to the broader palliative care team during an in-service session in Winter 2025. Using the Sunrise Clinical Manager (SCM) EMR system, patients were "tagged" to generate automated rosters and new registration processes were created for community visits. A custom SCM consult note template was developed to allow direct entry of typed or speech-to-text dictated consults, viewable by the entire care team. Quality improvement cycles informed iterative refinements. This initiative qualified as quality improvement under Article 2.5 of the Tri-Council Policy Statement (TCPS2) and was granted an ethics exemption by the University of Saskatoon's Research Ethics Office (E-Bio-048).

Results/Findings: The automated SCM roster eliminated the need for daily manual updates, saving the palliative nurse 2–3 hours daily. Consult documentation became more accurate and accessible, and integration with eHealth Saskatchewan ensured consults were available across care settings. The project avoided approximately $1800/month in EMR subscription costs. Provider satisfaction increased, citing improved workflow and communication.

Discussion: Leveraging existing EMR infrastructure, the project successfully addressed inefficiencies in documentation and patient tracking. The use of speech-to-text technology further enhanced documentation speed and clarity, contributing to interdisciplinary communication and continuity of care.

Conclusions: Modernizing documentation processes within the existing SHA EMR system improved efficiency, accuracy, and provider satisfaction, while reducing administrative burden and cost.

Recommendations: Sustain current processes through staff training; expand to other services; monitor long-term outcomes; and encourage broader adoption across SHA facilities.

References:

1. Chakraborty A, Stilos K. Palliative Care Consult Team: Program Evaluation Over a 15-Year Period. Can Oncol Nurs J. 2024 Jul;34(3):431-8.
2. Hart GK, Martin L, Todd J, Hosking N. Technology-Based Challenges of Informal Clinical Communication in an Australian Tertiary Referral Hospital: A Survey-Based Assessment of User Perspectives. BMJ Open Qual [Internet]. 2025 Apr 17 [cited 2025 May 26];14(2):[11 p.]. Available from: https://doi.org/10.1136/bmjoq-2024-002976.
3. Guttman OT, Lazzara EH, Keebler JR, Webster KLW, Gisick LM, Baker AL. Dissecting Communication Barriers in Healthcare: A Path to Enhancing Communication Resiliency, Reliability, and Patient Safety. J Patient Saf. 2021 Dec;17(8):e1465-71.
4. Uslu A, Stausberg J. Value of the Electronic Medical Record for Hospital Care: Update From the Literature. J Med Internet Res [Internet]. 2021 Dec 23 [cited 2025 May 26];23(12):[16 p.]. Available from: https://doi.org/10.2196/26323.
5. Stausberg J, Koch D, Ingenerf J, Betzler M. Comparing Paper-Based with Electronic Patient Records: Lessons Learned During a Study on Diagnosis and Procedure Codes. J Am Med Inform Assoc. 2003 Sep-Oct;10(5):470-7.
6. Zuchowski M, Goller A. Speech Recognition for Medical Documentation: An Analysis of Time, Cost Efficiency and Acceptance in a Clinical Setting. Br J Healthc Manag. 2021 Jan;27(1):30–6.