



**ABSTRACT BOOK**  
**June 2, 2023**

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

*[medicine.usask.ca/familymedicine](http://medicine.usask.ca/familymedicine)*

May 17, 2023

Our Annual Resident Scholarship Day is one of my favourite events in the academic year. This will be our 33<sup>rd</sup> Annual event. It is so great to be able to come together to celebrate your achievements as a whole department.

Hearing about your questions and what you learned through the process of answering them is inspiring. 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

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. This is the first Resident Scholarship Day that has been held in person since the pandemic, so I am grateful we are able to come together to celebrate your success. Please know that your contributions to Family Medicine scholarship are greatly appreciated and valued.

The skills of research, scholarship and critical appraisal have never been more important than they are now. The rate of increase in medical information has ballooned in the past two years, with information seeming to evolve almost hourly during the COVID-19 pandemic. 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 the critical appraisal of information.

Please join me in thanking those people who have made this moment possible: the Research Division; Faculty Advisors; 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 their chosen careers.

Sincerely,



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

June 2, 2023

Colleagues

On this occasion, the 33<sup>rd</sup> Annual Resident Scholarship Day, I want to take this opportunity to recognize Residents, Faculty 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 33 years, we have come a long way, but we must continue to transform to meet the needs of the people we serve, and 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 transformation each and 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; and the Saskatchewan College of Family Physicians.

At this, our first in-person celebration, 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  
Professor & Director, Research Division  
Department of Academic Family Medicine

---

# 33<sup>rd</sup> ANNUAL RESIDENT SCHOLARSHIP DAY

## DEPARTMENT OF ACADEMIC FAMILY MEDICINE

---

Friday, June 2, 2023  
Prairieland Park – Hall C  
Saskatoon, SK

- 0900 - 0910 Opening Remarks & Introductions  
Dr. Vivian R Ramsden, Director, Research Division  
Dr. Kathy Lawrence, Provincial Department Head
- 0910 - 0920 The Effect of Media Types on the Engagement and Dissemination of Health Information via a Physician-managed Instagram Account during the COVID-19 Pandemic  
*Vanessa Leung Shing, Justin Ladham, Emily Sullivan, Rhonda Bryce*
- 0920 - 0930 Pre-pandemic and Pandemic Comparison of Operative Deliveries in a Regional Saskatchewan Hospital  
*Evan Mah, Ashton Craven, Rhonda Bryce*
- 0930 - 0940 Breech Deliveries: A Retrospective 3-year Quality Improvement Study in a Regional Center  
*Bianca (Adebanke) Adekola, Brianna Hutchinson, Udayasankar Vijayalakshmi, Rhonda Bryce, Breanna Davis, Vivian R Ramsden*
- 0940 - 0950 The Incidence and Management of Bacteriuria in Pregnant females in Northern Saskatchewan  
*Erin Segstro, Jeff Irvine, Rhonda Bryce*
- 0950 - 1000 The Effectiveness of a Low-fidelity Cervical Simulation Model Training Session in Enhancing Family Medicine Residents' Confidence in Cervical Exams  
*Cadence MacPherson, Aden Mah, Tracey Guselle, Rhonda Bryce*
- 1000 - 1010 What are Patient's Usage, Understanding, Barriers, and Facilitators of Contraception in an Urban, Academic Family Practice?  
*Eva Lioutas, Joanna Lioutas, Marie Yacoub, Olivia Reis, Megan Clark, Adam Clay*
- 1010 - 1030 Break
- 1030 - 1040 Care Modality and Preferences for Gender-affirming Care in Regional to Remote Saskatchewan  
*Alexander Hoffman, Megan Clark, Adam Clay*

- 1040 - 1050 Practice-related Racism faced by Physician Graduates of the Saskatchewan International Physician Practice Assessment Program  
*Rufaro Asefa, Syeda Ifrah Bukhari, Ginger Ruddy, Rhonda Bryce, Brady Bouchard, Carla Fehr, Jon Witt*
- 1050 - 1100 Attitudes and Barriers to Distributing Take Home Naloxone Kits Among ER Staff in Cypress Regional Hospital  
*Rudy Andrews, Emerveer Khosa, Kelsy Leavins*
- 1100 - 1110 Perceptions and Attitudes of Healthcare Professionals Towards Antipsychotic use among Long Term Care Residents with Dementia in the Battlefords  
*Tawanda Hatendi, Grishma Shrestha, Andrhea Nocon, Erin Hamilton, Yasin Mahmood, Rhonda Bryce*
- 1110 - 1120 NODRUGS: New Onset Diagnosis Rivalling URTI Guidelines Study  
*Jake Allison, Cody Weiler, Rhonda Bryce, Vivian R Ramsden, Breanna Davis*
- 1120 - 1130 The State of Traditional Medicine and Healing from the Perspective of Cultural Support  
*Samuel Simonson, Lillian Sanderson, Jeff Irvine, Rhonda Bryce, Vivian R Ramsden*
- 1130 - 1230 Lunch/Networking
- 1230 - 1240 Retrospective Chart Review of Emergency Department Ultrasound Documentation Following Training in a Regional Center  
*Anson Dinh, Katherine Klassen, Emmett Harrison, Adam Clay, Michael Kapusta*
- 1240 - 1250 SLIP-GAPPED: Study of Limits to Implementation of Practice Guidelines for Aged Population Presenting to the Emergency Department  
*Louisa Viban, Amanda Hondl, Volker Rininsland, Adam Clay*
- 1250 - 1300 Evaluating the Implementation of a Hospitalist Model of Family Practice Inpatient Care in a Regional Center  
*Dylan Coupal, Justin Gregory, Robert Haver, Adam Clay*
- 1300 - 1310 Implementing a Palliative Care Referral Screening Tool for Patients Admitted to Long-Term Care: What Do Primary Care Providers Think?  
*Corbin Chengler, Mike Chiu, Kaitlyn Schick, Alanna Surkan, Rhonda Bryce, Breanna Davis*
- 1310 - 1320 Patient Demographic and Care Outcomes of an Academic Family Medicine Clinic's After-hours On-call Service  
*Ashley A Chand, Nerissa N Nankissoor, Greg C R Warren, Adam Clay, Olivia Reis, Barb Beurivage, Lori Schramm, Megan Clark*
- 1320 - 1340 The Potential Benefits of a Transcutaneous Bilirubinometer Screening System in a Northern Saskatchewan Community  
*Katelyn Larson, Jeff Irvine, Rhonda Bryce*
- 1340 - 1350 Exploring Motivations that Influence Practice Patterns among Recently Practicing Family Physicians  
*Daniel Thomas, Sidra Haque, Oliva Reis, Adam Clay*



- 1350 - 1400 Medical Student Perceptions of Family Medicine  
*Dakota Van Dijk, Meredith McKague, Matthew Kushneriuk, Rhonda Bryce*
- 1400 - 1410 Delivery of Medical Abortion Services in Northern Rural/Remote Settings  
*Alisha Beler, Jeff Irvine*
- 1410 - 1430 Break
- 1430 - 1440 Clearing the Air: A QI Approach to Changing Metered Dose Inhaler (MDI) Prescription practices at West Winds Primary Health Centre  
*Claire DeBoer, Bruna Murvay, Michael Moroz, Cathy MacLean, Meredith McKague, Rhonda Bryce*
- 1440 - 1450 Breastfeeding Duration Following Frenotomy Consultation in Infants with Suspected Ankyloglossia and Feeding Difficulty at West Winds Primary Health Centre and Cornerstone Medical Clinic  
*Michele Sheikh, Fei Ge, Jill Farrukh, Emily Sullivan, Jennifer Wood, Rhonda Bryce*
- 1450-1500 Exploring Barriers and Motivations for Family Medicine Residents in Choosing to Practice Community Family Medicine  
*Chrissy Simon, Aaron Vanderlot, Olivia Reis, Adam Clay*
- 1500 - 1515 Reflections  
Research Awards – K Lawrence/A Muller/VR Ramsden  
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 the 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 the Departments of Obstetrics & Gynecology, Ophthalmology, Medical Imaging, Family Medicine, Pathology and the Division of Oncology in the College of Medicine at the University of Saskatchewan. 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 have focused on the development and use of novel contrast agents for medical imaging along with the development of therapeutics for cancer treatment. For the past few years, Mark has been in administrative positions working on grant development either at Lawson Research Institute or at Western University in London, ON.

### **Katrina Sawchuk, MEd, PhD – Greater Saskatoon Catholic Schools, Saskatoon, SK & University of Saskatchewan, Saskatoon, SK**

Dr. Katrina Sawchuk is the Principal at St. Marguerite Elementary School; and has recently become a Sessional Lecturer in the College of Education and a Co-Investigator on the recently funded CoMRAD Grant entitled ka kwe miskasoh: Breaking the Cycle. She has a MEd in Curriculum Studies and a PhD in Health Sciences from the University of Saskatchewan. Katrina is a participatory researcher, and her PhD Dissertation was entitled Understanding Indigenous Health Literacy through Community-Led Engagement.

## **Acknowledgements**

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

Masters of Ceremonies – Drs. Megan Clark and Andries Muller

Research Support – Dr. Rhonda Bryce, Adam Clay, Nicole Jacobson

Administrative Support – Michelle Koehn, Chantel Ellis & the Program Administrators



# The Effect of Media Types on the Engagement and Dissemination of Health Information via a Physician-managed Instagram Account during the COVID-19 Pandemic

Vanessa Leung Shing, FMR II, Justin Ladham, FMR II;  
Emily Sullivan, MD, MPH, CCFP; Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** With ever-increasing reliance on computers and technology, the public is more frequently obtaining its health information from social media. Several studies have shown that social media can be used as a platform to relay public health information. Dr. Emily Sullivan created an Instagram account (yxe.md) at the beginning of the pandemic to provide the public with reliable information regarding COVID-19 and public health measures. The nature of Instagram posts from yxe.md during periods of high COVID concern, November 2020 to February 2021 and September 2021 to November 2021 were evaluated.

**Question(s):** There were several questions we had for this study:

1. Can social media be an impactful way to spread healthcare knowledge?
2. Which forms of content would be most engaging?
3. Which types of information would be most engaging?

**Methods/Methodology:** This project received an Exemption from the University of Saskatchewan's Behavioural REB (Beh ID E370). Descriptive statistics (medians with interquartile ranges, frequencies with percentages) were used to describe post characteristics. Comparisons of median values for count data conveying the number of likes, comments, shares, saves and total reach were made across constructs of the Health Belief Model (HBM), content categories, and source categories using the Kruskal Wallis test.

**Results/Findings:** We reviewed 245 posts during the time frames outlined above. The most common HBM construct seen in the posts was cues to action, comprising 44.3% of total posts. Government health agencies were the most common source, comprising 26.2% of posts. Social media reposts were the most common type of post, comprising 41.4%.

The posts receiving the most likes related to the benefit construct of the HBM, came from health academic/professional sources, or offered social commentary. The least liked posts were related to the HBM susceptibility construct, came from a government health agency source, or presented factual information.

**Discussion:** These findings can be beneficial for future physicians wanting to start medical Instagram accounts to relay public health information.

**Conclusions:** Based on this sample, posts that focus on benefits of preventative behaviours, come from academic professionals, or include some entertaining form of social commentary provide relatively strong engagement.

## References:

1. Statista - The Statistics Portal for Market Data, Market Research and Market Studies [Internet]. Hamburg (DE): Ströer; c2023. Number of internet and social media users worldwide as of January 2023; 2023 Jan [cited 2023 May 19];[about 6 screens]. Available from: <https://www.statista.com/statistics/617136/digital-population-worldwide>.
2. Malik A, Khan ML, Quan-Haase A. Public Health Agencies Outreach Through Instagram During the COVID-19 Pandemic: Crisis and Emergency Risk Communication Perspective. *Int J Disaster Risk Reduct* [Internet]. 2021 May 27 [cited 2023 May 19];61:[10 p.]. Available from: <https://doi.org/10.1016/j.ijdr.2021.102346>.
3. Alexander G. Smile! It's Only Covid: Analyzing Covid-19 Internet Memes. *J Creativ* [Internet]. 2023 Apr 1 [cited 2023 May 19];33(1):[8 p.]. Available from: <https://doi.org/10.1016/j.yjoc.2023.100049>.
4. MacKay M, Ford C, Colangeli T, Gillis D, McWhirter JE, Papadopoulos A. A Content Analysis of Canadian Influencer Crisis Messages on Instagram and the Public's Response during COVID-19. *BMC Public Health* [Internet]. 2022 Apr 15 [cited 2023 May 19];22(1):[15 p.]. Available from: <https://doi.org/10.1186/s12889-022-13129-5>.
5. Mello S, Glowacki E, Fuentes I, Seabolt J. Communicating COVID-19 Risk on Instagram: A Content Analysis of Official Public Health Messaging During the First Year of the Pandemic. *J Health Commun*. 2023 Jan;28(1):38-52.

# Pre-pandemic and pandemic comparison of operative deliveries in a regional Saskatchewan hospital

Evan Mah, MD, CCFP, FMR III; Ashton Craven, MD, FRCS; Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** The COVID-19 pandemic broadly altered health care delivery and patient comfort with accessing healthcare. We propose that these dynamics may have increased the need for operative delivery (i.e., caesarean section, vacuum extraction, forceps delivery) and altered the associated risk factors in our local population.

**Question(s):** Among pregnant women delivering at our regional hospital, did the rates and characteristics of operative deliveries change between pre-pandemic and pandemic periods?

**Methods/Methodology:** Ethical exemption and operational approval were received from the University of Saskatchewan (BIO 3786) and Saskatchewan Health Authority (OA-UofS-3786). Charts of all operative deliveries that occurred during the selected pre-pandemic (January 1 – 14, 2020) and pandemic (January 1 – 14, 2021) periods were reviewed for patient characteristics and operative delivery indications/types. Health records personnel also provided overall delivery counts within each period for incidence calculations. Time period comparisons were undertaken utilizing Chi-square/Fisher's exact and Mann-Whitney-U testing.

**Results/Findings:** Eighty-three and 42 deliveries occurred during the pre-pandemic and pandemic periods, respectively. Fifteen operative deliveries occurred in each period (incidence: 18% versus 36%,  $p=0.03$ ). Demographics and operative delivery types were similar between the groups. First prenatal appointments in the pandemic group were slightly later (median gestational age 16.5 weeks versus 14 weeks,  $p=0.43$ ), with fewer patients screened for gestational diabetes (73% versus 100%,  $p=0.10$ ) and Group B streptococcus (60% versus 80%,  $p=0.43$ ). Induction less frequently preceded operative delivery during the pandemic (20% versus 60%,  $p=0.03$ ), and there were fewer NICU transfers (0% versus 29%,  $p=0.04$ ).

**Discussion:** Although there were statistically more operative deliveries during the pandemic period, the demographics were comparable between the groups. Some early signals suggest potential differences may relate to accessing prenatal care. The study was limited by relatively short period intervals, reduced power due to small delivery numbers, and lack of comparative data regarding patients who delivered during these periods without operative assistance. Further investigation with expanded data collection is required for meaningful conclusions and is warranted given the higher pandemic incidence of operative delivery noted.

**Conclusions:** In our local context, operative delivery incidence appears to have increased during the pandemic. Differences in accessing prenatal care may have contributed.

**References:**

1. Society of Obstetricians and Gynaecologists of Canada. ALARM Course Manual. 26th ed. Ottawa (ON): Society of Obstetricians and Gynaecologists of Canada; 2019. 512 p.
2. Public Health Agency of Canada. Family-centred Maternity and Newborn Care: National Guidelines. Ottawa (ON): Government of Canada; 2018. 531 p.
3. Muraca GM, Boutin A, Razaz N, Lisonkova S, John S, Ting JY, et al. Maternal and Neonatal Trauma Following Operative Vaginal Delivery. CMAJ. 2022 Jan;194(1):E1-12.
4. Alsayegh E, Bos H, Campbell K, Barrett J. No. 361—Caesarean Delivery on Maternal Request. J Obstet Gynaecol Can. 2018 Jul;40(7):967-71.
5. World Health Organization (WHO) [Internet]. Geneva (CE): World Health Organization; c2023. New guidelines on antenatal care for a positive pregnancy experience; 2016 Nov 7 [cited 2023 Apr 12];[about 3 screens]. Available from: <https://www.who.int/news/item/07-11-2016-new-guidelines-on-antenatal-care-for-a-positive-pregnancy-experience>.
6. Nussey L, Hunter A, Krueger S, Malhi R, Giglia L, Seigel S, et al. Sociodemographic Characteristics and Clinical Outcomes of People Receiving Inadequate Prenatal Care: A Retrospective Cohort Study. J Obstet Gynaecol Can. 2020 May;42(5):591-600.
7. Statistics Canada - Canada's national statistical agency [Internet]. Ottawa (ON): Government of Canada; c2023. Survey on access to health care and pharmaceuticals during the pandemic, March 2020 to May 2021; 2021 Nov 23 [cited 2023 Apr 12];[about 4 screens]. Available from: <https://www150.statcan.gc.ca/n1/daily-quotidien/211123/dq211123b-eng.htm>.
8. Knight E, Morris M, Heaman M. A Descriptive Study of Women Presenting to an Obstetric Triage Unit with No Prenatal Care. J Obstet Gynaecol Can. 2014 Mar;36(3):216-22.

# Breech Deliveries: A Retrospective Three Year Quality Improvement Study in a Regional Center

Bianca Adekola (Adebanke), FMR II; Brianna Hutchinson, FMR II;  
Vijayalakshmi Udayasankar, MD, FRCSC; Rhonda Bryce, MD, MSc;  
Breanna Davis, MD, CCFP; Vivian R Ramsden, RN, PhD

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

## ABSTRACT

**Background:** SOGC guidelines exist regarding breech deliveries. We wished to evaluate breech delivery occurrence and management locally.

**Question(s):**

1. What was the incidence of vaginal and Caesarean term singleton breech deliveries in this center between August 2019 and August 2022?
2. What are the characteristics of these groups and how do they compare?
3. Are there characteristics to suggest unanticipated breech delivery outcomes in this center (i.e., unplanned Caesarean)?

**Methods/Methodology:** Exempted by the University of Saskatchewan's BioMedical Research Ethics Board (BIO3751) and approved by the Saskatchewan Health Authority (OA-UofS-3751), we reviewed all term, live, singleton breech deliveries during the period. Collected data points included maternal age, obstetrical history, comorbidities, ultrasound performance, planned versus unplanned delivery status, induction, and neonatal outcomes. We also requested total birth count from the health records department for incidence determination.

**Results/Findings:** Incidence was 2.7% (95% CI 2.2, 3.2; 115/4282) and 87% delivered via Caesarean section. Vaginal deliveries had a higher gravidity and parity (median values 4 vs 2 and 2 vs 1, respectively;  $p = 0.02$  for both). Among those with a previous Caesarean, 83% had a repeat procedure planned, compared to 50% with no such history ( $p=0.01$ ). Among Caesarean deliveries, 73% had a prior immediate ultrasound. Five-minute Apgar scores were slightly higher among planned Caesarean deliveries versus unplanned deliveries (median 9 vs 8,  $p=0.02$ ).

**Discussion:** Breech delivery incidence in our community is relatively low. Prior Caesarean delivery associated with planned Caesarean delivery aligns with current guidelines. Our association of greater gravidity/parity among women with vaginal breech delivery is uncommon in the literature. Our recognized small but significant benefit in five-minute Apgar scores among planned Caesarean deliveries aligns with recommendations. Findings may have been limited due to relatively few vaginal deliveries in our data.

**Conclusions:** Breech deliveries are relatively infrequent locally. There are few patient characteristics related to delivery modality. Prior ultrasound is not always performed.

**Recommendations:** Routine ultrasound assessment prior to breech delivery should be promoted to help guide counselling on options for mode of delivery. Better documentation of counselling options provided and reasons for maternal choices are needed to understand the limited vaginal breech births in our population.

**References:**

1. Mukhopadhyay S, Arulkumaran S. Breech Delivery. *Best Pract Res Clin Obstet Gynaecol*. 2002 Feb;16(1):31-42.
2. Gagnon R. In Response: SOGC Clinical Practice Guideline on Vaginal Delivery of Breech Presentation. *J Obstet Gynaecol Can*. 2010 Jan;32(1):15.
3. Berhan Y, Haileamlak A. The Risks of Planned Vaginal Breech Delivery versus Planned Caesarean Section for Term Breech Birth: A Meta-analysis Including Observational Studies. *BJOG*. 2016 Jan;123(1):49-57.
4. Hofmeyr GJ, Hannah M, Lawrie TA. Planned Caesarean Section for Term Breech Delivery. 2001 Jan 22 [updated 2015 Jul 21; cited 2023 May 16]. In: *The Cochrane Database of Systematic Reviews* [Internet]. Hoboken (NJ): John Wiley & Sons. c1999-2023. Available from: <https://doi.org/10.1002/14651858.CD000166.pub2>. Record No.: CD000166.
5. Kotaska A, Menticoglou S, Gagnon R; Maternal Fetal Medicine Committee. Vaginal Delivery of Breech Presentation. *J Obstet Gynaecol Can*. 2009 Jun;31(6):557-66.
6. Fahey M. Outcomes of a Breech Birth Program in Canada, Quality Assurance Project. *J Obstet Gynaecol Can*. 2021 Jun;43(6):721-5.
7. Doyle NM, Riggs JW, Ramin SM, Sosa MA, Gilstrap LC 3rd. Outcomes of Term Vaginal Breech Delivery. *Am J Perinatol*. 2005 Aug;22(6):325-8.
8. Boudaya F, Hecini N, Achour A, Chelli D. [Breech Presentation: Does the Decision of Vaginal Delivery Depend on Parity?]. *Tunis Med*. 2015 Jun;93(6):371-5. French.
9. Brouwer WK, Veenstra van Nieuwenhoven AL, Santema JG. [Neonatal Outcome After a Planned Vaginal Breech Birth: No Association with Parity or Birth Weight, but More Birth Injuries than in Planned Cesarean Section]. *Ned Tijdschr Geneesk*. 2001 Aug;145(32):1554-7. Dutch.
10. Lyons J, Pressey T, Bartholomew S, Liu S, Liston RM, Joseph KS, et al. Delivery of Breech Presentation at Term Gestation in Canada, 2003-2011. *Obstet Gynecol*. 2015 May;125(5):1153-61.
11. Ghesquière L, Demetz J, Dufour P, Depret S, Garabedian C, Subtil D. Type of Breech Presentation and Prognosis for Delivery. *J Gynecol Obstet Hum Reprod* [Internet]. 2020 Nov 1 [cited 2023 May 16];49(9):[23 p.]. Available from: <https://doi.org/10.1016/j.jogoh.2020.101832>.
12. Mattuizzi A. [Breech Presentation: CNGOF Guidelines for Clinical Practice - Epidemiology, Risk Factors and Complications]. *Gynecol Obstet Fertil Senol*. 2020 Jan;48(1):70-80. French.
13. Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, Willan AR. Planned Caesarean Section versus Planned Vaginal Birth for Breech Presentation at Term: A Randomised Multicentre Trial. Term Breech Trial Collaborative Group. *Lancet*. 2000 Oct 21;356(9239):1375-83.
14. Albrechtsen S, Rasmussen S, Dalaker K, Irgens LM. The Occurrence of Breech Presentation in Norway 1967-1994. *Acta Obstet Gynecol Scand*. 1998 Apr;77(4):410-5.



15. Acién P. Breech Presentation in Spain, 1992: A Collaborative Study. *Eur J Obstet Gynecol Reprod Biol.* 1995 Sep;62(1):19-24.
16. National Center for Biotechnology Information [Internet]. Bethesda (MD): National Library of Medicine; c2023. APGAR Score – StatPearls; 19 Feb 2023 [cited 2023 May 16];[about 7 screens]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470569/>.

# The Significance of Bacteriuria in Pregnant Females in Northern Saskatchewan

Erin Segstro, FMR II; Jeff Irvine, MD, MPH, CCFP; Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** Bacteriuria is common in pregnant women and has been linked to negative pregnancy outcomes if untreated. While Canadian guidelines vary, they all suggest routine screening during pregnancy with subsequent treatment if necessary.

**Question(s):** This study aims to characterize screening patterns and incidence of bacteriuria in pregnant women in a northeastern community and explore treatment regimens, including whether a test of cure occurred.

**Methods/Methodology:** With approvals from the University of Saskatchewan's BioMedical REB (Bio ID 3566) and related Indigenous communities, the local primary care clinic's electronic medical records of pregnant females delivering in 2021 were reviewed. Recorded variables included age, gravida/para status, gestational age at screening, initial urinalysis and culture result, treatment choice and duration, and whether or not a test of cure was completed. We also determined time to re-test and examined any bacteriuria recurrence or additional urinary cultures.

**Results/Findings:** The 30 women reviewed were typically multiparous, with a mean age of 26 years. There was approximately equal representation of residence inside and outside of community. Overall, women had 1.0 cultures completed per 100 pregnancy-days. The median gestational age of first culture was 13.9 weeks (range: 2-38 weeks); 14/30 screening cultures occurred in first trimester. Six of 30 screened positively for bacteriuria and three of these were prescribed antibiotics in response. There were four additional infections. The earliest follow-up culture occurred at 35 days. Of all infections, both those detected at screening and subsequently, 40% were followed to a negative culture.

**Discussion:** Less than half of infections were followed to negative culture. Health care system constraints may include appointment scheduling logistics, patient transportation difficulties, and inconsistent telephone communication for care facilitation. Limitations include small sample size, the inability to determine the patient's symptom status at the time of culture, and potential inaccuracies in time to follow-up.

**Conclusions:** The incidence of bacteriuria in pregnancy appears to be relatively high in this population. Women are screened at various gestational ages, likely secondary to difficulties in accessing prenatal care. Treatment is not always immediate or may not occur at all. A test of cure may be delayed or not occur at all.

**References:**

1. Kass EH. Asymptomatic Infections of the Urinary Tract [Reprint]. *J Urol*. 2002 Feb;167(2 Pt 2):1016-20.
2. Patterson TF, Andriole, VT. Bacteriuria in Pregnancy. *Infect Dis Clin of North Am*. 1987 Dec;1(4):807-22.
3. Whalley PJ, Martin FG, Peters PC. Significance of Asymptomatic Bacteriuria Detected During Pregnancy. *JAMA*. 1965 Sep;193(11):879-81.
4. Smaill F. Asymptomatic Bacteriuria in Pregnancy. *Best Pract Res Clin Obstet Gynaecol*. 2007 Jun;21(3):439-50.
5. Moore A, Doull M, Grad R, Groulx S, Pottie K, Tonelli M, et al. Recommendations on Screening for Asymptomatic Bacteriuria in Pregnancy. *CMAJ*. 2018 Jul;190(27):E823-30.
6. Wingert A, Pillay J, Featherstone R, Gates M, Sebastianski M, Shave K, et al. Screening for Asymptomatic Bacteriuria in Pregnancy: Systematic Review and Meta-analysis [Internet]. Edmonton (AB): University of Alberta; 2017 Oct 13 [cited 2023 April 25]. 88 p. Available from: [https://canadiantaskforce.ca/wp-content/uploads/2018/06/Screening-for-Asymptomatic-Bacteriuria-in-Pregnancy-Final-Report-13Oct2017\\_v2.pdf](https://canadiantaskforce.ca/wp-content/uploads/2018/06/Screening-for-Asymptomatic-Bacteriuria-in-Pregnancy-Final-Report-13Oct2017_v2.pdf).
7. Sheppard AJ, Shapiro GD, Bushnik T, Wilkins R, Perry S, Kaufman JS, et al. Birth Outcomes Among First Nations, Inuit and Métis Populations. *Health Rep*. 2017 Nov;28(11):11-6.

# The Effectiveness of a Low-Fidelity Cervical Simulation Model in Enhancing Family Medicine Residents' Confidence in Cervical Exams

Cadence MacPherson, FMR II; Aden Mah, FMR II;  
Tracey Guselle, MD, CFPC; Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** Conducting accurate cervical exams is an essential skill in obstetrics as it dictates both the immediate and future management of laboring patients. Medical trainees often develop this skill by practicing on patients under the supervision of an expert's assessment. This training paradigm is not conducive to learners or patients due to maternal discomfort, trainee anxiety, and the risk of negative outcomes associated with repeated cervical exams. Various simulation models have been shown to be an effective tool for teaching cervical exams<sup>1,2,3</sup>. We assessed the effectiveness of the PROMPT Birthing Simulator and Cervical Dilation Module in enhancing Saskatoon family medicine resident confidence in performing cervical examinations.

**Question(s):** Does using a cervical simulation model help family medicine residents gain confidence in their cervical exams?

**Methods/Methodology:** With approval from the University of Saskatchewan's Behavioural Research Ethics Board (Beh-ID # 3245), twenty family medicine residents (10 first years and 10 second years) at the Saskatoon Training Site took part in this study. Baseline confidence levels in four areas of the cervical exam (dilation, effacement, station, and position) were assessed using a 10-point rating scale. Trainees then participated in a 40-minute teaching session using the Prompt Birthing Simulator and Cervical Dilation Module. A second survey was provided after the training session to assess change in resident perceived confidence.

**Results/Findings:** Greater improvement in confidence was observed in residents who had not completed their first-year obstetrics rotation, specifically for measures of dilation ( $p=0.03$ ) and effacement ( $p=0.13$ ). Residents with greater confidence pre-session generally benefited the least (less confidence acquired post-session) (Spearman's rho = -0.69 to -0.85).

**Discussion:** Overall, residents appeared to benefit from the cervical simulation model teaching session regardless of previous obstetrical experience. However, those that benefitted the most were residents who had not completed their obstetrical rotation and had less experience in real life cervical exams.

**Conclusions:** Results from this study support the use of cervical simulation models for obstetrical teaching, especially in trainees who lack previous experience in obstetrics.

**Recommendations:** Further research with larger sample sizes and diverse populations could be conducted to confirm the effectiveness of simulation-based training in improving cervical

examination skills.

**References:**

1. Mitric C, Chow K, Krishnamurthy S, Zeng XZ, Leung A. Impact of a Multidimensional Technical Skills Training Session Before Obstetrics and Gynaecology Clerkship Rotation on Performance and Exposure. *J Obstet Gynaecol Can.* 2018 Oct;40(10):1315–23.
2. Nitsche JF, Fino NF, Palomo JM, Perdomo AP, Brost BC. Effectiveness of a Labor Cervical Exam Model in Family Medicine and OB-GYN Residents. *Fam Med.* 2017 May;49(5):384-7.
3. Huhn KA, Brost BC. Accuracy of Simulated Cervical Dilation and Effacement Measurements Among Practitioners. *Am J Obstet Gynecol.* 2004 Nov;191(5):1797–9.
4. Chow K, Murphy D. The Development and Validation of Three-dimensional Printed and Silicone Based Intrapartum Cervical Models. *J Obstet Gynaecol Can.* 2020 May;42(5):672.
5. Arias T, Tran A, Breaud J, Fournier JP, Bongain A, Delotte J. A Prospective Study into the Benefits of Simulation Training in Teaching Obstetric Vaginal Examination. *Int J Gynaecol Obstet.* 2016 Jun;133(3):380-4.

# What are Patient's Usage and Knowledge of Intrauterine Devices and Attitudes towards Contraceptive Discussions in an Urban, Academic Family Practice?

Eva Lioutas, FMR II; Joanna Lioutas, FMR II; Marie Yacoub, FMR II;  
Olivia Reis, MD, CCFP; Megan Clark, MD, CCFP; Adam Clay, MSc

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

## ABSTRACT

**Background:** Long-acting reversible contraceptives (LARCs), including the hormonal and copper intrauterine devices (IUDs), are the most effective forms of birth control at preventing pregnancy; nevertheless, LARCs are not widely used. Effective contraception can help to reduce unintended pregnancy and associated adverse outcomes and healthcare costs.

**Question(s):** What are patient's usage and knowledge of intrauterine devices and attitudes towards contraceptive discussions in an urban, academic family practice?

**Methods/Methodology:** A cross-sectional survey was completed between May and December 2022 by patients of the Family Medicine Unit in Regina who were born with a uterus and were 14 to 51 years old. This project was approved by the University of Saskatchewan's Behavioural REB (Beh ID 3261).

**Results/Findings:** The survey was completed by 106 participants. The most common method of contraception used was the hormonal IUD (n=34, 32.1%). The most common reason for current contraception was wanting to prevent pregnancy (n=50, 64.1%). Of those using contraception, 93.3% reported that they were satisfied with their current method (n=70). When comparing IUDs to other methods of contraception, satisfaction was similar (n=39, 95.1% vs. n=30, 83.3%, p=.137). Almost all study participants were aware of the IUD (n=104, 99%), with 64.8% (n=68) having had an IUD counselling appointment. There was no statistically significant difference in IUD knowledge scores based on method of contraception or correlation with age.

**Discussion:** IUD uptake in our population was significantly higher than the national estimate (38.7% vs. 4.3%). This is likely due to a highly knowledgeable patient population and their positive contraceptive counselling experiences. In contrast to other studies, cost and misconceptions were not identified as significant barriers.

**Conclusions:** This study illustrated high IUD uptake and knowledge of IUDs amongst study participants, as well as overall positive attitudes toward contraceptive discussions with their family physician.



## References:

1. Caetano C, Blikendaal S, Engler Y, Lombardo M. From Awareness to Usage of Long-acting Reversible Contraceptives: Results of a Large European Survey. *Int J Gynaecol Obstet*. 2020 Dec;151(3):366-76.
2. Black A, Yang Q, Wen SW, Lalonde AB, Guilbert E, Fisher W. Contraceptive Use Among Canadian Women of Reproductive Age: Results of a National Survey. *J Obstet Gynaecol Can*. 2009 Jul;31(7):627-40.
3. United Nations Population Fund [Internet]. New York (NY): United Nations Population Fund; c2022. Nearly Half of All Pregnancies Are Unintended—A Global Crisis, Says New UNFPA Report; 2022 Mar 30 [updated 2022 April 1; cited 2023 April 25];[about 6 screens]. Available from: <https://www.unfpa.org/press/nearly-half-all-pregnancies-are-unintended-global-crisis-says-new-unfpa-report>.
4. Bearak JM, Popinchalk A, Beavin C, Ganatra B, Moller AB, Tunçalp Ö, et al. Country-specific Estimates of Unintended Pregnancy and Abortion Incidence: A Global Comparative Analysis of Levels in 2015–2019. *BMJ Glob Health* [Internet]. 2022 Mar 1 [cited 2023 May 10];7(3):[10 p.]. Available from: <https://doi.org/10.1136/bmjgh-2021-007151>.
5. Finer LB, Henshaw SK. Disparities in Rates of Unintended Pregnancy in the United States, 1994 and 2001. *Perspect Sex Reprod Health*. 2006 Jun;38(2):90-6.
6. Ingersoll T. Improving Knowledge of Long-acting Reversible Contraception in an Adolescent and Young Adult Female Population. *Nurs Womens Health*. 2021 Feb;25(1):54-62.
7. Black AY, Guilbert E, Hassan F, Chatziheofilou I, Lowin J, Jeddi M, et al. The Cost of Unintended Pregnancies in Canada: Estimating Direct Cost, Role of Imperfect Adherence, and the Potential Impact of Increased Use of Long-acting Reversible Contraceptives. *J Obstet Gynaecol Can*. 2015 Dec;37(12):1086-97.
8. Hirth JM, Dinehart EE, Lin YL, Kuo YF, Patel PR. Reasons Why Young Women in the United States Choose Their Contraceptive Method. *J Womens Health*. 2021 Jan;30(1):64-72.
9. Edwards S, Mercier R, Perriera L. Differences in Knowledge and Attitudes Toward the Intrauterine Device: Do Age and Race Matter? *J Obstet Gynaecol Res*. 2021 Feb;47(2):501-7.
10. The BMJ: Leading Medical Research, News, Education, Opinion [Internet]. London (UK): BMJ Publishing Group; c2023. Correlation and regression; [cited 2023 April 24];[about 12 screens]. Available from: <https://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one/11-correlation-and-regression>.
11. Hopkins B. Barriers to Healthcare Providers' Provision of Long-acting Reversible Contraception to Adolescent and Nulliparous Young Women. *Nurs Womens Health*. 2017 Apr-May;21(2):122-8.
12. Eisenberg D, McNicholas C, Peipert JF. Cost as a Barrier to Long-acting Reversible Contraceptive (LARC) Use in Adolescents. *J Adolesc Health*. 2013 Apr;52(4 Suppl):S59-63.
13. Hauck B, Costescu D. Barriers and Misperceptions Limiting Widespread Use of Intrauterine Contraception Among Canadian Women. *J Obstet Gynaecol Can*. 2015 Jul;37(7):606-16.

# Care Modality and Preferences for Gender-Affirming Care in Regional to Remote Saskatchewan

Alexander Hoffman, FMR II; Megan Clark, MD, CCFP; Adam Clay, MSc

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

## ABSTRACT

**Background:** Gender-affirming care in Saskatchewan has seen explosive interest over the past decade and is of critical value to marginalized populations seeking care in increasing numbers. Access is limited to larger urban centres, and individuals living in regional to remote Saskatchewan may be required to travel long distances at personal expense. Historically, studies attempting to ascertain preferences and best practice have been limited to urban centres in Canada or remote communities outside of Canada; no studies have previously addressed the specific care needs and preferences of these patients.

**Question(s):** What are the demographics of patients living in regional to remote Saskatchewan who are accessing/intending to access gender-affirming care?

How are most individuals currently accessing gender-affirming care?

How would individuals prefer to access gender-affirming care?

Are there any additional barriers to care access?

**Methods/Methodology:** Data was collected via SurveyMonkey over 2 weeks. Participant inclusion criteria, demographics, current care access, care modality preferences, satisfaction, and additional care barriers were assessed. Descriptive statistical analysis was completed via the “analyze” tools included in SurveyMonkey support; no further formal analysis was completed. The project was approved by the University of Saskatchewan’s Behavioural REB (Beh ID 4059).

**Results/Findings:** Of eleven responses, two did not meet inclusion criteria and were disqualified (n=9). Participants were majorly aged 16-35 (75%), from rural SK, and equally identified as transmasculine/feminine. The highest percentage of first-ranked care modality preference was for initial diagnosis with an urban care specialist in-person, with in-person follow up from a family physician (25%); 75% of participants preferred care via family physicians as either first or second ranked preferences. Two respondents were omitted from rankings analysis (skipped question). Additional participant self-disclosure identified barriers to care: travel time/distance, medication expense, lack of physician knowledge, lack of timely access, and excessive wait lists.

**Discussion:** Study engagement was less than expected, however themes of care modality preference and significant barriers to gender-affirming care were identified.

**Conclusions:** Despite meagre data, our results indicate a potential need for involvement of family physicians in gender-affirming care.

**Recommendations:** We recommend that the UofS make further efforts to include gender affirming care in FM medical education.

**References:**

1. TransSask [Internet]. Saskatoon (SK): TransSask Support Services; c2023. Accessing affirming healthcare; [cited 2023 May 13];[about 4 screens]. Available from: <https://www.transsask.ca/accessing-affirming-healthcare/>.
2. Gender and Population Studies (GAPS) in Health [Internet]. Lethbridge (AB): Gender and Population Studies (GAPS) in Health; c2023. TRANS-forming rural primary care project: Exploring the inclusivity and safety of rural primary care spaces for trans-persons in southern Alberta; [cited 2023 May 13];[about 7 screens]. Available from: <http://www.gapsinhealth.ca/gender-health/trans-forming-primary-care-project/>.
3. Rainbow Health Ontario. Trans and Non-binary Children and Youth in Ontario: A Roadmap for Improving Services and Supports [Internet]. Toronto (ON): Sherbourne Health; 2019 [cited 2023 May 13]. 100 p. Available from: <https://www.rainbowhealthontario.ca/wp-content/uploads/2016/07/Trans-NB-ChildrenYouth-2019-RHO-final-2.pdf>.
4. Provincial Health Services Authority [Internet]. Vancouver (BC): Provincial Health Services Authority; c2023. Improving gender-affirming care across B.C.; [cited 2023 May 13];[about 3 screens]. Available from: <http://www.phsa.ca/transcarebc/>.
5. Inman E, Stelmak D, Kobernik EK, Andino J, Strousma D, Moravek MB, et al. Patient Preferences for Receiving Gender-Affirming Hormone Therapy. *Transgend Health*. 2022 Feb;7(1):85-91.
6. Sequeira GM, Kidd KM, Rankine J, Miller E, Ray KN, Fortenbery JD, et al. Gender-Diverse Youth's Experiences and Satisfaction with Telemedicine for Gender-Affirming Care During the COVID-19 Pandemic. *Transgend Health*. 2022 Apr;7(2):127-34.
7. Bretherton I, Thrower E, Zwickl S, Wong A, Chetcuti D, Grossman M, et al. The Health and Well-Being of Transgender Australians: A National Community Survey. *LGBT Health*. 2021 Jan;8(1):42-9.
8. Henriquez NR, Ahmad N. "The Message Is You Don't Exist": Exploring Lived Experiences of Rural Lesbian, Gay, Bisexual, Transgender, Queer/Questioning (LGBTQ) People Utilizing Health Care Services. *SAGE Open Nursing* [Internet]. 2021 Oct 6 [cited 2023 May 18];7:[10 p.]. Available from: <https://doi.org/10.1177/23779608211051174>.
9. Renner J, Blaszyk W, Tauber L, Dekker A, Briken P, Neider TO. Barriers to Accessing Health Care in Rural Regions by Transgender, Non-Binary, and Gender Diverse People: A Case-Based Scoping Review. *Front Endocrinol (Lausanne)* [Internet]. 2021 Nov 18 [cited 2023 May 18];12:[12 p.]. Available from: <https://doi.org/10.3389/fendo.2021.717821>.
10. Burgwal A, Motmans J. Trans and Gender Diverse People's Experiences and Evaluations with General and Trans-specific Healthcare Services: A Cross-sectional Survey. *Int J Impot Res*. 2020 Nov;33(7):679-86.
11. Logie CH, Lys CL, Dias L, Schott N, Zouboules MR, MacNeil N, et al. "Automatic Assumption of Your Gender, Sexuality and Sexual Practices is Also Discrimination": Exploring Sexual Healthcare Experiences and Recommendations among Sexually and Gender Diverse Persons in Arctic Canada. *Health Soc Care Community*. 2019 Sep;27(5):1204-13.

12. Patterson JG, Jabson Tree JM, Kamen C. Cultural Competency and Microaggressions in the Provision of Care to LGBT Patients in Rural and Appalachian Tennessee. *Patient Educ Couns*. 2019 Nov;102(11):2081-90.
13. Robards F, Kang M, Steinbeck K, Hawke C, Jan S, Sanci L. Health Care Equity and Access for Marginalised Young People: A Longitudinal Qualitative Study Exploring Health System Navigation in Australia. *Int J Equity Health* [Internet]. 2019 Mar 4 [cited 2023 May 18];18(1):[14 p.]. Available from: <https://doi.org/10.1186/s12939-019-0941-2>.
14. Aitken S. The Primary Health Care of Transgender Adults. *Sex Health*. 2017 Oct;14(5):477-83.
15. Snelgrove JW, Jasudavisius AM, Rowe BW, Head EM, Bauer GR. "Completely Out-at-sea" with "Two-gender Medicine": A Qualitative Analysis of Physician-side Barriers to Providing Healthcare for Transgender Patients. *BMC Health Serv Res* [Internet]. 2012 May 4 [cited 2023 May 18];12(1):[13 p.]. Available from: <https://doi.org/10.1186/1472-6963-12-110>.
16. Kelley L, Chou CL, Dibble SL, Robertson PA. A Critical Intervention in Lesbian, Gay, Bisexual, and Transgender Health: Knowledge and Attitude Outcomes among Second-year Medical Students. *Teach Learn Med*. 2008 Jul-Sep;20(3):248-53.
17. Shin-Kim J, Shapiro A, John D, Arno K, Pathak S, Strauss J. Transgender and Non-binary Health Care: A Virtual Objective Structured Clinical Examination. *Med Educ*. 2021 Nov;55(11):1314-5.
18. Ding JM, Ehrenfeld JM, Edmiston EK, Eckstrand K, Beach LB. A Model for Improving Health Care Quality for Transgender and Gender Nonconforming Patients. *Jt Comm J Qual Patient Saf*. 2020 Jan;46(1):37-43.
19. Selix NW, Cotler K, Behnke L. Clinical Care for the Aging LGBT Population. *J Nurse Pract*. 2020 May;16(5):349-54.
20. Willging C, Kano M, Green AE, Sturm R, Sklar M, Davies S, et al. Enhancing Primary Care Services for Diverse Sexual and Gender Minority Populations: A Developmental Study Protocol. *BMJ Open* [Internet]. 2020 Feb 25 [cited 2023 May 18];10(2):[12 p.]. Available from: <https://doi.org/10.1136/bmjopen-2019-032787>.
21. Bristowe K, Hodson M, Wee B, Almack K, Johnson K, Daveson BA, et al. Recommendations to Reduce Inequalities for LGBT People Facing Advanced Illness: ACCESSCare National Qualitative Interview Study. *Palliat Med*. 2018 Jan;32(1):23-35.
22. Oliphant J, Veale J, Macdonald J, Carroll R, Johnson R, Harte M, et al. Guidelines for Gender Affirming Healthcare for Gender Diverse and Transgender Children, Young People and Adults in Aotearoa, New Zealand. *N Z Med J*. 2018 Dec;131(1487):86-96.
23. Ehrenfeld J, Gridley S. Education Creates Welcoming Environment for Transgender Patients. *ED Manag*. 2016 Aug;28(8):90-3.
24. Kano M, Silva-Banuelos AR, Sturm R, Willging C. Stakeholders' Recommendations to Improve Patient-centered "LGBTQ" Primary Care in Rural and Multicultural Practices. *J Am Board Fam Med*. 2016 Jan-Feb;29(1):156-60.
25. Selix NW, Rowniak S. Provision of Patient-Centered Transgender Care. *J Midwifery Womens Health*. 2016 Nov;61(6):744-51.

26. Wylie K, Knudson G, Khan SI, Bonierbale M, Watanyusakul S, Baral S. Serving Transgender People: Clinical Care Considerations and Service Delivery Models in Transgender Health. *Lancet*. 2016 Jul;388(10042):401-11.
27. 2023 Anti-Trans Bills: Trans Legislation Tracker [Internet]. [place unknown]; Trans Legislation; c2023 [cited 2023 May 13]. Available from: <https://translegislation.com/>.

# Practice-Related Racism Faced by Physician Graduates of the Saskatchewan International Physician Practice Assessment Program

Rufaro Asefa, FMR II; Syeda Ifrah Bukhari, FMR II; Ginger Ruddy, MD, MPH, CCFP;  
Rhonda Bryce, MD, MSc; Brady Bouchard, MBBS, CCFP, CISAM;  
Carla Fehr, MA, PMP; Jon Witt, MD, CCFP(EM), MPH, FCFP

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

## ABSTRACT

**Background:** The Saskatchewan International Physician Practice Assessment (SIPPA) Program is a “practice ready assessment” that assesses internationally trained physicians for practice in Canada. However, international physicians often face racism and may end up leaving the province.

**Question(s):**

1. Are there incidents of racism faced by internationally trained doctors (individuals who are often racialized) in rural Saskatchewan?
2. Does racism contribute to reduced practice satisfaction and thus adversely affect physician retention within the province?

**Methods/Methodology:** With approval from the University of Saskatchewan's Behavioural REB (Beh ID 3657), SIPPA Administrative Staff emailed a survey invitation to all 189 SIPPA participants who graduated from the program within the previous five years. Data was collected via the University of Saskatchewan's SurveyMonkey platform as a one-time, cross-sectional survey, gathering demographics as well as closed and open-ended questions related to experiences of racism. Quantitative responses were analyzed using frequencies; these responses were also cross tabulated with the occurrence of a work-related experience of racism. Qualitative variables were analyzed using thematic analysis.

**Results/Findings:** Among 42 respondents (22% response rate), 41%, 37%, and 17% self-identified as West Asian/Middle Eastern, Black, and South/Southeast Asian, respectively. Twenty-eight (67%) identified at least one incident of racism related to work or community. No definitive associations between demographic characteristics and experiences of racism were recognized. Thematic analysis identified these common themes: racism in the Emergency Room; microaggressions/racism from nurses and allied health professionals; covert racism; comparison between International and Canadian training; and lack of support.

**Discussion:** As most participants were currently engaged in Return of Service and were undecided regarding future practice location, it was unclear as to how experiences related to racism impacted practice location decisions. Vulnerability to racism appears to extend beyond basic demographic characteristics.

**Conclusions:** Racism is commonly experienced by Internationally trained physicians in rural Saskatchewan with potential to impact practice decisions. Both staff and patients contribute to these negative experiences.



**Recommendations:** Further research in this area is recommended, including in-person interviews. It would also be beneficial if continued cross-cultural sensitivity, implicit bias, and relational workshops were held. These could be rolled out for both healthcare staff and patients.

**References:**

1. Home – saskdocs.ca [Internet]. Saskatoon (SK): Saskdocs; c2023. Saskatchewan International Physician Practice Assessment; [cited 2023 May 10];[about 6 screens]. Available from: <https://www.saskdocs.ca/work/familyphysicians/imgfamilyphysician/sippa/>.
2. Global News | Latest & Current News [Internet]. Toronto (ON): Corus Entertainment; c2023. 61 new doctors recruited to Saskatchewan; 2014 Feb 18 [cited 2023 May 10];[about 8 screens]. Available from: <https://globalnews.ca/news/1157055/61-new-doctors-recruited-to-saskatchewan/>.
3. Williams DR, Lawrence JA, Davis BA. Racism and Health: Evidence and Needed Research. *Annu Rev Public Health*. 2019 Apr;40(4):105-25.
4. Gunn BL. Ignored to Death: Systemic Racism in the Canadian Healthcare System [Internet]. Winnipeg (MB): University of Manitoba; 2016 [cited 2023 May 13]. 7 p. Available from: <https://www.ohchr.org/sites/default/files/Documents/Issues/IPeoples/EMRIP/Health/UniversityManitoba.pdf>.
5. Osei-Tutu K, Duchesne N, Barnabe C, Richardson L, Razack S, Thoma B, et al. Anti-racism in CanMEDS 2025. *Can Med Educ J*. 2023 Mar;14(1):33-40.
6. Dryden O, Nnorom O. Time to Dismantle Systemic Anti-Black Racism in Medicine in Canada. *CMAJ*. 2021 Jan;193(2):E55-7.
7. Ruzycki SM, Roach P, Holroyd-Leduc J, Barnabe C, Ahmed SB. Experiences and Perceptions of Racism and Sexism Among Alberta Physicians: Quantitative Results and Framework Analysis of a Cross-Sectional Survey. *J Gen Intern Med*. 2023 Jan;38(1):165-75.
8. Mpalirwa J, Lofters A, Nnorom O, Hanson MD. Patients, Pride, and Prejudice: Exploring Black Ontarian Physicians' Experiences of Racism and Discrimination. *Acad Med*. 2020 Nov;95(11 Suppl):S51-7.
9. Wenghofer EF, Timony PE, Pong RW. A Closer Look at Ontario's Northern and Southern Rural Physician Demographics. *Rural Remote Health* [Internet]. 2011 Mar 15 [cited 2023 May 18];11(2):[11 p.]. Available from: <https://www.rrh.org.au/journal/article/1591>.
10. Mowat S, Reslerova M, Sisler J. Retention in a 10-year Cohort of Internationally Trained Family Physicians Licensed in Manitoba. *Can J Rural Med*. 2017 Winter;22(1):13-9.
11. Curran V, Hollett A, Hann S, Bradbury C. A Qualitative Study of the International Medical Graduate and the Orientation Process. *Can J Rural Med*. 2008 Autumn;13(4):163-9.

# Attitudes and Barriers to Distributing Take-Home Naloxone Kits Among ER Staff at Cypress Regional Hospital

Rudy Andrews, FMR II; Emerveer Khosa, FMR II;  
Kelsy Leavins, MD, CCFP

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

## ABSTRACT

**Background:** Opioid overdose is a concerning cause of mortality across Canada, with numbers consistently increasing over the last several years. Naloxone is a potentially life-saving antidote to opioid overdose and is available for free as a take-home naloxone (THN) kit in Emergency departments nationwide.

**Question(s):** What are the barriers to take-home naloxone kit distribution by the staff?

**Methods/Methodology:** The design was a cross-sectional anonymous survey that was distributed to the ER staff at the Cypress Regional Hospital (CRH). The survey was modified based on the literature. Surveys were placed in a communal area in the ER and the survey was advertised by the Residents whenever they are physically present in the ER, and through a poster on the ER pin-up board. Items using a Likert scale were described as medians with interquartile ranges, whereas categorical variables were described as frequency and percentages. Intergroup comparisons were performed using a Mann-Whitney U (items that used a Likert scale), Fisher Exact or Pearson Chi-squared test, as appropriate. The significant level was set to an alpha of 0.05. All analysis were performed using IBM SPSS v. 28.

Certificate of Approval was received from the University of Saskatchewan's Behavioural REB and Operational Approval was received from the Saskatchewan Health Authority.

**Results and Discussion:** As the surveys were anonymous and the exact number of ER Staff is unknown, the response rate was unable to be determined. However, 25 participants completed the survey, 10 physicians and 15 non-physician staff. Results indicated that the majority of staff were in favour of distributing THN kits.

The greatest barriers identified to increased distribution were lack of time in the clinic encounter and a lack of support staff for patient education. Of note, the only group that did not know where patients could obtain a THN kit were resident physicians.

**Conclusions:** Most staff were in favour of distributing THN kits.

**Recommendations:** Investment in ER Support Staff to educate patients, along with additional resident physician education may lead to increased knowledge of where THN kits can be obtained and subsequent THN kit distribution.

## References:

1. Health Infobase – Health data in Canada [Internet]. Ottawa (ON): Government of Canada; c2023. Opioid- and stimulant-related harms in Canada; 2023 Mar [cited 2023 May 18];[about 9 screens]. Available from: <https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants/>.
2. BC Gov News [Internet]. Victoria (BC): BC Government; c2023. Provincial health officer declares public health emergency; 2016 Apr 14 [cited 2023 May 18];[about 7 screens]. Available from: <https://news.gov.bc.ca/releases/2016HLTH0026-000568>.
3. Saskatchewan Coroners Service. Confirmed and Suspected Drug Toxicity Deaths (2016-2023) [Internet]. Regina (SK): Government of Saskatchewan; 2023. 16 p. Available from: <https://publications.saskatchewan.ca/#/products/90505>.
4. Government of Saskatchewan [Internet]. Regina (SK): Government of Saskatchewan; c2023. Take home naloxone now available at 225 locations in 76 communities across Saskatchewan; 2022 Mar 18 [cited 2023 May 18];[about 4 screens]. Available from: <https://www.saskatchewan.ca/government/news-and-media/2022/march/18/take-home-naloxone-now-available-at-225-locations-in-76-communities-across-saskatchewan>.
5. Bell J, Strang J. Medication Treatment of Opioid Use Disorder. *Biol Psychiatry*. 2020 Jan;87(1):82–8.
6. Lacroix L, Thurgur L, Orkin AM, Perry JJ, Stiell IG. Emergency Physicians’ Attitudes and Perceived Barriers to the Implementation of Take-home Naloxone Programs in Canadian Emergency Departments. *CJEM*. 2017 Jan;20(1):46–52.

## Perceptions and attitudes of healthcare professionals towards antipsychotic use among long term care residents with dementia in the Battlefords

Tawanda Hatendi, FMR II; Grishma Shrestha, FMR II; Andrhea Nocon, FMR II;  
Erin Hamilton, MD, CCFP; Yasin Mahmood, MD; Rhonda Bryce, MD, MSc

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

### ABSTRACT

**Background:** Antipsychotics are frequently prescribed to manage psychotic symptoms but can be inappropriately used for managing responsive behaviours in dementia<sup>1</sup>. In Canadian long-term care (LTC) facilities, 3 in 13 residents are prescribed antipsychotics without diagnosis of psychosis.<sup>1</sup> These medications increase healthcare costs, have limited benefit, carry significant adverse outcomes, and are rarely indicated.<sup>2,3,4</sup>

**Question(s):** The study aimed to explore healthcare staff attitudes and perceptions on antipsychotic usage in dementia patients living in LTC facilities in the Battlefords, using qualitative methods. The results could improve practice approaches in managing responsive behaviours in LTC residents.

**Methods/Methodology:** A survey was conducted among healthcare staff in three LTC facilities in the Battlefords to gather their perceptions and attitudes on antipsychotic use. The survey was distributed to participants via QR code/web link. The study was approved by the University of Saskatchewan Behavioural Research Ethics Board (BEH# 3875).

**Results/Findings:** The majority of participants (94%) viewed regular antipsychotic use as “moderately” to “extremely effective”. However, 71% agreed that antipsychotics should not be used as a first line for behavioral problems. Over 87% of physicians perceived antipsychotics to be “hazardous” when used regularly whereas only 41% allied staff shared this view. Awareness of assessment tools for responsive behaviours were varied (9% unaware, 34% slight awareness). However, 69% responded that these tools were being used at their facility to monitor challenging behaviour. Of the responders, 11% found training to handle responsive behaviours in dementia patients unsatisfactory.

**Discussion:** Healthcare workers view antipsychotics to be effective for managing extreme responsive behaviors. Although physicians showed understanding of the hazards of these drugs, care staff were less wary. This highlights challenges for prescribers to balance staff expectations, resources, and skills when managing responsive behaviours. Although assessment tools are available in surveyed facilities, 43% of respondents may lack adequate knowledge on their appropriate usage.

**Conclusions:** The surveyed healthcare workers recognize the value and challenges of using antipsychotics to manage responsive behaviours. The assessment, management, and follow-up processes for responsive behaviors in LTC residents with dementia in the Battlefords could be improved.

**Recommendations:** Further staff training, modified infrastructure, adoption of standardized and simplified prescription approaches, and inclusion of additional human resources could be considered.

#### References:

1. Canadian Institute of Health Information | CIHI [Internet]. Ottawa (ON): CIHI; c1996-2023. Potentially inappropriate use of antipsychotics in long-term care; [cited 2023 May 6];[about 4 screens]. Available from: [https://yourhealthsystem.cihi.ca/hsp/inbrief?lang=en#!/indicators/008/potentially-inappropriate-use-of-antipsychotics-in-long-term-care;/mapC1;mapLevel2;provinceC7082;trend\(C1,C7082\);/](https://yourhealthsystem.cihi.ca/hsp/inbrief?lang=en#!/indicators/008/potentially-inappropriate-use-of-antipsychotics-in-long-term-care;/mapC1;mapLevel2;provinceC7082;trend(C1,C7082);/).
2. Choosing Wisely Canada [Internet]. Toronto (ON): Choosing Wisely Canada; c2023. Geriatrics: Eight tests and treatments to question; 2022 Nov [cited 2023 May 6];[about 4 screens]. Available from: <https://choosingwiselycanada.org/recommendation/geriatrics>.
3. Canadian Deprescribing Network. Annual report [Internet]. Montreal (QC): Canadian Deprescribing Network; 2017 [cited 2023 May 15]. 36 p. Available from: [https://deprescribing.org/wp-content/uploads/2015/11/CaDeN\\_Annual-Report\\_23Jan2017\\_EN\\_WEB.pdf](https://deprescribing.org/wp-content/uploads/2015/11/CaDeN_Annual-Report_23Jan2017_EN_WEB.pdf).
4. Schneider LS, Dagerman K, Insel PS. Efficacy and Adverse Effects of Atypical Antipsychotics for Dementia: Meta-analysis of Randomized, Placebo-controlled Trials. *Am J Geriatr Psychiatry*. 2006 Mar;14(3):191-210.
5. Rios S, Perlman CM, Costa A, Heckman G, Hirdes JP, Mitchell L. Antipsychotics and Dementia in Canada: A Retrospective Cross-sectional Study of Four Health Sectors. *BMC Geriatr* [Internet]. 2017 Oct 23 [cited 2023 May 18];17(1):[8 p.]. Available from: <https://doi.org/10.1186/s12877-017-0636-8>.
6. Kirkham J, Sherman C, Velkers C, Maxwell C, Gill S, Rochon P, et al. Antipsychotic Use in Dementia: Is There a Problem and Are There Solutions? *Can J Psychiatry*. 2016 Mar;62(3):170-81.
7. Canadian Institute for Health Information. How Canada Compares: Results from the Commonwealth Fund's 2019 International Health Policy Survey of Primary Care Physicians — Accessible Report [Internet]. Ottawa (ON): Canadian Institute for Health Information; 2020 Jan [cited 2023 May 18]. 78 p. Available from: <https://www.cihi.ca/sites/default/files/document/cmwf-2019-accessible-report-en-web.pdf>.
8. Canadian Institute of Health Information | CIHI [Internet]. Ottawa (ON): Canadian Institute of Health Information; c1996-2023. Dementia in long-term care; [cited 2023 May 18];[about 10 screens]. Available form: <https://www.cihi.ca/en/dementia-in-canada/dementia-care-across-the-health-system/dementia-in-long-term-care>.
9. Seniors Health Strategic Clinical Network. Steps to Culture Change: Appropriate Use of Antipsychotics in Dementia Strategies and Resources [Internet]. Edmonton (AB): Alberta Health Services; [cited 2023 May 13]. 14 p. Available from: <https://social.albertahealthservices.ca/assets/about/scn/ahs-scn-srs-aua-change-notes.pdf>.
10. Ton J, Ramji J, Allan GM. Antipsychotics for Agitation in Dementia. *Can Fam Physician*. 2018 May;64(5):369.

11. Kerns JW, Winter JD, Winter KM, Boyd T, Etz RS. Primary Care Physician Perspectives about Antipsychotics and Other Medications for Symptoms of Dementia. *J Am Board Fam Med*. 2018 Jan-Feb;31(1):9-21.
12. Cornegé-Blokland E, Cohen-Mansfield J, Chen Y, Kamble P, Jalbert JJ, Schneider LS, et al. Reasons to Prescribe Antipsychotics for the Behavioral Symptoms of Dementia: A Survey in Dutch Nursing Homes among Physicians, Nurses, and Family Caregivers. *J Am Med Dir Assoc*. 2012 Jan;13(1):80.e1-6.
13. Whitby P. Improve Environment to Reduce Pressure to Prescribe Antipsychotic Drugs in Nursing Homes. *BMJ* [Internet]. 2012 Apr 2 [cited 2023 May 18];344(4):[2 p.]. Available from: <https://doi.org/10.1136/bmj.e2450>.
14. Janus SI, van Manen JG, IJzerman MJ, Bisseling M, Drossaert CH, Zuidema SU. Determinants of the Nurses' and Nursing Assistants' Request for Antipsychotics for People with Dementia. *Int Psychogeriatric*. 2017 Mar;29(3):475-84.
15. Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, et al. Deprescribing Antipsychotics for Behavioural and Psychological Symptoms of Dementia and Insomnia. *Can Fam Physician*. 2018 Jan;64(1):17-27.
16. Seniors Health Strategic Clinical Network. Appropriate Use of Antipsychotics: Prescriber and Pharmacist Frequently Asked Questions [Internet]. Edmonton (AB): Alberta Health Services; 2015 Jul [cited 2023 May 18]. 9 p. Available from: <https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-srs-aa-a-prescriber-pharm-faq.pdf>.
17. RxFiles. Dementia: Bringing Evidence and Experience to Drug Therapy Decision Points [Internet]. Saskatoon (SK): University of Saskatchewan; 2014 Oct [cited 2023 May 18]. 26 p. Available from: <https://www.rxfiles.ca/rxfiles/uploads/documents/Dementia-Newsletter-Overview-Booklet-WEB.pdf>.

# NODRUGS: New Onset Diagnosis Rivalling URTI Guidelines Study

Jake Allison, FMR II; Cody Weiler, FMR II; Rhonda Bryce, MD, MSc;  
Vivian R Ramsden, RN, PhD; Breanna Davis, MD, CCFP

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

## ABSTRACT

**Background:** Pediatric antibiotic over-prescription contributes to antibiotic resistance and adverse side effects. This study aims to analyze the prescription patterns of family physicians at Prince Albert's Associate Medical Clinic treating low-risk pediatric patients diagnosed with upper respiratory tract infections (URTIs), pharyngitis, or tonsillitis.

**Question(s):** 1) Are physicians at Prince Albert's Associate Medical Clinic prescribing antibiotics for URTIs that do not meet modified CENTOR criteria? 2) What patient characteristics predispose patients to inappropriate prescribing at this clinic? 3) What antibiotics are being prescribed for these patients?

**Methods/Methodology:** We retrospectively reviewed all consecutive pediatric presentations with a diagnosis of URTI, pharyngitis, or tonsillitis to a minimum a priori sample size of 116 patients. Data on demographics, primary diagnosis, number of visits, CENTOR score criteria, throat swab results, number of visits, and antibiotic prescriptions were collected and analyzed using chi-square and Mann-Whitney U tests. Patients with CENTOR scores less than 3 were considered low risk.

**Results/Findings:** CENTOR scores were calculated for 113 of 120 presentations reviewed. Among these, 85 were low risk, of whom 57 (67.1%) received antibiotics. In this group, antibiotics were prescribed for 72.2% of patients diagnosed with pharyngitis, 100% of those with tonsillitis, and 56.8% of those with URTI ( $p=0.02$ ). Low-risk patients who received antibiotics had a higher median CENTOR score than those who did not (2 vs. 1,  $p=0.03$ ). Older age and absence of cough, as well as a preliminary diagnosis of tonsillitis or pharyngitis, predisposed patients to inappropriate prescribing. The most commonly antibiotics were amoxicillin and azithromycin.

**Discussion:** Although some degree of clinical discernment is applied, a low threshold for prescribing antibiotics was observed. Over half of the cases labeled as URTIs and low risk by CENTOR criteria received antibiotics, suggesting over-prescription.

**Conclusions:** Physicians at Prince Albert's Associate Medical Clinic prescribe antibiotics for URTIs that do not meet modified CENTOR criteria, with patient characteristics such as older age, absence of cough, and specific preliminary diagnoses contributing.

**Recommendations:** Further evaluation is needed to investigate the underlying reasons for antibiotic over-prescription in this context. Education and intervention programs targeting improved clinical discernment and guideline adherence are potential next steps.



## References:

1. Poehling KA, Edwards KM, Weinberg GA, Szilagyi P, Staat MA, Iwane MK, et al. The Underrecognized Burden of Influenza in Young Children. *New Engl J Med*. 2006 Jul;355(1):31–40.
2. Heikkinen T, Järvinen A. The common cold. *Lancet*. 2003 Jan;361(9351):51–9.
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. Centor RM, Witherspoon JM, Dalton HP, Brody CE, Link K. The Diagnosis of Strep Throat in Adults in the Emergency Room. *Med Decis Making*. 1981 Mar;1(3):239–46.
5. Sykes EA, Wu V, Beyea MM, Simpson MTW, Beyea JA. Pharyngitis: Approach to Diagnosis and Treatment. *Can Fam Physician*. 2020 Apr;66(4):251-7.
6. Schroeck JL, Ruh CA, Sellick JA, Ott MC, Mattappallil A, Mergenhagen KA. Factors Associated with Antibiotic Misuse in Outpatient Treatment for Upper Respiratory Tract Infections. *Antimicrob Agents Chemother*. 2015 Jul;59(7):3848–52.
7. Iwata S, Akita H. Adverse Effects of Antibiotics. *Acta Pediatr Jpn*. 1997 Feb;39(1):143–54.
8. Lee GC, Reveles KR, Attridge RT, Lawson KA, Mansi IA, Lewis JS, et al. Outpatient Antibiotic Prescribing in the United States: 2000 to 2010. *BMC Med* [Internet]. 2014 Jun 11 [cited 2023 May 5];12(1):[8 p.]. Available from: <https://doi.org/10.1186/1741-7015-12-96>.
9. Statistics Canada: Canada’s national statistical agency [Internet]. Ottawa (ON): Government of Canada; c2023. Profile table, Census Profile, 2021 | Census of Population - Prince Albert, City (CY) [Census subdivision], Saskatchewan; [cited 2023 May 5];[about 75 screens]. Available from: <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0&DGUIDlist=2021A00054715066&SearchText=Prince%20Albert>.
10. Malley M, Driver K, Costelloe M, Monaghan I, Jefferson L, Poole L, et al. To Prescribe or Not to Prescribe for Paediatric Sore Throat: A Retrospective Cohort Study Comparing Clinician-led Antibiotic Prescriptions to FeverPAIN and Centor Scoring in a Tertiary Paediatric Emergency Department and a National Review of Practice. *Emerg Med J*. 2021 Aug;38(8):613–6.
11. Choby BA. Diagnosis and Treatment of Streptococcal Pharyngitis. *Am Fam Physician*. 2009 Mar;79(5):383-90.
12. Sauve L, Forrester MA, Top KA; Canadian Paediatric Society. Group A Streptococcal (GAS) Pharyngitis: A Practical Guide to Diagnosis and Treatment. *Paediatr Child Health*. 2021 Jul;26(5):319-20.
13. Bisno AL. Acute Pharyngitis. *N Engl J Med*. 2001 Jan;344(3):205–11.
14. Dooling KL, Shapiro DJ, Van Beneden C, Hersh AL, Hicks LA. Overprescribing and Inappropriate Antibiotic Selection for Children with Pharyngitis in the United States, 1997-2010. *JAMA Pediatr*. 2014 Nov;168(11):1073–4.
15. Li J, Song X, Yang T, Chen Y, Gong Y, Yin X, et al. A Systematic Review of Antibiotic Prescription Associated with Upper Respiratory Tract Infections in China. *Medicine*

- (Baltimore) [Internet]. 2016 May 1 [cited 2023 May 12];95(19):[7 p.]. Available from: <https://doi.org/10.1097/md.0000000000003587>.
16. Thompson W, McCormack S. Interventions to Influence the Use of Antibiotics for Acute Upper Respiratory Tract Infections [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2021 Feb 18 [cited 2023 May 16]. 65 p. Available from: <https://canjhealthtechnol.ca/index.php/cjht/article/view/rc1332/rc1332>.
  17. National Center for Biotechnological Information [Internet]. Bethesda (MD): National Library of Medicine; c2023. Penicillin Allergy – StatPearls; 2022 Jun 23 [cited 2023 May 5];[about 7 screens]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK459320/>.

# The State of Traditional Medicine and Healing from the Perspective of Cultural Support

Samuel Simonson, FMR II; Lillian Sanderson, Knowledge Keeper;  
Jeffrey Irvine, MD, MPH, CCFP; Rhonda Bryce, MD, MSc; Vivian R Ramsden, RN, PhD

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

## ABSTRACT

**Background:** The Cultural Unit is a part of the Lac La Ronge Indian Band Health Services that focuses on traditional medicine and knowledge of the Woodland Cree peoples. It was built from a strong desire for self-determination and to give Woodland Cree peoples the option of engaging with their own cultural approaches to healing. This is an evolving process as the community is learning to decolonize their own approach to health and healing.

**Question(s):** In what ways can Traditional Medicine and Western Medicine begin effectively collaborating to improve access and choice of services?

**Methods/Methodology:** Conversational interviewing was undertaken by the researcher and knowledge keeper. The inductive, thematic analysis of both the conversation and the qualitative reflexivity was undertaken. This project was approved by the University of Saskatchewan's Behavioural REB (Beh ID 3864).

**Results/Findings:** Themes of sovereignty, self-healing, and reclamation of traditional knowledge and medicine were central to discussions. Relationships of mutual respect and understanding are essential for collaboration. Stigma around traditional knowledge, cultural relativism, capacity-building, and process of re-learning traditional medicine are seen as potential barriers.

**Discussion:** Colonized thinking can impair genuine collaboration. Time and relationship building are the underpinnings of a sustainable cultural program that is about building capacity and reclaiming knowledge. Allyship, and dissolving an "us versus them mentality" will be instrumental to moving forward.

**Conclusions:** Genuine respect for traditional ways of knowing, the gifted nature of healers, and values found by those who access cultural services is essential to decolonizing relationships. Traditional knowledge should be destigmatized and recognized for its value to the Woodland Cree peoples.

**Recommendations:** Development of a EMR Service Referral to the Cultural Programming Unit, establish ongoing in-service education to build awareness and respect for cultural services, and establish a point person at the La Ronge Medical Clinic to ensure relational equity and sustainability.

**References:**

1. Ermine W. The Ethical Space of Engagement. *Indig Law J.* 2007 Jan;6(1):193-203.

# Quality Assurance of Emergency Department Ultrasound Documentation Following Visual Intervention

Anson Dinh, FMR II; Katherine Klassen, FMR II;  
Emmett Harrison, MD, CCFP; Adam Clay, MSc; Michael Kapusta, MD, CCFP

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

## ABSTRACT

**Background:** Correctly documented Emergency Department Ultrasound Scans (EDUS) is essential for patient safety and physician quality control. In 2020, it was found that 38% of EDUS were incorrectly documented in the Emergency Department of Cypress Regional Health (CRH). In order to justify having EDUS screen capture within the CRH Emergency Department, rates of correct EDUS documentation need to increase.

**Question(s):** Does a visual intervention that highlights the requirements for correct EDUS documentation, improve EDUS documentation at CRH according to the Standard for Emergency Ultrasound in Saskatchewan 2019. Integration of EDUS results into the care of the patient was a secondary measure in this study.

**Methods/Methodology:** A retrospective chart review of CRH Emergency Department was conducted from August 2022 to February 2023. Charts were reviewed based on ICD-10 codes that had a high likelihood of containing EDUS. Documentation of EDUS was compared to Saskatchewan's Emergency Department's Standards for Emergency Ultrasound in Saskatchewan – 2019 which includes type of scan, determinant vs. indeterminate scan, and clinical information about the scan. The University of Saskatchewan Biomedical Research Ethics Board approved this project (ID 3370). Operational Approval from the Saskatchewan Health Authority was received.

**Results/Findings:** 823 charts were reviewed, 13.2% (n=109) contained EDUS documentation. Seventy-nine percent (n=86) of charts using the EDUS button within the electronic medical record. Fifty-one percent (n=55) of charts had correctly documented EDUS. Ninety-four percent (n=103) of these charts including clinical information about the EDUS. Twenty-eight (n=23) of EDUS documented integration of scan results into the patient's care. Fifty-four percent (n=59) of EDUS indicated if scans were determinant or indeterminate.

**Discussion:** Visual intervention is not enough to improve correct EDUS documentation rates in the CRH Emergency Department. Consideration should be made as to whether having a 'determinant vs. indeterminate' button within the electronic medical record would increase the rates of correct EDUS documentation.

**Conclusions:** Compared to Harrison et al. 2020, there was an increase in EDUS documentation rates, a decrease in the percentage of correctly documented EDUS, and an increase in clinical

correlation with ‘determinant vs. indeterminate’ scan being the criteria that contributed most to incorrect EDUS documentation.

### References:

1. Nixon G, Blattner K, Koroheke-Rogers M, Muirhead J, Finnie WL, Lawrenson R, et al. Point-of-care Ultrasound in Rural New Zealand: Safety, Quality and Impact on Patient Management. *Aust J Rural Health*. 2018 Oct;26(5):342-9.
2. Saul T, Siadecki SD, Rose G, Berkowitz R. A Survey Evaluation of Barriers to Provider Compliance with Point-of-care Ultrasound Documentation. *Ann Emerg Med* [Internet]. 2016 Oct 16 [cited 2023 May 10];668(4S):[1 p.]. Available from: <https://doi.org/10.1016/j.annemergmed.2016.08.386>.
3. Shwe S, Witchev L, Lahham S, Kunststadt E, Shniter I, Fox JC. Retrospective Analysis of eFAST Ultrasounds Performed on Trauma Activations at an Academic Level-1 Trauma Center. *World J Emerg Med*. 2020 Jan;11(1):12–7.
4. Micks T, Sue K, Rogers P. Barriers to Point-of-care Ultrasound Use in Rural Emergency Departments. *CJEM*. 2016 Nov;18(6):475-9.
5. Andersen CA, Holden S, Vela J, Rathleff MS, Jensen MB. Point-of-Care Ultrasound in General Practice: A Systematic Review. *Ann Fam Med*. 2019 Jan;17(1):61-9.
6. Won M, Woo M, Cheung W, Pageau P, Olszynski P, Lewis D. Minimum Archiving Requirements for Emergency Medicine Point-of-care Ultrasound: A Modified Delphi-derived National Consensus. *CJEM*. 2020 May;22(S1):S65.
7. Byrne C, McLeod SL, Thompson D, Arntifield R. Point-of-care Ultrasound Usage Patterns Following Implementation of an Archiving and Quality Assurance Process in an Academic Tertiary Care Emergency Department. *CJEM*. 2013 May;15(Suppl 1):S33.
8. Aspler A, Wu A, Chiu S, Mohindra R, Hannam P. Towards Quality Assurance: Implementation of a POCUS Image Archiving System in a High-volume Community Emergency Department. *CJEM*. 2022 Mar;24(2):219-23.
9. Hassler J, Simmonds J, Trivedi S, Olszynski P. Quality in Emergency Ultrasound: Continuous Improvement, Continuous Growth. Poster presented at: University of Saskatchewan 2019 Emergency Medicine Research Day; 2019 May 22; Saskatoon, SK.
10. Harrison E, Clay A, Kapusta M. Quality Assurance of Emergency Department Ultrasound Documentation in a Regional Centre. Paper presented at: University of Saskatchewan 2022 Emergency Medicine Research Day; 2022 May 25; Saskatoon, SK.
11. Allie B, Davies A, Delpont C, Kapur P, Lynds D, Turnquist A, et al. Standards for Emergency Ultrasound in Saskatchewan [Internet]. Saskatoon (SK): University of Saskatchewan; Saskatchewan Health Authority; 2019 Sep 1 [cited 2023 May 10]. 25 p. Available from: <https://skemcollective.ca/wp-content/uploads/2023/01/SK-ED-Ultrasound-Standards.pdf>.

# Study of Limits to Implementation of Practice Guidelines for Aged Population Presenting to the Emergency Department (SLIP-GAPPED)

Louisa Viban, FMR II; Amanda Hondl, FMR II;  
Volker Rininsland, MD, CCFP; Adam Clay, MSc

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

## ABSTRACT

**Background:** Falls are a common cause for presentation to the Emergency Department, and a leading cause of death/injury in elderly populations. Despite the high prevalence and associated morbidity/mortality of falls, fall assessment and management guidelines may be underutilized in the Emergency Department setting.

**Question(s):** Does the Moose Jaw Emergency Department consistently utilize Fall guideline-concordant care to assess and manage elderly patients presenting with the complaint of fall?

**Methods/Methodology:** This study was a retrospective cross-sectional chart review of patients 65 and older presenting to the Emergency Department of the Dr. F.H. Wigmore Hospital for a fall between January – February 2021. Transferred patients and those who presented more than 24 hours post-fall were excluded. The data collection tool was based on the Geriatric Emergency Department Guidelines, and the American/British Geriatric Societies Guidelines. This project received an Exemption (Bio: 3705) from the University of Saskatchewan's Biomedical REB and Operational Approval from the Saskatchewan Health Authority.

**Results/Findings:** Of the 88 patients studied, the majority were female (n=51, 58%). The median age was 79 years (IQR 71 – 87). The range of recorded elements concordant with fall guidelines was 5.6%-92%. Only five elements were reported in more than 50% of cases, with cardiovascular status examination reported most frequently (n=81, 92.0%), and time spent on the ground reported the least (n=5, 5.6%). Xray was the most common investigation ordered (n=66, 75%). Most patients were referred for specialist consultation (n=45, 51.5%), and 50.6% (n=44) of patients were discharged to their place of preadmission.

**Discussion:** Given the extensivity of recommended fall guidelines, our findings of care discordant with fall guidelines was anticipated and have been echoed in previous studies. These results highlight the need for further investigation into improving implementation of fall guideline-concordant care in the Emergency Department setting. Study limitations included investigations/history/physical exams that may have been conducted but not recorded.

**Conclusions:** Documentation of evaluation/management of elderly patients presenting with a fall was discordant with fall guidelines within the Moose Jaw Emergency Department.



## References:

1. Public Health Agency of Canada. The Safe Living Guide - A Guide to Home Safety for Seniors [Internet]. Ottawa (ON): Government of Canada; 2015 [cited 2023 May 18]. 38 p. Available from: <https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/seniors-aines/publications/public/injury-blessure/safelive-securite/pdfs/safelive-securite-eng.pdf>.
2. Public Health Agency of Canada. Seniors' Falls in Canada: Second Report [Internet]. Ottawa (ON): Government of Canada; 2014 [cited 2023 May 18]. 62 p. Available from: [https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/seniors-aines/publications/public/injury-blessure/seniors\\_falls-chutes\\_aines/assets/pdf/seniors\\_falls-chutes\\_aines-eng.pdf](https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/seniors-aines/publications/public/injury-blessure/seniors_falls-chutes_aines/assets/pdf/seniors_falls-chutes_aines-eng.pdf).
3. Haagsma JA, Olij BF, Majdan M, Van Beeck EF, Vos T, Castle CD, et al. Falls in Older Aged Adults in 22 European Countries: Incidence, Mortality and Burden of Disease from 1990 to 2017. *Inj Prev*. 2020 Oct;26(Suppl 2):i67-74.
4. Goldberg EM, McCreedy EM, Gettel CJ, Merchant RC. Slipping Through the Cracks: A Cross-sectional Study Examining Older Adult Emergency Department Patient Fall History, Post-fall Treatment and Prevention. *R I Med J* (2013). 2017 Dec;100(12):18-23.
5. Salter AE, Khan KM, Donaldson MG, Davis JC, Buchanan J, Abu-Laban RB, et al. Community-dwelling Seniors Who Present to the Emergency Department with a Fall Do Not Receive Guideline Care and Their Fall Risk Profile Worsens Significantly: A 6-month Prospective Study. *Osteoporos Int*. 2006 May;17(5):672-83.
6. O'Keeffe A, O'Grady S, Cronin F, Dolan C, O'Hea A, O'Shea KL, et al. Evaluation of an Emergency Department Falls Pathway for Older People: A Patient Chart Review. *Int Emerg Nurs* [Internet]. 2020 Jul 1 [cited 2023 May 15];51:[8 p.]. Available from: <https://doi.org/10.1016/j.ienj.2020.100869>.
7. American Geriatrics Society; British Geriatrics Society; American Academy of Orthopaedic Surgeons Panel on Fall Prevention. Guideline for the Prevention of Falls in Older Persons. *J Am Geriatr Soc*. 2001 May;49(5):664-72.
8. Chen Y, Zhu LL, Zhou Q. Effects of Drug Pharmacokinetic/Pharmacodynamic Properties, Characteristics of Medication Use, and Relevant Pharmacological Interventions on Fall Risk in Elderly Patients. *Ther Clin Risk Manag*. 2014 Jun;10(6):437-48.
9. Goldberg EM, Resnik L, Marks SJ, Merchant RC. GAPcare: The Geriatric Acute and Post-acute Fall Prevention Intervention—A Pilot Investigation of an Emergency Department-based Fall Prevention Program for Community-dwelling Older Adults. *Pilot Feasibility Stud* [Internet]. 2019 Aug 27 [cited 2023 May 15];5:[8 p.]. Available from: <https://doi.org/10.1186/s40814-019-0491-9>.
10. BCGuidelines.ca. Fall Prevention: Risk Assessment and Management for Community-dwelling Older Adults [Internet]. Victoria (BC): BC Government; 2021 Jun 30 [cited 2023 May 18]. 27 p. Available from: [https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/fall\\_prevention\\_guideline\\_final.pdf](https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/fall_prevention_guideline_final.pdf).
11. Tirrell G, Sri-on J, Lipsitz LA, Camargo CA, Kabrhel C, Liu SW. Evaluation of Older Adult Patients with Falls in the Emergency Department: Discordance with National Guidelines. *Acad Emerg Med*. 2015 Apr;22(4):461-7.

12. Kim SH, Higuchi M, Ishigami Y, Makishi G, Tada M, Hibino S, et al. Five Key Papers About Emergency Department Fall Evaluation: A Curated Collection for Emergency Physicians. *Cureus* [Internet]. 2021 Sep 4 [cited 2023 May 15];13(9):[8 p.]. Available from: <https://doi.org/10.7759/cureus.17717>.
13. Saskatchewan Health. Fall Injuries Among Saskatchewan Seniors, 1992/93-1997/98 [Internet]. Regina (SK): Government of Saskatchewan; 2002. 42 p. Available from: <https://pubsaskdev.blob.core.windows.net/pubsask-prod/104977/104977-Fall-Injuries-among-Saskatchewan-Seniors-1998.pdf>.
14. Saskatoon Health Region [Internet]. Saskatoon (SK): Saskatchewan Health Authority; c2023. Falls prevention; 2020 Oct 5 [cited 2023 May 6];[about 3 screens]. Available from: [https://www.saskatoonhealthregion.ca/locations\\_services/Services/Falls-Prevention](https://www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention).
15. American Geriatric Society; British Geriatric Society. Prevention of Falls in Older Persons: AGS/BGS Clinical Practice Guideline [Internet]. New York (NY): American Geriatric Society; 2010 [cited 2023 May 15]. 61 p. Available from: <https://www.archcare.org/sites/default/files/pdf/2010-prevention-of-falls-in-older-persons-ags-and-bgs-clinical-practice-guideline.pdf>.
16. American College of Emergency Physicians; American Geriatrics Society; Emergency Nurses Association; Society for Academic Emergency Medicine. Geriatric Emergency Department Guidelines. *Ann Emerg Med*. 2014 May;63(5):e7-25.
17. Carpenter CR, Cameron A, Ganz DA, Liu S. Older Adult Falls in Emergency Medicine—A Sentinel Event. *Clin Geriatr Med*. 2018 Aug;34(3):355-67.
18. Carpenter CR, Cameron A, Ganz DA, Liu S. Older Adult Falls in Emergency Medicine: 2019 Update. *Clin Geriatr Med*. 2019 May;35(2):205-19.
19. Shankar KN, Liu SW, Ganz DA. Trends and Characteristics of Emergency Department Visits for Fall-related Injuries in Older Adults, 2003-2010. *West J Emerg Med*. 2017 Aug;18(5):785-93.

# Evaluating the Implementation of a Hospitalist Model of Family Practice Inpatient Care in a Regional Center

Dylan Coupal, FMR II; Justin Gregory FMR II; Robert Haver, MD, CCFP; Adam Clay, MSc

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

## ABSTRACT

**Background:** Moose Jaw recently implemented a hospitalist-based family physician inpatient care model at the beginning of the CoVID-19 pandemic. It is a multidisciplinary, patient-centered model of in-patient family physician care.

**Question(s):** Did the change to a hospitalist-based in-patient model of general practitioner care in Moose Jaw produce shorter lengths of stay? decrease re-admission rates? decrease mortality?

**Methods/Methodology:** The study design was a retrospective review of outcome data comparing outcomes both pre and post change to a hospitalist-based in-patient model in Moose Jaw. The pre-hospitalist group included patients discharged from the F.H. Wigmore Regional Hospital between December 2019 and February 2020. The post-hospitalist group were those discharged between November 2022 and January 2023. This project was approved by the University of Saskatchewan's BioMedical REB (Bio ID 3634) and Operational Approval was received from the SHA (OA-UofS-3634).

**Results/Findings:** One hundred and sixty-four hospitalizations were analyzed representing 157 patients. Of this, the pre-hospitalist accounted for 94 patients compared to the post-hospitalist of 70. The median age was 81 years in both groups. Length of stay in the pre- vs post-hospitalist group was nine days compared to eight days ( $p=0.111$ ). In-hospital mortality in the pre- vs post-hospitalist group was 16 compared to nine ( $p=0.463$ ). Seven-day all cause re-admission in the pre- vs post-hospitalist group was eight compared to four ( $p=0.496$ ). Lastly, thirty-day all cause readmission in the pre- vs post-hospitalist group was 20 compared to nine ( $p=0.162$ ).

**Discussion:** Overall, the results show a trend towards decreased re-admission, mortality, and length of stay. These results are consistent with what have been seen in meta-analysis of American hospitalist programs vs non-hospitalist care evaluating the same measures.

**Conclusions:** A switch to a hospitalist model of inpatient care resulted in a trend towards decreased length of stay, mortality, and readmission rates, but were not statistically significant.

**Recommendations:** Further investigations are required to evaluate whether there is a significant difference since the transition a hospitalist-based care model in Moose Jaw. This would require a larger sample size and longer timeframe, in addition to evaluating larger numbers of outcome variables.

**References:**

1. Peterson MC. A Systematic Review of Outcomes and Quality Measures in Adult Patients Cared for by Hospitalists vs. Nonhospitalists. *Mayo Clin Proc.* 2009 Mar;84(3):248-54.
2. Kara A, Johnson CS, Nicley A, Niemeier MR, Hui SL. Redesigning Inpatient Care: Testing the Effectiveness of an Accountable Care Team Model. *J Hosp Med.* 2015 Dec;10(12):773-9.
3. O’Leary KJ, Johnson JK, Manojlovich M, Goldstein JD, Lee J, Williams MV. Redesigning Systems to Improve Teamwork and Quality for Hospitalized Patients (RESET): Study Protocol Evaluating the Effect of Mentored Implementation to Redesign Clinical Microsystems. *BMC Health Serv Res* [Internet]. 2019 May 8 [cited 2023 May 18];19(1):[11 p.]. Available from: <https://doi.org/10.1186/s12913-019-4116-z>.
4. Meltzer DO, Manning WG, Morrison J, Shah MN, Jin L, Guth T, et al. Effects of Physician Experience on Costs and Outcomes on an Academic General Medicine Service: Results of a Trial of Hospitalists. *Ann Intern Med.* 2002 Dec;137(11):866-74.

# Implementing a Palliative Care Referral Screening Tool for Patients Admitted to Long-Term Care: What do Primary Care Providers Think?

Corbin Chenger, FMR II; Mike Chiu, FMR II; Kaitlyn Schick, FMR II;  
Alanna Surkan, MD, CCFP; Rhonda Bryce, MD, MSc; Breanna Davis, MD, CCFP

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

## ABSTRACT

**Background:** As our population ages, there are more patients with complex end-of-life care needs in long-term care (LTC) settings. Our research group hopes to see more palliative care referrals for residents in LTC.

**Question(s):** Would incorporating a palliative care screening tool into the established LTC referral process in Prince Albert be helpful? Would primary care providers utilize this tool and refer more incoming LTC patients to the palliative care team?

**Methods/Methodology:** We created a series of palliative care screening criteria and surveyed family physicians and residents from four clinics in Prince Albert regarding their current practices and opinions on the screening tool. The survey was distributed via a secure delivery software and responses were anonymous. The data was organized to characterize respondents and crosstabulations were undertaken to provide descriptive comparisons of respondent groups. This project was approved by the U of S Behavioural Research Ethics Board (ID #3777).

**Results/Findings:** Across respondents, 86.9% (20/23) felt the tool was effective for screening patients for possible palliative care referrals, and 82.6% (19/23) agreed they would complete it in an LTC admission package. With the tool, 73.9% (17/23) thought their referrals to palliative care would increase. Just over half (56.5%) would prefer the screening questionnaire to include a scoring system to determine the need for a palliative care referral, particularly those who are earlier in their practice.

**Discussion:** Most of the survey respondents indicated they would use the proposed screening tool and felt that utilizing it would increase their number of palliative care referrals. There is a preference among providers in training for a scoring system. This may reflect that those in training prefer a numeric score when in guiding their decision to initiate a palliative care referral. Trainees may feel that a numeric score could assist them in deciding when to initiate a palliative care referral.

**Conclusions:** Our results suggest that both newer and more experienced primary care providers would find a palliative care referral screening tool helpful in guiding their clinical decision making and would use our screening tool in its current form if it were part of the Prince Albert LTC admission package. Further, the data supports our hypothesis that screening LTC patients would increase the number of referrals to palliative care in this population.

**References:**

1. Churchill I, Turner K, Duliban C, Pullar V, Priestley A, Postma K, et al. The Use of a Palliative Care Screening Tool to Improve Referrals to Palliative Care Services in Community-Based Hospitals: A Quality Improvement Initiative. *J Hosp Palliat Nurs.* 2020 Aug;22(4):327-34.
2. Hill C, Duggleby W, Venturato L, Durepos P, Kulasegaram P, Hunter P, et al. An Analysis of Documents Guiding Palliative Care in Five Canadian Provinces. *Can J Aging.* 2019 Sep;38(3):281-95.
3. Kaasalainen S, Sussman T, Thompson G, McCleary L, Hunter PV, Venturato L, et al. A Pilot Evaluation of the Strengthening a Palliative Approach in Long-Term Care (SPA-LTC) program. *BMC Palliat Care* [Internet]. 2020 Jul 13 [cited 2023 May 10];19(1):[12 p.]. Available from: <https://doi.org/10.1186/s12904-020-00599-w>.
4. Haydar SA, Almeder L, Michalakes L, Han PKJ, Strout TD. Using the Surprise Question to Identify Those with Unmet Palliative Care Needs in Emergency and Inpatient Settings: What Do Clinicians Think? *J Palliat Med.* 2017 Jul;20(7):729-35.
5. Yen YF, Lee YL, Hu HY, Sun WJ, Ko MC, Chen CC, et al. Early palliative care: the surprise question and the palliative care screening tool-better together. *BMJ Support Palliat Care.* 2022 Jun;12(2):211-17.
6. Zeng H, Eugene P, Supino M. Would You Be Surprised if This Patient Died in the Next 12 Months? Using the Surprise Question to Increase Palliative Care Consults from the Emergency Department. *J Palliat Care.* 2020 Oct;35(4):221-5.

## **Patient demographic and care outcomes of academic family medicine clinic's after-hours on-call service.**

Ashley A Chand, FMR II; Nerissa N Nankissoor, FMR II; Greg C R Warren, FMR II;  
Adam Clay, MSc; Olivia Reis, MD, CCFP; Barb Beurivage, NP;  
Lori Schramm, MD, CCFP; Megan Clark, MD, CCFP

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

### **ABSTRACT**

**Background:** The Family Medicine Unit (FMU) offers an after-hours call service to offer mandatory 24-hour patient care. Previous studies have looked at a variation of after-hours call services in preventing emergency department visits but have failed to identify patient demographics and care outcomes.

**Question(s):** What are the demographic and care outcomes of those using the after-hours call service offered at the Family Medicine Unit assessed over a six-month period?

**Methods/Methodology:** A retrospective chart review was conducted using on-call notes on the MedAccess Electronic Medical Record of the FMU from July 1, 2021 to January 1, 2022. Data which was analyzed with descriptive analysis. Exemption from the Biomedical Research Ethics Board of the University of Saskatchewan (Bio-3775) and Operational Approval from the Saskatchewan Health Authority (OA-UofS-3775-Exempt) were obtained.

**Results/Findings:** Four-hundred seventy-four calls were received, with females accessing the call service more than males (69.0%, n=327 vs. 30.6%, n=145). Twelve percent (n=55) of calls came from children less than age 5 years and 27% (n=128) of call came individuals >65 years. The medical concerns were related to gastrointestinal symptoms (15.6%, n=74), musculoskeletal symptoms (13.9%, n=66), respiratory symptoms (12.0%, n=57), and psychiatric concerns (8.0%, n=38). Visits resulted in reassurance (39.3%, n=186), prescription sent to the pharmacy (28.3%, n=134), follow-up appointments during regular clinic hours (23.5%, n=111), referral to emergency department due to urgency of concern (17.1%, n=81) and same day in-person visits (6.1%, n=29).

**Discussion:** As with previous research, the call service was accessed most by individuals with concerns for children less than 5 years of age. Unlike previous research, we found no hesitancy among our elder population in using and accessing the call service.

**Conclusions:** Patient demographics encompasses a wide range in age distribution accessing the call service, with females more likely to use the after-hours call service. Without a call service, patients may have sought care through walk-in facilities or the ER. As such, the call service prevented up to 82.9% of patient seeking care through other means such as walk-in clinics or emergency departments.



## References:

1. College of Physicians and Surgeons of Saskatchewan. Policy: Medical Practice Coverage [Internet]. Saskatoon (SK): College of Physicians and Surgeons of Saskatchewan; 2021 Mar [cited 2023 May 2023]. 4 p. Available from: <https://www.cps.sk.ca/iMIS/Documents/Legislation/Policies/POLICY%20-%20Medical%20Practice%20Coverage.pdf>.
2. Hedden L, Lavergne MR, McGrail KM, Law MR, Bourgeault IL, McCracken R, et al. Trends in Providing Out-of-Office, Urgent After-Hours, and On-Call Care in British Columbia. *Ann Fam Med*. 2019 Mar;17(2):116-24.
3. Abraham C, Avis E, Caddle S, Lane M, Friedman S. Improving Utilization of an After-Hours Phone Triage Service: A Resident Quality Improvement Initiative. *Qual Manag Health Care*. 2022 Jul-Sep;31(3):191-5.
4. Hong M, Thind A, Zaric GS, Sarma S. Emergency Department Use Following Incentives to Provide After-hours Primary Care: A Retrospective Cohort Study. *CMAJ*. 2021 Jan;193(3):E85-93.
5. Devlin RA, Kpelitse KA, Li L, Metha N, Sarma S. After-Hours Incentives and Emergency Department Visits: Evidence from Ontario. *Can Public Policy*. 2020 Jul;46(2):253-63.
6. Smith S, Carragher L. Prioritization and Management of Calls from Older People to GP Out-of-hours Services. *Int J Qual Health Care* [Internet]. 2021 Feb 22 [cited 2023 May 18];33(1):[5 p.]. Available from: <https://doi.org/10.1093/intqhc/mzab021>.
7. Foster H, Moffat KR, Burns N, Gannon M, Macdonald S, O'Donnell CA. What Do We Know about Demand, Use and Outcomes in Primary Care Out-of-hours Services? A Systematic Scoping Review of International Literature. *BMJ Open* [Internet]. 2020 Jan 19 [cited 2023 May 18];10(1):[17 p.]. Available from: <https://doi.org/10.1136/bmjopen-2019-033481>.

# Potential Benefits of a Transcutaneous Bilirubinometer Screening System in a Northern Saskatchewan Community

Katelyn Larson, FMR II; Jeff Irvine, MD, MPH, CCFP; Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** All newborn babies are tested for bilirubin levels with either a blood test (TsB), requiring a heel poke, or using a transcutaneous device (TcB) that is touched to their skin<sup>1</sup>. Currently, the La Ronge Health Center does not have a transcutaneous device and all bilirubin levels are measured using blood samples.

**Question(s):** Would the implementation of an in-hospital transcutaneous bilirubin screening program demonstrate a cost and labour benefit and/or decrease the number of painful heel pricks to newborns in the La Ronge Health Center?

**Methods/Methodology:** Using the local electronic medical records, all bilirubin blood tests performed in the La Ronge Medical Center on newborns from the year 2021-2022 were documented. I then determined which of these could have been prevented with a transcutaneous device, how many heel pricks could be avoided, and if it is a cost-effective alternative.

This project was deemed to be Exempt from Ethical Review (UofS BioMed ID 3717).

**Results/Findings:** The total number of individual TsBs analyzed was 111 within 84 patient charts. Of these 111 tests, 71 of them (64%) could have been replaced with a transcutaneous measurement. Assuming that the 24-hour TsBs were drawn at the same time as the newborn metabolic screening blood work, only 13 heel pokes over the two years could have been prevented with a TcB screening program. The cost difference between a single test was approximately \$1.50-\$12.50 with the TcB being more expensive.

**Discussion:** Overall, it seems as if there is little bottom-line cost benefit of introducing a transcutaneous bilirubinometer into the current inpatient system in La Ronge. The cost difference is substantial given the price of the device itself and the limited number of deliveries done locally.

**Conclusions:** This study did not demonstrate the need for the purchase a transcutaneous bilirubinometer to be used at the La Ronge Medical Center.

## References:

1. Barrington KJ, Sankaran K; Fetus and Newborn Committee. Guidelines for Detection, Management and Prevention of Hyperbilirubinemia in Term and Late Preterm Newborn Infants (35 or More Weeks' Gestation) - Summary. *Paediatr Child Health*. 2007 May;12(5):401-7.
2. Welcome to Draeger Canada [Internet]. Mississauga (ON): Draeger Canada; c2023. Draeger Jaundice Meter JM-105; [cited 2023 May 19];[about 6 screens]. Available from: [https://www.draeger.com/en-us\\_ca/Products/Jaundice-Meter-JM-105](https://www.draeger.com/en-us_ca/Products/Jaundice-Meter-JM-105).
3. Alberta Health Services. Hyperbilirubinemia Screening, Assessment and Treatment – Well Newborn 35 0/7 Weeks Gestation and Greater [Internet]. Edmonton (AB): Alberta Health Services; 2020 Mar 18 [cited 2023 May 19]. 22 p. Available from: <https://extranet.ahsnet.ca/teams/policydocuments/1/clp-prov-womens-health-postpartum-hyperbilirubinemia-hcs-238-01.pdf>.
4. McClean S, Baerg K, Smith-Fehr J, Szafron M. Cost Savings with Transcutaneous Screening versus Total Serum Bilirubin Measurement for Newborn Jaundice in Hospital and Community Settings: A Cost Minimization Analysis. *CMAJ Open*. 2018 Jul-Sep;6(3):E285–91.
5. Maya-Enero S, Candel-Pau J, Garcia-Garcia J, Duran-Jordà X, López-Vílchez MÁ. Reliability of Transcutaneous Bilirubin Determination Based on Skin Color Determined by a Neonatal Skin Color Scale of Our Own. *Eur J Pediatr*. 2021 Feb;180(2):607-16.
6. BiliTool [Internet]. Pasedena (CA): BiliTool Inc.; c2004-2023 [cited 2023 May 19]. Available from: <https://bilitool.org/index.php>.
7. Kemper AR, Newman TB, Slaughter JL, Maisels JM, Watchko JF, Downs SM, et al. Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation. *Pediatrics*. *Pediatrics* [Internet]. 2022 Sep 1 [cited 2023 May 18];150(3):[48 p.]. Available from: <https://doi.org/10.1542/peds.2022-058859>.
8. SaskJobs – Real Careers. Real Life. [Internet]. Regina (SK): Government of Saskatchewan; c2023. Job search results; [cited 2023 May 19]. Available from: [https://www.saskjobs.ca/jsp/joborder/listing.jsp?filter\\_by=1&region\\_id=4&noc\\_skill\\_type=3](https://www.saskjobs.ca/jsp/joborder/listing.jsp?filter_by=1&region_id=4&noc_skill_type=3).

# Exploring Motivations that Influence Practice Patterns among Recently Practicing Family Physicians

Daniel Thomas, FMR II; Sidra Haque, FMR II; Oliva Reis, MD, CCFP; Adam Clay, MSc

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

## ABSTRACT

**Background:** In Canada there are a significant number of Canadians without family doctors despite there being a high number of family physicians within populations. Understanding this gap between the physician supply and the unmet patient need is essential to improve health outcomes. There has been a considerable amount of research focused on ways to encourage medical students to pursue family medicine. However very little research has been done to identify reasons why recently qualified family physicians decide their practice-type in their initial years.

**Question(s):** What are the values and preferences that influence practice patterns among early-career family physicians?

**Methods/Methodology:** Virtual semi-structured interviews of Saskatchewan-based family physicians were conducted in Sprint 2023. The inclusion criteria involved family physicians who completed residency in Canada and have been practicing for 1-5 years since residency. Interview data were analyzed using thematic and framework analysis. This study was approved by the Behavioral Research Ethics Board of the University of Saskatchewan.

**Results/Findings:** A total of five physicians were interviewed. Consistent themes among all participants were type of practice, compensation type, work-life balance, job satisfaction and the ability to pursue special interests. Other themes included location, job flexibility, and specific experiences during training.

**Discussion:** More research is needed to understand the values and preferences that influence practice patterns among family physicians. By recognizing these values, appropriate advocacy for practice-related policy reform can be done to meet the needs of primary care providers and ultimately reduce the gap between the physician supply and the unmet patient need.

**Conclusions:** Family physician practice choices are greatly influenced by a variety of personal and professional factors. Physicians are seeking better remuneration, greater work-life balance, and the opportunity to pursue special interests whilst staying close to home. It was clear that many of these factors overlapped with one another.

## References:

1. Statistics Canada: Canada's national statistical agency [Internet]. Ottawa (ON): Government of Canada; c2023. Health characteristics, annual estimates; 2022 Aug 26 [cited 2023 May 15];[about 3 screens]. Available from: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009601>.
2. Canadian Institute for Health Information | CIHI [Internet]. Ottawa (ON): CIHI; c1996-2023. Supply, distribution and migration of physicians in Canada, 2021 - Data tables; [cited 2023 May 15];[about 1 screen]. Available from: <https://secure.cihi.ca/estore/productSeries.htm?pc=PCC34>.
3. Glynn LG, Regan AO, Casey M, Hayes P, O'Callaghan M, O'Dwyer P, et al. Career Destinations of Graduates from a Medical School with an 18-week Longitudinal Integrated Clerkship in General Practise: A Survey of Alumni 6 to 8 Years After Graduation. *Ir J Med Sci.* 2021 Feb;190(1):185-91.
4. Lavergne MR, Goldsmith JL, Grudniewicz A, Rudoler D, Marshall EG, Ahuja M, et al. Practice Patterns Among Early-career Primary Care (ECPC) Physicians and Workforce Planning Implications: Protocol for a Mixed Methods Study. *BMJ Open* [Internet]. 2019 Sep 24 [cited 2023 May 15];9(9):[8 p.]. Available from: <https://doi.org/10.1136/bmjopen-2019-030477>.

# Medical Student Perceptions of Family Medicine

Dakota Van Dijk, FMR II; Meredith McKague, MD, MSc, CCFP;  
Matthew Kushneriuk, MD, PME, CCFP; Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** Primary care providers are a cornerstone in our healthcare system, but as of 2019 14.5% of Canadians did not have access to a regular healthcare provider. Despite this overwhelming demand, CaRMS first iteration match rates continue to fall. The objective of our study is to better understand how medical students at the University of Saskatchewan perceive family medicine. The study will also identify areas where further education or exposure may increase the interest in pursuing this career.

### Question(s):

1. How do medical students perceive aspects of family medicine (as compared to CMA survey data)?
2. What aspects of a career are important to current medical students, and does this differ between those who are and are not interested in family medicine?

**Methods/Methodology:** A one-time, cross-sectional online survey was sent to all medical students at the University of Saskatchewan enrolled in the 2022-23 academic year. A Certificate of Approval was obtained from the University of Saskatchewan's Behavioural REB (Beh ID 3608).

**Results/Findings:** Results showed that medical students both overestimated the number of hours worked per week by family physicians and underestimated the compensation received for this work. We also saw that the important qualities of a career were different among those students who did and did not have an interest in family medicine.

**Discussion:** There is a perception among medical students that family physicians work longer hours, are paid less, and are less satisfied with their jobs. This combination of poor perceptions could certainly lead students to pursue other specialties. We also saw that among students who are interested in family medicine, one of the major drivers is a shorter training program, which may impact family medicine match results when the move to a 3-year program is made.

**Conclusions:** The current perception of family medicine among medical students could be negatively affecting the match rates and interest in this career. Education on these elements of family medicine and early exposure in medical training could increase interest in this field.

## References:

1. Statistics Canada – Canada’s national statistical agency [Internet]. Ottawa (ON): Government of Canada; c2023. Primary health care providers, 2019; 2020 Oct 22 [cited 2023 May 8];[about 7 screens]. Available from: <https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm>.
2. Canadian Resident Matching Service. 2023 CaRMS Forum [Internet]. Ottawa (ON): Canadian Resident Matching Service; 2023 May 4 [cited 2023 May 19]. 119 p. Available from: <https://www.carms.ca/pdfs/carms-forum-2023.pdf>.
3. Canadian Medical Association. Family Medicine Profile [Internet]. Ottawa (ON): Canadian Medical Association; 2019 Dec [cited 2023 May 8]. 21 p. Available from: <https://www.cma.ca/sites/default/files/2019-01/family-e.pdf>.
4. Deutsch T, Hönigschmid P, Frese T, Sandholzer H. Early Community-based Family Practice Elective Positively Influences Medical Students' Career Considerations--A Pre-post Comparison. BMC Fam Pract [Internet]. 2013 Feb 21 [cited 2023 May 19];14:[6 p.]. Available from: <https://doi.org/10.1186/1471-2296-14-24>.
5. Roett MA, Diller P, Piggott C, Weidner A, Fetter G, Bentley A, et al. The Best Practice Guide for Strategic Planning to Increase Student Choice of Family Medicine [Internet]. Leawood (KS): Association of Departments of Family Medicine; 2020 [cited 2023 May 19]. 37 p. Available from: <https://adfm.org/media/1798/draft-best-practice-guide.pdf>.
6. Stagg P, Prideaux D, Greenhill J, Sweet L. Are Medical Students Influenced by Preceptors in Making Career Choices, and If So How? A Systematic Review. Rural Remote Health [Internet]. 2012 Jan 24 [cited 2023 May 19];12(1):[21 p.]. Available from: <https://www.rrh.org.au/journal/article/1832>.



# Delivery of Medical Abortion Services in Northern Rural/Remote Setting

Alisha Beler, FMR II; Jeff Irvine, MD, MPH, CCFP

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

## ABSTRACT

**Background:** Medical abortion services are a critical component of the Canadian health care system. Access to medical termination of pregnancy is a significant barrier for women across Saskatchewan, with women in rural areas and women of lower socioeconomic status affected most. Medical abortion performed with Mifegymiso is an effective, safe procedure and can be used up to 70 days gestation. The medication can be prescribed by a family physician with no additional training and can be taken by a patient in the comforts of their own home.

**Question(s):** The AIM of this project was to build a standardized template for the La Ronge Medical Clinic Electronic Medical Record system to offer medical abortion services with Mifegymiso.

**Methods/Methodology:** The project was submitted to the University of Saskatchewan's Behavioural Research Ethics Board for an Exemption from Ethics which was approved. Approval was granted since the reviewed literature was available in the public domain and the template evaluation/revision was a quality improvement initiative for the La Ronge Medical Clinic. A literature review was conducted to identify best evidence-based practices for delivery of medical abortion care in a rural/remote setting. Consideration of both published literature and existing practice guidelines related to this provision were included in the review.

**Results/Findings and Discussion:** The delivery of medical abortion care in Canada is typically carried out in urban centers with access to obstetrical ultrasound services and laboratory testing. From a rural and remote context, access to these services are often limited.

Mifegymiso can be prescribed with or without ultrasound dating, and date cut-offs can be based on accurate last menstrual period dating. Confirmation of pregnancy and monitoring of successful completion of medical termination can be conducted with either serum B-HCG or urine B-HCG, eliminating the need for laboratory access.

**Conclusions:** Application of these findings were applied to the northern context of the La Ronge Medical Clinic in the form of creation of a standardized electronic medical record template for medical abortion with Mifegymiso. Adoption of this process improvement aims to provide future improved patient safety measures and workplace efficiency.

### References:

1. Abortion Rights Coalition of Canada. Statistics - Abortion in Canada [Internet]. Vancouver (BC): Abortion Rights Coalition of Canada; 2023 Apr 8 [cited 2023 May 18]. 7 p. Available from: <https://www.arcc-cdac.ca/media/2020/07/statistics-abortion-in-canada.pdf>.

2. Norman W, Soon J. Requiring Physicians to Dispense Mifepristone: An Unnecessary Limit on Safety and Access to Medical Abortion. *CMAJ*. 2016 Dec;188(17-18):E429-30.
3. World Health Organization. *Safe Abortion: Technical and Policy Guidance for Health Systems*, 2<sup>nd</sup> ed [Internet]. Geneva (CE): World Health Organization; 2012 [cited 2023 May 18]. 123 p. Available from: <https://apps.who.int/iris/handle/10665/70914>.
4. Norman WV, Munro S, Brooks M, Devane C, Guilbert E, Renner R, et al. Could Implementation of Mifepristone Address Canada's Urban-rural Abortion Access Disparity: A mixed-methods Implementation Study Protocol. *BMJ Open* [Internet]. 2019 Apr 20 [cited 2023 May 18];9(4):[9 p.]. Available from: <https://doi.org/10.1136/bmjopen-2018-028443>.
5. Costescu D, Guilbert E, Bernard J, Black A, Dunn S, Fitzsimmons B, et al. Medical abortion. *J Obstet Gynaecol Can*. 2016 Apr;38(4):366-89.
6. Guilbert E, Costescu D, Wagner MS, Renner R, Norman WV, Dunn S, et al. Canadian Protocol for the Provision of Medical Abortion via Telemedicine [Internet]. Ottawa (ON): Society of Gynecology and Obstetrics Canada; [cited 2023 May 18]. 5 p. Available from: <https://www.sogc.org/common/Uploaded%20files/CANADIAN%20PROTOCOL%20FOR%20THE%20PROVISION%20OF%20MA%20VIA%20TELEMEDICINE.pdf>.

# Clearing the Air: A quality improvement approach to changing metered dose inhaler prescription practices at West Winds Primary Health Centre

Claire DeBoer, FMR II; Bruna Murvay, FMR I; Michael Moroz, FMR I;  
Cathy MacLean, MD, MCISc, CCFP; Meredith McKague, MD, MSc, CCFP;  
Rhonda Bryce, MD, MSc

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

## ABSTRACT

**Background:** Healthcare is responsible for a significant portion of greenhouse gas emissions. A single metered dose inhaler (MDI) is equivalent to driving a car for 290 kilometers, whereas dry powder inhalers (DPIs) have a significantly lower emission profile. This quality improvement project aims to inform and empower next steps in reducing MDI prescribing at West Winds Primary Health Centre (WWPHC) and possibly in others primary health settings.

**Question(s):** The aim of this project was to assess the prevalence of MDI and DPI prescribing among adolescent and adult asthmatic patients at WWPHC. Among these patients, we wish to describe the characteristics of those currently treated with these respective inhaler types and to quantify how frequently these patients are being switched from MDIs to DPIs. Furthermore, we want to identify what characteristics are associated with a switch between MDIs and DPIs.

**Methods/Methodology:** This project received ethical approval from the University of Saskatchewan's BioMedical REB (Bio ID 3940) and Operational Approval from the Saskatchewan Health Authority (OA-UofS-3940). All patients 12 to 60 years of age with a diagnosis of asthma, but not chronic obstructive pulmonary disease, having had a current/recent prescription for a DPI or MDI and an appointment at WWPHC in the past two years will be included. Data points collected will include age, sex, duration of care provision at WWPHC, prior pulmonary function testing results, and, for the three years since most recent visit, information related to the total number of visits, asthma-related visits, puffer types/agents, dates of agent changes, regular physician, and number of physicians/residents seen. Analysis will include a description of the sample, calculation of MDI and DPI prevalence, the frequency and nature of switches between agent types, and related characteristics.

**Results/Findings:** Initial tabulations indicate that 231 patients meet our study criteria. Findings are pending.

**Discussion:** Pending.

**Conclusions:** Pending.

**Recommendations:** Pending.

# **Breastfeeding Duration following Frenotomy Consultation in Infants with Suspected Ankyloglossia and Feeding Difficulty at West Winds Primary Health Care Centre and Cornerstone Medical Clinic**

Michele Sheikh, FMR II; Fei Ge, FMR I; Jill Farrukh, MD, MS, CCFP;  
Emily Sullivan, MD, MPH, CCFP; Jennifer Wood, MD, MEng, CCFP;  
Rhonda Bryce, MD, MSc

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

## **ABSTRACT**

**Background:** Exclusive breastfeeding for six months and continued breastfeeding to two years and beyond is a widely accepted recommendation endorsed by the World Health Organization, the Canadian Pediatric Society, and other organizations. Ankyloglossia is thought to cause breastfeeding difficulties and can be treated with frenotomy. Ankyloglossia diagnosis rates and frenotomy procedures are both increasing, but there remains limited evidence regarding frenotomy effectiveness for breastfeeding outcomes.

**Question(s):** Do frenotomy procedures provided at West Winds Primary Health Centre and Cornerstone Medical Clinic improve breastfeeding duration and/or experience?

**Methods/Methodology:** We received ethical and operational approvals from the University of Saskatchewan's Behavioral Research Ethics Board (Beh3046) and the Saskatchewan Health Authority for this prospective, observational, longitudinal quality improvement study evaluating breastfeeding duration (primary outcome) and experience. Consulting physicians at West Winds Primary Health Centre and Cornerstone Medical Clinic are inviting the participation of caregivers who present for 1) suspected tongue-tie/lip-tie assessment or 2) more general breastfeeding concerns for which the consulting physician offered frenotomy as a treatment option. These patients are requested to complete an online survey at 2 weeks, 1 month, and 3 months post-consultation, regardless of frenotomy decision. Statistical analysis will describe participants overall and then evaluate factors related to longer breastfeeding duration and better outcomes using time-to-event analysis and mixed modeling, respectively. We are targeting a minimum sample size of 25 respondents.

**Results/Findings:** Unfortunately, no data is yet available due to delayed study approvals and difficulty recruiting participants. Recruitment is ongoing, and to date we have recruited 2 participants who have yet to complete all surveys.

**Discussion:** Amendments were made to the original study to improve participant recruitment and retention: a) participants may now be recruited from Cornerstone Medical Clinic as well as West Winds Primary Health Centre; b) physicians are now actively recruiting, rather than medical office assistants; c) surveys are now administered online instead of by telephone; d) the 1st survey is administered at 2 weeks rather than 1-week post-consultation. When completed, this

study will offer a longer view of frenotomy benefits as our three-month timeline exceeds that of most available studies.

**Conclusions:** To be determined.

**Recommendations:** To be determined.

**References:**

1. World Health Organization (WHO) [Internet]. Geneva (CE): World Health Organization; c2023. Infant and young child feeding; [cited 2023 May 9];[about 8 screens]. Available from: <https://www.who.int/data/nutrition/nlis/info/infant-and-young-child-feeding>.
2. Critch JN; Canadian Paediatric Society Nutrition and Gastroenterology Committee. Nutrition for Healthy Term Infants, Birth to Six Months: An Overview. *Paediatr Child Health*. 2013 Apr;18(4):206-7.
3. Walsh J, Links A, Boss E, Tunkel D. Ankyloglossia and Lingual Frenotomy: National Trends in Diagnosis and Management in the United States, 1997-2012. *Otolaryngol Head Neck Surg*. 2019 Apr;156(4):735-40.
4. Lisonek M, Liu S, Dzakpasu S, Moor AM, Joseph KS. Changes in the Incidence and Surgical Treatment of Ankyloglossia in Canada. *Paediatr Child Health*. 2017 Oct;22(7):382-6.
5. O'Shea JE, Foster JP, O'Donnell CPF, Breathnach D, Jacobs SE, Todd DA, et al. Frenotomy for Tongue-tie in Newborn Infants. 2017 Mar 11 [cited 2023 May 19]. In: *The Cochrane Database of Systematic Reviews* [Internet]. Hoboken (NJ): John Wiley & Sons. c1999-2023. Available from: <https://doi.org/10.1002/14651858.cd011065.pub2>. Record No.: CD011065.
6. O'Callahan C, Macary S, Clemente S. The Effects of Office-based Frenotomy for Anterior and Posterior Ankyloglossia on Breastfeeding. *Int J Pediatr Otorhinolaryngol*. 2013 May;77(5):827-32.
7. Sethi N, Smith D, Kortequee S, Ward VMM, Clarke S. Benefits of Frenulotomy in Infants with Ankyloglossia. *Int J Pediatr Otorhinolaryngol*. 2013 May;77(5):762-5.
8. Brookes A, Bowley DM. Tongue Tie: The Evidence for Frenotomy. *Early Hum Dev*. 2014 Nov;90(11):765-8.
9. Power RF, Murphy JF. Tongue-tie and Frenotomy in Infants with Breastfeeding Difficulties: Achieving a Balance. *Arch Dis Child*. 2015 May;100(5):489-94.
10. Emond A, Ingram J, Johnson D, Blair P, Whitelaw A, Copeland M, et al. Randomised Controlled Trial of Early Frenotomy in Breastfed Infants with Mild-moderate Tongue-tie. *Arch Dis Child Fetal Neonatal Ed*. 2014 May;99(3):F189-95.
11. Rowan-Legg A. Ankyloglossia and Breastfeeding. *Paediatr Child Health*. 2015 May;20(4):209-13.
12. Muldoon K, Gallagher L, McGuinness D, Smith V. Effect of Frenotomy on Breastfeeding Variables in Infants with Ankyloglossia (Tongue-tie): A Prospective Before and After Cohort Study. *BMC Pregnancy Childbirth* [Internet]. 2017 Nov 13 [cited 2023 May 19];17(1):[9 p.]. Available from: <https://doi.org/10.1186/s12884-017-1561-8>.

13. Caloway C, Hersh C, Baars R, Sally S, Diercks G, Hartnick C. Association of Feeding Evaluation with Frenotomy Rates in Infants with Breastfeeding Difficulties. *JAMA Otolaryngol Head Neck Surg.* 2019 Sep;145(9):817-22.

# Exploring Barriers and Motivations for Family Medicine Residents in Choosing to Practice Community Family Medicine

Chrissy Simon, FMR II; Aaron Vanderlot, MD, CCFP;  
Olivia Reis, MD, CCFP; Adam Clay, MSc

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

## ABSTRACT

**Background:** Family physicians are increasingly choosing to move away from comprehensive medical care towards focused practice. Therefore, it is important to understand the factors contributing to this recent shift.

**Question(s):** What are the factors influencing Saskatchewan-based family medicine (FM) residents' anticipated career choices after completing residency?

**Methods/Methodology:** Virtual interviews of FM residents in Saskatchewan were conducted in April 2023. Residents answered a series of open-ended questions about their career plans. This data was then transcribed and analysed thematically. Approval was obtained from the University of Saskatchewan Behavioral Research Ethics Board (Beh ID# 3857).

**Results/Findings:** Two participants were recruited into the study. Preliminary data indicates a shift away from comprehensive care to focused practice. A few preliminary themes influencing career choices were identified which included: clinical exposures and mentorship and self-preservation within the healthcare system. The study also found that residents shared a desire to work in various localities and group/interprofessional teams. This study found no evidence that the shift to focused practice was due to trainees' beliefs that comprehensive care led to burn out. Furthermore, our study also showed uncertainty and flexibility in regard to future career goals.

**Discussion:** The preliminary themes identified were generally consistent with existing literature that highlighted self-preservation is at the core of resident choices. Therefore, the shift to focused care was seen as a way to maintain financial and personal viability by practitioners. Unlike previous studies, participants did not believe comprehensive care led to burn out. Uncertainty regarding career goals has not been highlighted in the literature. This is likely due to the nature of residency training itself in Saskatchewan or a reflection of international medical training in our study population.

**Conclusions:** The career decisions of resident physicians are multifactorial. Further research is needed to understand how practice planning in residency translates into independent practice.



**References:**

1. Chan BT. The Declining Comprehensiveness of Primary Care. *CMAJ*. 2002 Feb;166(4):429-34.
2. Glazer J. Specialization in Family Medicine Education: Abandoning Our Generalist Roots. *Fam Pract Manag*. 2007 Feb;14(2):13-5.
3. Oandasan IF, Archibald D, Louis A, Lawrence K, McEwan LA, Mackay MP, et al. Future Practise of Comprehensive Care: Practise Intentions of Exiting Family Medicine Residents in Canada. *Can Fam Physician*. 2018 Jul;64(7):520-8.
4. Kabir M, Randall E, Mitra G, Lavergne MR, Scott I, Snadden D, et al. Resident and Early-career Family Physicians' Focused Practice Choices in Canada: A Qualitative Study. *Br J Gen Pract*. 2022 May;72(718):e334-41.
5. Marbeen MI. Focused Practice and Enhanced Skills PGY3 Training in Family Medicine: A Mixed Methods Study [master's thesis]. [London (ON)]: University of Western Ontario; 2019. 151 p.
6. Aggarwal M, Holtby A, Oandasan I, eds. Factors That Influence Practice Choices of Early-career Family Physicians: An Outcomes of Training Project Evidence Summary. Mississauga (ON): College of Family Physicians of Canada; 2022. 10 p.
7. Lavergne MR, Goldsmith LJ, Grudniewicz A, Rudoler D, Marshall EG, Ahuja M, et al. Practice Patterns Among Early-career Primary Care (ECPC) Physicians and Workforce Planning Implications: Protocol for a Mixed Methods Study. *BMJ Open* [Internet]. 2019 Sep 24 [cited 2023 May 29];9(9):[8 p.]. Available from: <https://doi.org/10.1136/bmjopen-2019-030477>.