36th ANNUAL RESIDENT SCHOLARSHIP DAY

University of Saskatchewan | Department of Family Medicine

ABSTRACT BOOK

May 29, 2026

Department of Family Medicine

College of Medicine | University of Saskatchewan

medicine.usask.ca/familymedicine

UNIVERSITY OF SASKATCHEWAN

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

May 12, 2026

I am looking forward to celebrating your scholarship achievements at the end of the month. This will be our 36th Annual event.

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

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

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

All the best in your future endeavours and keep asking questions!

Sincerely,

Kathy Lawrence
Provincial Head
Family Medicine

UNIVERSITY OF SASKATCHEWAN

Department of
Family Medicine

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

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

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

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

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

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

Sincerely,

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

UNIVERSITY OF SASKATCHEWAN

May 25, 2026

Dear Enhanced Skills Residents,

I would like to extend my sincere appreciation for your participation in the Family Medicine Resident Scholarship Day.

Scholarship is an important component of being an effective physician. It reflects our ongoing commitment to asking questions, seeking answers, and continually improving the care we provide to our patients, as well as the healthcare systems in which we work.

The Enhanced Skills year is demanding, and finding time to engage in formal scholarship is not easy. Your efforts in doing so are commendable, and I hope you found the process both valuable and rewarding. I look forward to learning more about your projects.

Congratulations on reaching this milestone and on the culmination of your hard work. I wish you all the best in your future careers and hope you will continue to incorporate scholarship into your practice.

Sincerely,

Martin Heroux
Enhanced Skills Program Director

Academic Family Medicine - - Regina Division • University of Saskatchewan • Regina Center Crossing
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UNIVERSITY OF SASKATCHEWAN

Department of Family Medicine
Division of Scholarship & Innovation
West Winds Primary Health Centre
3311 Fairlight Drive
Saskatoon SK S7M 3Y5

May 29, 2026

Colleagues

On this occasion, the 36th Annual Resident Scholarship Day, I want to take this opportunity to recognize Residents, Research Officers, Coaches/Supervisors, Faculty, Staff and members of the various 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 reflections and feedback (peer-review). The Annual Scholarship Day in the Department of 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 36 years, we have come a long way, but we must continue to transform to meet the needs of the peoples we serve; as well as the Accreditation Standards set by the College of Family Physicians of Canada.

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. Mahatma Gandhi stated, “you must be the change you wish to see in the world.” Paulo Freire stated in his book Pedagogy of Hope that "we must dare to invent the future." Thus, improving practice provides opportunities for learning, answering questions and inventing the future each and every day.

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

I wish each of you much success and the very best as you move forward in your chosen profession.

Yours sincerely,

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

36th ANNUAL RESIDENT SCHOLARSHIP DAY

DEPARTMENT OF ACADEMIC FAMILY MEDICINE

Friday, May 29, 2026
Prairieland Park – Hall C
Saskatoon, SK

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

0900 – 0910 Assessing the Impact of the City of Prince Albert's Alcohol Bylaw on Emergency Department Visits
Daniel Antonenko, Camille Mutukistna, Natalie Tinney, Jeffery DC Irvine, Lauren Rusk, Ananna Arna, Ahmed Faress, Anna Dinsdale

0910 – 0920 Understanding Emergency Department Use for Non-Emergent MSK Complaints in Moose Jaw, SK
Justin Hall, Anna Rucelli Ignacio, *Mark Young*, Brandon Thorpe, Adam Clay

0920 – 0930 Improving the Management of Chronic Obstructive Pulmonary Disease at the Family Medicine Unit in Regina
Ali Alfayyadh, Andrea Vasquez Camargo, Rejina Kamrul, Adam Clay, Radhika Marwah

0930 – 0940 What Family Physicians Need to Know About Creatine Use in Adolescents and Young Adults: A Scoping Review
Jason Fyfe, Boris Hencic, Katrina Sawchuk

0940 – 0950 Assessing Adherence for Counselling Non–Insulin-Dependent Type 2 Diabetics Regarding "Sick-Day Rules": A Chart Review of 300 Chronic Disease Management (CDM) Patients at the Family Medicine Unit in Regina, Saskatchewan
Manraj Aujla, Manav Bhalla, Sanchsith Rajalingam, Rejina Kamrul, Adam Clay

0950 - 1000 Appropriate primary care prescribing and patient compliance with compression therapy for venous insufficiency
Maham Tasneem, Warda Zanib, Adam Clay, Rejina Kamrul, Abdalla Butt, David Kopriva

1000 - 1010 Evaluating Physicians' Perceptions of Procedural Skills Taught in Saskatchewan's Family Medicine Surgical Skills Curriculum
Chaudhry Masud, Husam Muftah, Jack Yassa, Clara Rocha Michaels, Adam Clay, Andrea Vasquez Camargo

1010 - 1040 Break

1040 - 1050 A Rapid Review of Principles, Practices, and Challenges in Canada, Australia, and New Zealand Regarding the Teaching of Indigenous Health in Medical Education
Hamza Dani, Aaron Prystupa, Vivian R Ramsden, Rhonda Bryce

1050 - 1100 A Review of Preventative Care in HIV Care
Morgan Schatz, Jelyssa Luc, Cole Picot, Katrina Sawchuk

1100 – 1110 Accessing Healthcare and Affirming Care: Perspectives of 2SLGBTQIA+ Individuals in North Battleford, Saskatchewan
Jessica Kainth, Sarah Nazim, Michael Barnett, Ginger Ruddy, Rhonda Bryce

1110 - 1120 Investigating parenthood considerations and subsequent challenges while training in a Family Medicine Residency in Saskatchewan
Anum Ali, Aliaa El Tobgy, Eriny Tawedrous, Rhonda Bryce

1120 – 1130 Influence of prenatal hand expression on postpartum breastfeeding
Dilanjani Pietersz, Onyinyechi Nwoke, Anneme Dunhin, Rhonda Bryce

1130 – 1140 Evaluation of a Prenatal and Postpartum Educational Resource at West Winds Primary Health Care Centre
Abeer Nfaileh, Tracey Field, Katrina Sawchuk

1140 - 1150 Increasing Rates of Cervical Cancer Screening at a Rural Family Medicine Clinic
Oseihioria Alex-Ohunyon, *Sonya Kim*, Emmett Harrison, Adam Clay, Brenda Andreas

1150 - 1200 Effect of Non-Sterile Gloves on Infection Rate in Family Medicine Office-Based Procedures
Ololade Akinlabi, Sarina Sadeghi, Andrea Vasquez Carmargo, Adam Clay, Clara Rocha Michaels, Asma Gargoum

1200 - 1300 Lunch/Networking

1300 - 1310 Artificial Intelligence in Primary Care: A Scoping Review of Perceptions, Adoption, and Emerging Implications of Generative AI
Carina Hoi Ying Chan, Aathmika Kirubaharan, Jared Oberkirsch, Udoka Okpalauwaekwe

1310 – 1320 Understanding Missed Appointments at West Winds Primary Health Centre: Perspectives and Opportunities
Stephanie Walls, Maa Quartey, Jason Hosain, Katrina Sawchuk

1320 – 1330 Exploring the Relationship Between Clinical Scheduling Practices, Resident Wellness, and Patient Care in Saskatchewan's Family Medicine Training Programs
Samantha Tso, Hadir Ismail, Mahmood Beheshti, Udoka Okpalauwaekwe

1330 – 1340 Exploration of Patient Perspectives of the Use of Artificial Intelligence Scribe in a Family Medicine Clinic
Riley Schaaf, Gezila De Beer, Mya Ajayi, Danielle Frost, Andries Muller, Katrina Sawchuk

1340 – 1350 Penicillin Allergy De-labelling at the Family Medicine Unit: A Quality Improvement Project
Kylee Kosokowsky, *Shaina Templeton,* Radhika Marwah, Debbie Bunka, Adam Clay

1350 – 1400 Dance Movement Therapy's Role in Chronic Disease Management: A Systematic Review
Vladyslav Liamprekht, Ai-Lien Le, Vipul Parekh, Rhonda Bryce, Breanna Davis

1400 – 1410 Enhanced Skills Program Evaluation: Graduate Survey of Career Satisfaction, Support Systems, and Work-Life Integration
Dinesh Kumar, Maria Siddiqui, Martin Heroux, Adam Clay

1410 – 1420 Pyxis-Programmed Anaphylaxis Kit to Improve Testing of Suspected Intraoperative Anaphylaxis: A Quality Improvement Project (FPA)
Yechan Kim, Vicky Loessin, Carla Flogan, Richard Schaan, Darcie Earle

1420 – 1430 Investigating Hypocalcemia in Trauma Patients: Trends in Detection and Treatment Timelines at RUH (FPA)
Chiru Gade, Troy Simpson, Matt Johnson, Darcie Earle

1430 – 1440 Updated Assessment of Postpartum Hemorrhage in a Regional Saskatchewan Care Centre (ESS)
Carissa McGuin, Michelle Zawartka, Vijayalakshmi Udayasankar, Rhonda Bryce

1440 – 1450 Do Visual Reminders Improve Appropriate ASA Prescribing for Preeclampsia Prevention?: A Quality Improvement Study
Yuli (Alex) Chen, Calista Lytle, Audrey Roane, Breanna Davis, Rhonda Bryce, Vivian R Ramsden

1450 - 1520 Break

1520 - 1600 Recognition & Reflections – Dr. Vivian R Ramsden
Reflections – Dr. Jack Westfall, Dr. Mark Milne, Dr. Marcella Ogenchuk
Overall Research Award – Presented by the Saskatchewan College of Family Physicians:
Lisa Bagonluri, Executive Director and Dr. Darcie McGonigle, President
Departmental Awards – Dr. Kathy Lawrence, Dr. Sheila Smith, Dr. Marty Heroux
Closing Remarks

Adjudicators

Jack Westfall – MD, MPH
John M. (Jack) Westfall grew up in Yuma, Colorado. He completed his MD and MPH at the University of Kansas School of Medicine, an internship in hospital medicine in Wichita, Kansas, and his Family Medicine Residency at the University of Colorado Rose Family Medicine Program. After joining the faculty at the University of Colorado's Department of Family Medicine, Dr Westfall started the High Plains Research Network, a geographic community and practice-based research network in rural and frontier Colorado. He practiced family medicine in several rural communities including Limon, Ft Morgan, and his hometown of Yuma. The HPRN was founded as a participatory practice-based research network, engaging clinicians and staff in the research. In 2003, the Community Advisory Council of farmers, ranchers, school teachers, and students joined the HPRN to fully engage patients and community members in all HPRN efforts. Clinicians and patients have been fully engaged partners in all HPRN research: defining research questions, assisting with methods and recruitment, leading interpretation and dissemination efforts, presenting and co-authoring manuscripts. The HPRN has received funding from the Centers for Disease Control, National Institutes of Health, Agency for Healthcare Research and Quality, and numerous state and local foundations. After retiring from the University of Colorado's School of Medicine, Jack worked for several years as the Director for Whole Person Care at Santa Clara County Health and Hospitals in San Jose, California. He also served for several years as the Director of the Robert Graham Center for policy research in primary care and family medicine in Washington DC. Returning to Colorado, he continued to consult and collaborate on primary care practice-based research, community-based participatory research, integrated primary care, behavioral health, and the interface between primary care, public, and community health. Jack practiced family medicine in his hometown, Yuma, Colorado until this year, when he followed his spouse to Boise, Idaho where he joined a local community health center.

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

Marcella Ogenchuk, RN, PhD – University of Saskatchewan, Saskatoon, SK
Dr Marcella Ogenchuk is a tenured Associate Professor in the University of Saskatchewan (USask)'s College of Nursing. She completed her BSN and Master of Nursing at USask, and her PhD from the College of Education, Department of Education Administration (USask). Dr. Ogenchuk has over 25 years of nursing experience in a variety of settings including acute, community including rural and remote settings in Saskatchewan. The focus of her practice and research is community-led. The population that she focuses on is children and youth.

Dr. Ogenchuk has been instrumental in developing pathways of care for urban elementary students using a multidisciplinary approach in the area of substance use prevention and oral health practice. She is working with communities in developing a tool for early identification of alcohol use disorder and has contributed to resources for families living with SUD (substance use disorder).

Master of Ceremonies – Jeffery DC Irvine, BSc, MD, MPH, CCFP

Dr. Jeff Irvine is a rural family physician in La Ronge, Saskatchewan, and faculty with the University of Saskatchewan's Department of Family Medicine. His practice has included primary care, emergency medicine, and obstetrics. He serves as Faculty Development Site Lead and Resident Scholarship Site Lead for the La Ronge Residency Training Program. His academic interests include rural and northern health systems, substance use in primary care, and community-partnered research, with a focus on supporting resident scholarship and locally relevant quality improvement.

Acknowledgements

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

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

Administrative Support

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

Prairieland Park

Kim Ferguson, Staff and Technical Support.

Assessing the Impact of the City of Prince Albert's Alcohol Bylaw on Emergency Department Visits

Daniel Antonenko, FMR II; Camille Mutukistna, FMR II; Natalie Tinney, FMR II
Jeffery DC Irvine, BSc, MD, MPH, CCFP; Lauren Rusk, BHSc, MPH
Ananna Arna, BASc, MSc; Ahmed Faress, MD MSc, FRCPC; Anna Dinsdale, BA, MPH

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

ABSTRACT

Background: Alcohol use is a major contributor to preventable morbidity and health system burden in Saskatchewan, where it is associated with more than 34,000 emergency department (ED) visits and hospitalizations annually. In June 2024, Prince Albert, Saskatchewan implemented a municipal bylaw reducing retail alcohol sale hours, creating a natural experiment to evaluate whether reduced alcohol availability was associated with changes in alcohol-related ED presentations.

Question(s): Was implementation of a municipal alcohol sale-hour restriction associated with a change in alcohol-related ED presentations in Prince Albert?

Methods/Methodology: We conducted a quasi-experimental interrupted time series study of alcohol-related ED presentations to Victoria Hospital from June 1, 2023 to May 31, 2025, including 12 months before and after policy implementation. ED visit data were obtained from the National Ambulatory Care Reporting System (NACRS). Alcohol-related visits were identified using alcohol-specific ICD-10-CA codes and structured chart review of selected non-alcohol-coded presentations. This study was approved by the University of Saskatchewan Research Ethics Board (Bio 1565) with Saskatchewan Health Authority operational approval (OA-UofS-5165).

Results/Findings: A total of 2,594 alcohol-related ED presentations were identified, representing 6.8% of all ED visits. Mean weekly alcohol-related ED presentations decreased from 27.0 before policy implementation to 22.7 after implementation, a 15.9% reduction. Interrupted time series analysis demonstrated a statistically significant immediate reduction in weekly alcohol-related ED presentations following policy implementation (level change coefficient −0.520, standard error 0.167; p=0.0018).

Discussion: Implementation of a municipal alcohol sale-hour restriction in Prince Albert was associated with an immediate reduction in alcohol-related ED presentations. Alcohol involvement was also frequently identified in presentations not coded primarily as alcohol-related, suggesting administrative coding alone likely underestimates alcohol-related acute care burden.

Conclusions: Reduced municipal alcohol sale hours were associated with fewer alcohol-related ED presentations at Prince Albert's regional hospital.

Recommendations: Municipal regulation of alcohol retail availability should be considered a local policy tool to reduce alcohol-related harm and health system burden. Similar evaluations should be undertaken in other Canadian municipalities.

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Understanding Emergency Department Use for Non-Emergent MSK Complaints in Moose Jaw, SK

Justin Hall, FMR II; Anna Ignacio, FMR II; Mark Young, FMR II
Brandon Thorpe, MB.BCh, CCFP, FLEX; Adam Clay, MSc

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

ABSTRACT

Background: Emergency departments (EDs) across Canada experienced overcrowding and prolonged wait times. In some regions, up to 25% of ED visits are for non-urgent musculoskeletal (MSK) presentations, which include sprains, back pain, and tendinopathies. However, no local data exists for Moose Jaw.

Question(s): What percentage of visits to the ED at Dr. F.H. Wigmore Regional Hospital between January 2022 and 2025 were for non-emergent MSK injuries within the scope of a physiotherapist?

Methods/Methodology: Data entered by the Dr. F.H. Wigmore Regional Hospital into the National Ambulatory Care Reporting Systems was used to identity visits between January 1, 2022, and January 31, 2025. Low acuity visits (CTAS 4 or 5) with an ICD diagnostic code within the scope of physiotherapy were included. This study received ethics approval from the University of Saskatchewan's Biomedical Research Ethics Board (Bio-5759) and Operational Approval from the Saskatchewan Health Authority (OA-UofS-5759 Exempt).

Results/Findings: 1,118 patients presented with diagnoses within the scope of physiotherapy practice, representing 1.6% of 71,881 total ED visits. The median age was 47 years (interquartile range: 34–66). Low back pain was the most frequent diagnosis (40.1%), and most patients (87.2%) were discharged home.

Discussion: Non-emergent MSK presentations accounted for a small proportion of ED visits, with low back pain being the most frequent diagnosis. This proportion is lower than that reported in prior literature, which has estimated a substantially larger share of ED utilization attributed to MSK conditions. This difference is likely due to methodological variation, as only CTAS 4–5 presentations were included and higher-acuity MSK cases were excluded. Although infrequent, these visits contribute to emergency department resource use, including physician assessment and diagnostic investigations.

Conclusions: Less than 2% of ED visits in Moose Jaw were for non-emergent MSK injuries within the physiotherapy scope. Although low in prevalence, these presentations represent a measurable component of ED utilization and contribute to overall service demand.

Recommendations: Strategies could include integrating allied healthcare professionals, such as physiotherapists, into ED workflows and developing alternative care pathways for non-urgent

MSK presentations. Future research could include all CTAS scores and evaluate healthcare costs of MSK visits.

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Improving the Management of Chronic Obstructive Pulmonary Disease (COPD) at the Family Medicine Unit in Regina

Ali Alfayyadh, FMR II; Andrea Vasquez Camargo, MD, CCFP, MSc;
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ABSTRACT

Background: Chronic obstructive pulmonary disease (COPD) affects 10% of Canadians aged ≥35 years[1]. At the Family Medicine Unit (FMU) in Regina, Saskatchewan, the number of spirometry-confirmed COPD patients and adherence to the 2023 Canadian Thoracic Society (CTS) recommended baseline pharmacotherapy were unknown.

Question(s): This quality improvement project aims to determine the percentage of patients with documented COPD diagnosis at the FMU with confirmatory spirometry within the past five years and to assess the proportion receiving baseline long-acting bronchodilator (LABD) therapy per the 2023 CTS guidelines.

Methods/Methodology: Patients over the age of 50 were identified using the Canadian Primary Care Sentinel Surveillance Network case definitions for COPD, with the addition of asthma-COPD overlap diagnosis. A retrospective chart audit was conducted using MedAccess electronic medical records, reviewing spirometry status (2020–2024) and pharmacotherapy. The project received exemption from the University of Saskatchewan's Biomedical Research Ethics Board (E-Bio-080) and Operational Approval from the Saskatchewan Health Authority (E-Bio-080 Exempt).

Results/Findings: Of the 270 patients identified, 135 were included in the chart review, of whom 132 were active. Spirometry confirmation was documented for 51 patients (38.6%). Among these, 16 had Chronic Disease Management (CDM) visits in 2024, of whom 14 (87.5%) were prescribed LABD therapy. Overall, 42 patients (82.4%) were on LABD therapy. Among the 81 non-confirmed cases, 48 had spirometry performed, with 27 showing no evidence of COPD, 20 having uninterpreted results, and 1 interpreted as a borderline for obstruction.

Discussion: This project highlighted a low spirometry confirmation rate of 38.6%. Adherence to LABD therapy was relatively good overall amongst confirmed patients (82.4%) and even higher among those with CDM visits within 2024 (87.5%). A notable finding was that 20 spirometry tests remained uninterpreted. These results reflect the challenges of diagnosing COPD in primary care.

Conclusions: The project established key baseline data for the FMU. While spirometry confirmation remains low and many uninterpreted, adherence to LABD therapy is relatively

strong especially among patients with recent CDM visits. These findings highlight opportunities for quality improvement interventions.

Recommendations: Future interventions may include pharmacotherapy adjustment recommendations to the most responsible physicians, enhanced spirometry interpretation pathways and documentation, and optimizing CDM template use.

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What Family Physicians Need to Know About Creatine Use in Adolescents and Young Adults: A Scoping Review

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ABSTRACT

Background: Creatine is one of the most widely used ergogenic supplements among adolescents and young adults, particularly those involved in competitive sports. Despite its popularity, many family physicians report uncertainty regarding its safety, dosing, and benefits in this population, highlighting the need for a synthesis of current evidence to support primary care counselling.

Question(s): What evidence exists regarding the safety, dosing, and potential benefits of creatine use in individuals aged 15-25, and what key information should family physicians understand when advising patients?

Methods/Methodology: A Scoping Review was conducted using Covidence. Google Scholar, Embase, Ovid MEDLINE, and PubMed were searched for English-language randomized controlled trials and relevant reviews published within the last 20 years involving healthy, non-pregnant individuals aged 15-25. Due to the presence of all study materials being in the public domain, formal ethics approval was not required.

Results/Findings: Evidence suggests creatine supplementation is generally well tolerated in healthy adolescents and young adults when used at recommended doses. Common regimens include a loading phase of 0.3 g/kg/day for 5-7 days followed by maintenance dosing of 3-5 g/day, though lower-dose strategies without loading also appear effective. Most studies did not evaluate safety as a primary outcome, limiting the strength of safety conclusions. A consistent effect is weight gain related to increased intracellular water retention. Gastrointestinal complaints and muscle cramping have been reported, though these effects are not clearly attributable to creatine. Some studies suggest supplement use among adolescents, including creatine, may be associated with higher-risk of using other performance-enhancing substances such as anabolic steroids. Reported benefits include modest improvements in muscle strength, lean body mass, and high-intensity exercise performance. Limited emerging evidence also suggested a possible role for creatine in treating depression in adolescents.

Conclusions: Creatine use is common among adolescents and young adults, though discussions within family medicine appear limited. Current evidence suggests creatine is generally safe and well tolerated when used appropriately; however, long-term safety data remain limited.

Recommendations: Family physicians should routinely ask about supplement use, screen for concurrent higher-risk substances, and remain up to date with emerging literature to support informed counselling.

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Assessing Adherence for Counselling Non–Insulin-Dependent Type 2 Diabetics Regarding "Sick-Day Rules": A Chart Review of 300 Chronic Disease Management (CDM) Patients at the Family Medicine Unit in Regina, Saskatchewan

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ABSTRACT

Background: Older adults with type 2 diabetes mellitus (T2DM) often face increased risks of dehydration, hypoglycemia, acute kidney injury, and hospitalization during illness due to multiple comorbidities and medications. "Sick-day rules" advise temporary medication adjustments to prevent such complications but are inconsistently applied in primary care.

Question(s): What is the proportion of patients with non–insulin-dependent T2DM at the Family Medicine Unit in Regina, Saskatchewan, who received counselling and written reference materials regarding sick-day rules?

Methods/Methodology: Patients aged 65 years or older with non–insulin-dependent T2DM who were prescribed at least one glucose-lowering medication were identified using the reporting function in the Electronic Medical Record (EMR). Patients were enrolled in the CDM roster at the Family Medicine Unit for at least 12 months. Records were then manually reviewed to collect demographics, comorbidities (congestive heart failure, chronic kidney disease, and coronary artery disease), and documentation of counselling or written resources provided during clinic visits. Descriptive statistics and Fisher's exact tests were conducted. Ethics Approval was received from the University of Saskatchewan's Biomedical REB (Bio ID 5831) and Operational approval (OA-Bio-5831) was granted by the Saskatchewan Health Authority.

Results/Findings: The cohort captured in our study (n=299) had a median age of 73 years (IQR, 69–79), and 48.7% (n=146) were male. Overall, 31.3% (n=94) had documented sick-day counselling by a physician at the Family Medicine Unit, and 19.7% (n=59) had documentation of written materials provided during the encounter. Counselling rates did not differ significantly by age, sex, or comorbidity status ($p>0.05$). Of the 206 patients without documented counselling, 63 had major comorbidities.

Discussion: Documentation of sick-day education was suboptimal, particularly for patients with significant comorbidities. The findings are consistent with current literature, which demonstrates inconsistent clinician familiarity, a lack of standardized workflows, and limited EMR prompts to support documentation.

Conclusions: Sick-day counselling and written resource provision were infrequent and inconsistent, highlighting a significant learning opportunity for physicians managing patients with T2DM.

Recommendations: Integrating EMR prompts, easy-access patient handouts, and targeted clinician education may improve consistency of counselling efforts. Implementing these supports, along with a follow-up audit, is recommended to assess their impact.

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Appropriate primary care prescribing and patient compliance with compression therapy for venous insufficiency

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ABSTRACT

Background: Varicose veins and chronic venous insufficiency are common conditions that may significantly impact patient quality of life. Most cases can be effectively managed with compression therapy administered in primary care settings.

Question(s): In patients referred to vascular surgery for varicose veins orvenous insufficiency, how often do family physicians prescribe compression therapy prior to referral, and what is the rate of patient adherence to prescribed compression therapy?

Methods/Methodology: A retrospective chart review was completed for patients of family physicians working at the Family Medicine Unit, The Nest, Greens Medical Clinic, Stapleford Medical Clinic or Victoria East Medical Clinic. Patients referred to CVT Associates were identified using the CVT Associates database. Vascular surgery consult notes and family physician referral letters were reviewed to determine whether compression therapy was prescribed before referral and whether compliance was documented. This project was approved by the University of Saskatchewan's Biomedical Research Ethics Board (Bio 6047).

Results/Findings: A total of 287 patients were identified based on the CVT Associates database. Manual chart review identified 113 patients referred for varicose veins/venous insufficiency. Referrals per family physician ranged from 1 to 10. Before January 31, 2021, 19 of 76 referrals (25.0%) documented compression therapy prescription. After January 31, 2021, 12 of 37 referrals (32.4%) documented compression therapy prescription. Overall, 31 of 113 referrals (27.4%) documented compression therapy before referral. Patient compliance was noted at CVT in 10 of 76 patients (13.2%) before January 31, 2021, and 10 of 35 patients seen after January 31, 2021 (28.6%). Most patients were not offered intervention due to a lack of indications for invasive therapy.

Discussion: These findings suggest documentation of compression therapy prior to referral is often inconsistent, highlighting an opportunity for education within the primary care setting.

Conclusions: Compression therapy was documented in a minority of referrals, despite being first line conservative management.

Recommendations: Future improvement could include teaching, clearer documentation of compression therapy education, and referral prompts encouraging a trial of conservative management before vascular surgery referral.

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Evaluating Physicians' Perceptions of Procedural Skills Taught in Saskatchewan's Family Medicine Surgical Skills Curriculum

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ABSTRACT

Background: Procedural competence is an essential component of comprehensive family medicine training. However, family physicians may perform fewer procedures after residency due to limited confidence, low clinical volume, or practice environment constraints. Understanding graduates' perceptions of the Family Medicine Surgical Skills Curriculums in Saskatchewan can identify whether training is relevant to independent practice and where curriculum improvements are needed.

Question(s): How do University of Saskatchewan Family Medicine graduates perceive the relevance, confidence, and applicability of procedural skills taught during residency? What barriers to procedural practice and curriculum improvements do they identify?

Methods/Methodology: A cross-sectional online survey with closed- and open-ended items was distributed to family physicians who graduated from Saskatchewan's Family Medicine Program between July 1, 2017 and June 30, 2024. Quantitative data were summarized using descriptive statistics, and data from open-ended responses were reviewed to identify recurring themes. Ethics approval was obtained through the University of Saskatchewan Behavioural Research Ethics Board (Beh 6177).

Results/Findings: 34 respondents were analyzed (34/312 = 10.9%), including urban 19 (55.9%), regional 13 (38.2%), and rural 2 (5.9%) physicians. Twenty-one (61.7%) graduated within 5 years. Most graduates (33–34; 97–100%) intended to perform local anesthetic and skin procedures; only 4–12 respondents (11.7–35.2%) were not currently performing them. Fewer than half performed most gastrointestinal, genitourinary, and MSK procedures, except shoulder 25 (78.1%) and knee injections 28 (84.8%). Practice environment influenced expected procedural use for 29/31 respondents (93.5%). Barriers included limited time, equipment availability, lack of confidence or experience, and limited opportunities. Suggested improvements included more hands-on workshops, simulation-based training, mentorship, greater procedural volume, and repeated exposure.

Discussion: Findings align with literature showing that structured curricula, simulation, mentorship, and repeated exposure support procedural confidence, while limited clinical volume remains a barrier. Although respondents perceived the curriculums as relevant, variable confidence and use suggest that ongoing procedural opportunities are needed.

Conclusions: The Surgical Skills Curriculums in Saskatchewan appears relevant to family medicine practice, but opportunities exist to strengthen confidence and sustain procedural use after graduation.

Recommendations: Future curriculum development should prioritize repeated hands-on exposure, simulation, mentorship, and structured opportunities across both urban and rural sites.

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A Rapid Review of Principles, Practices, and Challenges in Canada, Australia, and New Zealand Regarding the Teaching of Indigenous Health in Medical Education

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ABSTRACT

Background: Indigenous populations in Canada continue to experience significant health inequities rooted in colonization and systemic racism. Medical education institutions are at the forefront of reconciliation and are key organizations in addressing the Truth and Reconciliation Commission of Canada's Call to Action #24 regarding Indigenous health education for health professionals.

Question(s):
1. What principles, strategies, and exemplary practices have other institutions both in Canada and Australia/New Zealand utilized to promote successful integration of Indigenous health curriculum into their medical training programs?
2. What challenges to the integration of Indigenous health curriculum into medical training programs have been identified in Canadian and Australia/New Zealand contexts?

Methods/Methodology: A rapid review of the PubMed database was commenced on September 15, 2025. Following structured screening of 238 articles by two reviewers using predefined inclusion and exclusion criteria, 32 studies were included and analyzed using thematic analysis. Due to the presence of all study materials in the public domain, formal ethics approval was not required.

Results/Findings: Successful Indigenous health harmonization is characterized by community-led partnerships, longitudinal immersion, and a collaborative approach. However, significant barriers remain, including the persistence of institutional racism, resource scarcity, and already overloaded curriculum.

Discussion: This review highlights that effective Indigenous health education extends beyond content delivery to relational, structural, and experiential learning. Community-led partnerships and immersive experiences are central to fostering cultural humility and advocacy. However, their implementation is constrained by limited resources, competing curricular demands, and insufficient institutional commitment. The findings show a gap between policy expectations and practical execution, suggesting that without sustained structural support and accountability, efforts risk remaining superficial rather than transformative.

Conclusions: Effective harmonization requires moving toward a model that emphasizes lifelong self-critique and institutional support.

Recommendations: Future reforms must focus on building partnerships to ensure Indigenous health is a core, rather than marginal, component of medical professionalism, with an emphasis on community-led, immersive, collaborative models.

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A Review of Preventative Care in HIV Care

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ABSTRACT

Background: Screening for common non-infectious comorbidities is critical to providing comprehensive care for people living with HIV (PLWHIV). West Winds Primary Health Centre (WWPHC) offers outpatient HIV care as part of the Positive Living Program (PLP) services offered by the SHA. This study references the Primary Care Guidelines for the Management of Adults Living With HIV/AIDS in British Columbia (BC-CfE HIV/AIDS Guidelines) to examine the current rate of non-infectious comorbidity screening for PLWHIV at WWPHC.

Question(s): Are PLWHIV who receive care at WWPHC screened for common non-infectious comorbidities in accordance with recommendations set out by the BC-CfE HIV/AIDS Guidelines?

Methods/Methodology: This was a retrospective chart review of 49 patients who are a part of the PLP at WWPHC from January of 2024 to December of 2025. Charts containing a diagnostic code for HIV were de-identified and screening was coded as not up to date, up to date, or missing. Descriptive analyses were performed with the support of CRSU. This project was Exempt from Ethics (E-Bio-090) and received SHA Operational Approval.

Results/Findings: Liver function, renal function, lipid levels, and diabetes were recorded as the screening most often up to date (76.6%-83.7%). Screening investigations such as blood pressure reading that required an in-person appointment was lower at 71.4%. Cervical cancer was the least likely completed screen at 39%.

Discussion: In-office testing such as blood pressure had the highest screening rates followed by serum laboratory testing. Pap testing and FIT had the lowest up to date rates, likely because they are more invasive and difficult to arrange. A lower mean of attended visits compared to scheduled visits, which may indicate larger potential systemic barriers to obtaining healthcare.

Conclusions: This study has identified that there is a gap in screening for non-infectious comorbidities in PLWHIV who receive care at WWPHC.

Recommendations: Consider qualitative studies to identify potential barriers to providing the recommended screening investigations. Multidisciplinary teams and integrated care networks could help identify shared goals and help manage concurrent needs to help optimize and streamline care.

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Accessing Healthcare and Affirming Care: Perspectives of 2SLGBTQIA+ Individuals in North Battleford, Saskatchewan

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ABSTRACT

Background: Family medicine aims to provide inclusive and accessible care to everyone, including members of the 2SLGBTQIA+ community who may not feel comfortable presenting for care. With support from local organizations, we hoped to better understand the experiences and perspectives of community members to suggest improvements to North Battleford's primary care, public health, and urgent/emergent care services.

Question(s): This project aims to examine the quality, accessibility, and potential improvement of front-line services for 2SLGBTQIA+-identifying patients in North Battleford.

Methods/Methodology: Distributed through Battlefords Pride and Battle River Treaty 6 Health Centre, this cross-sectional, mixed qualitative/quantitative online survey for 2SLGBTQIA+-identifying individuals inquired about experiences related to primary care, public health clinics, walk-in clinics, or emergency department services in North Battleford, Saskatchewan during the last five years. This study was exempted from Research Ethics Board review (E-Bio-129) as quality improvement work.

Results/Findings: Five of nine participants met the eligibility criteria and submitted the survey. All respondents had received care for urgent health needs (5/5) or chronic conditions (4/5). Satisfaction with routine care was found to be high, although trust in providers to respect gender identity and sexual orientation was moderate. The most reported barrier was universal assumption-making by healthcare staff about patients' gender identity or sexual orientation. Securing access to a provider knowledgeable in 2SLGBTQIA+ health needs was also reported to be difficult; however, a trusted provider relationship was the strongest facilitator of identity disclosure.

Discussion: These findings are consistent with patterns documented in 2SLGBTQIA+ health literature, showing a complex intersectionality in sexual orientation, gender orientation, socio-economic status, ethnicity, and other personal/cultural aspects to access care. Barriers such as heteronormative assumptions and a lack of inclusive intake processes continue to block equitable access.

Conclusions: The results suggest gaps in affirming care in North Battleford. Provider education, inclusive intake forms, and investment in primary care continuity are priority areas for improving 2SLGBTQIA+ healthcare equity in this region.

Recommendations: Enhanced education, clinical practices, and institutional policies, along with continual feedback from local PRIDE networks could help ensure the delivery of equitable and inclusive healthcare in the community.

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Investigating parenthood considerations and subsequent challenges while training in a Family Medicine Residency in Saskatchewan

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ABSTRACT

Background: Residency is a demanding phase of training often coinciding with the period when physicians consider starting or expanding their families. In family medicine, the emphasis on continuity and holistic care may conflict with the reality of long hours, emotional demands, and rigid schedules within training. Parenthood decisions in residency are likely influenced by multiple factors including workload, financial pressures, culture of the program, and career progression. Different programs may vary in their parental leave policies, clarity, consistency, and cultural acceptance regarding having a child during residency.

Question(s): This study aimed to explore parenthood considerations, challenges, and perceived program supports among family medicine residents at the University of Saskatchewan, including factors influencing decisions to have children during residency.

Methods/Methodology: This study was approved by the University of Saskatchewan Behavioural Research Ethics Board (REB #5653). An anonymous, online questionnaire was distributed to family medicine and FM+1 residents over one year. The survey included approximately 50 structured questions assessing decision-making factors, experiences of parenthood during residency, and perceptions of program support.

Results/Findings: Forty-one submitted responses were analyzed. Respondents were most often aged 30–34 years (36.6%), identified as cis-gender women (65.9%), and were in partnered relationships (87.8%). Overall, 24.4% reported having children during residency. Experiences among resident parents were generally positive, particularly regarding program leadership and return-to-training support, although leave duration varied, and some desired longer leave. Reported challenges included guilt related to family separation, on-call demands, and loss of peer continuity. Among residents without children, key barriers included timing within training, perceived impact on career progression, and limited childcare access.

Discussion: Findings highlight a complex interplay between training demands and family planning. While supportive elements exist, variability in leave practices, reintegration experiences, continuing medical education, and childcare access suggests inconsistency in policy implementation.

Conclusions: Residents at the University of Saskatchewan's family medicine program experience both meaningful support and ongoing structural challenges when navigating parenthood during training.

Recommendations: Parental leave policies should promote consistent and equitable support for residents across sites, while allowing implementation flexibility. Enhancing scheduling flexibility, expanding childcare access, and strengthening reintegration supports may help address current gaps and improve training environments.

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Influence of prenatal hand expression on postpartum breastfeeding

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ABSTRACT

Background: Prenatal hand-expression of colostrum has been promoted in the Battlefords since 2016 through distribution of collection kits at 36 weeks' gestation, but its impact on breastfeeding outcomes remains unassessed. Early breastfeeding is critical, especially in rural settings with access and equity challenges.

Question(s): This study aimed to evaluate whether prenatal hand-expression is associated with (1) increased initiation of breastfeeding within 24 hours postpartum, (2) improved maternal breastfeeding confidence, and (3) differences in obstetrical outcomes. A secondary objective was to assess uptake of hand-expression and its relationship with access to colostrum kits, addressing effectiveness, access, and equity.

Methods/Methodology: A retrospective cohort study was conducted among postpartum patients at Battlefords Union Hospital. Participants completed a survey either electronically or verbally during their hospital stay. Data were collected over 6 months and analyzed using descriptive and comparative statistics. Ethics approval was obtained from the University of Saskatchewan's Behavioral Research Ethics Board (Beh ID 5472).

Results/Findings: Of 77 patients approached, 71 participated; 31 (43.7%) had practiced prenatal hand-expression. Exclusive breastfeeding at time of survey was significantly higher among those who hand-expressed compared to those who did not (64.5% vs. 32.5%, $p=0.007$). High breastfeeding confidence was reported by 93.5% of those who hand-expressed versus 80.0% among those who did not ($p=0.17$), with 77% of those expressing reporting improved confidence. Participants who received a colostrum kit were significantly more likely to practice hand-expression compared to non-recipients (61% vs. 5%, $p<0.001$). However, 22 participants (31.0%) did not receive a kit, associated with lower education and later prenatal care. No significant association was observed between prenatal hand-expression and obstetrical outcomes.

Discussion: Prenatal hand-expression is associated with improved early breastfeeding continuance and may enhance maternal confidence. Kit distribution appears to be the primary driver of uptake, with accessibility linked to social inequities.

Conclusions: Prenatal hand-expression represents an effective, low-risk, and scalable intervention to improve early breastfeeding outcomes in a rural population.

Recommendations: All eligible patients should be offered a colostrum kit, with attention to equitable distribution. Additional support should be provided for those unsuccessful with hand-expression, and strategies to improve access for underserved populations are needed.

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Evaluation of a Prenatal and Postpartum Educational Resource at West Winds Primary Health Care Centre

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ABSTRACT

Background: Patients receiving prenatal care in primary care settings frequently have questions regarding investigations, pregnancy milestones, and postpartum care. At West Winds Primary Health Care Centre (WWPHC), the absence of standardized educational materials contributed to inconsistent information delivery and increased non-urgent patient contact. This represents a local quality improvement problem affecting efficiency, patient-centeredness, and provider workload.

Question(s): What are healthcare provider perceptions of a standardized prenatal and postpartum educational resource, and how does its implementation impact clinic workflow, patient preparedness, and communication burden? This project addresses the dimensions of efficiency and patient-centeredness.

Methods/Methodology: This qualitative study used a Plan-Do-Study-Act cycle (PDSA). A pre-survey was used to assess physician usage of maternal educational tools and advice for the development of a standard resource. The resource was then implemented, and a post survey given to iterate the PDSA cycle. Forty-nine surveys were sent to people involved in prenatal care. The educational resources were developed and provided to maternity patients. Survey items assessed perceptions of workflow efficiency, patient preparedness, and non-urgent patient communication. Descriptive statistics were used to summarize responses. An Ethical Exemption was received (Beh E794).

Results/Findings: Eighteen health care practitioners completed the pre-implementation survey and six completed the post-implementation survey. Prior to implementation, 61% of respondents were unsure how patients accessed prenatal educational materials, indicating lack of a standardized approach. Post-implementation, participants reported perceived benefits including reduced non-urgent patient calls and emails, improved patient preparedness, and enhanced planning of prenatal investigations.

Discussion: These findings suggest that a standardized, accessible educational resources may improve clinic efficiency and patient understanding. Existing literature supports the role of prenatal and postpartum education in improving maternal knowledge, self-efficacy, and healthcare engagement. Limitations include small post-implementation sample size.

Conclusions: A QR code-accessible prenatal and printed postpartum educational resource was perceived to improve patient education and clinic workflow at WWPHC.

Recommendations: Future initiatives should include patient feedback, increase clinician uptake, and measure objective outcomes such as communication frequency and visit efficiency. Additional studies evaluating maternal mental health outcomes and postpartum support interventions may further strengthen educational resource development.

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Increasing Rates of Cervical Cancer Screening at a Rural Family Medicine Clinic

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ABSTRACT

Background: Cervical cancer is highly preventable through routine screening. Despite this, cervical cancer screening rates remain suboptimal in many rural primary care settings. Barriers identified include limited opportunistic screening, workflow constraints, provider discomfort, and patient access challenges. At the Associate Family Physicians Clinic (AFPC) in Swift Current, the screening rate was 30.1% among eligible patients which is substantially lower than national benchmarks, highlighting a gap in preventive care delivery.

Question(s): To increase cervical cancer screening uptake at AFPC from 30.1% to 68% over a 9-month period improving effectiveness, access, and equity in preventive care delivery.

Methods/Methodology: This Quality Improvement (QI) initiative used the Model for Improvement. A multidisciplinary stakeholder group, including physicians, residents, nursing staff, medical office assistants, and a patient partner, identified barriers and implemented interventions including reminders in the electronic medical record (EMR), staff audit and feedback, opportunistic screening workflows, patient education materials, and expanded nursing involvement in screening. Monthly data was extracted from Accuro EMR and displayed on run charts time. This project was deemed exempt from ethical review by the University of Saskatchewan Biomedical Research Ethics Board (E-Bio-082).

Results/Findings: The baseline cervical cancer screening rate was 30.1%, among approximately 6,000 eligible patients. Following 9 months of interventions, screening rates increased to approximately 34%, representing a 4% improvement. The most effective intervention was Medical Office Assistant (MOA)/Nursing led patient recall and nursing led pap smear clinics.

Discussion: Team-based interventions, including proactive patient outreach and expanded roles for MOAs and nursing staff, were effective in increasing cervical cancer screening rates at AFPC. In particular, expanding the nursing role to perform pap smear offers significant benefits and contributed to improved screening uptake.

Despite these improvements, the overall increase fell short of the target. There is a need to address ongoing barriers and for sustained, scalable strategies to reach under-screened populations.

Conclusions: This QI initiative fell short of goal of 68% cervical cancer screening uptake sustained incremental gains over time, supporting the effectiveness of structured, team-based interventions.

Recommendations: Future improvement efforts may include expanded nursing-led screening, enhanced patient outreach strategies, and evaluation of self-sampling options as system resources allow.

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The Effect of Non-Sterile Gloves on Infection Rates in Family Medicine Office-Based Procedures

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ABSTRACT

Background: The use of sterile gloves for minor procedures in primary care is common practice; however, evidence supporting their superiority over non-sterile gloves remains limited. Several studies suggest comparable infection rates, but data from academic family medicine settings are scarce. This study evaluates whether non-sterile gloves are associated with increased post-procedural infection rates in a primary care office setting.

Question(s): Does the use of non-sterile gloves for in-office procedures result in any difference in infection rate when compared with procedures done with sterile gloves?

Methods/Methodology: We performed a retrospective chart review of patients who had procedures done at the Family Medicine Unit from 2015- 2021. Patient demographics (age, sex, comorbidities), lesion sites, and glove type were extracted. Our primary outcome was the presence of signs of infection at follow-up, or the need for antibiotics at subsequent visits for the purpose of treating surgical wound infections. The infection rates were then calculated. Two-sided 95% confidence intervals for the difference in infection rate were used to assess non-inferiority. To account for patients lost to follow up, an additional sensitivity analysis was performed. We obtained ethical approval through the Saskatchewan Health Authority's Research Ethics Board (SHA-REB-19-85) and also received SHA Operational Approval (OA-SHA-19-85).

Results/Findings: A total of 257 patients (158 non-sterile, 99 sterile) and 311 lesions were included. Among lesions with follow-up, infection rates were 8.8% (10/113) in the non-sterile group and 12.2% (10/82) in the sterile group (difference -3.3%, 95% CI -13.0% to 5.3%, p=0.447). Sensitivity analyses accounting for patients lost to follow-up demonstrated similar findings, with consistently small, non-significant differences between groups.

Discussion: The observed differences in infection rates were small and not statistically significant and remained within a clinically acceptable margin. These findings are consistent with prior literature suggesting that non-sterile gloves may provide comparable infection rate in minor procedures.

Conclusions: In this academic family medicine office-based procedure setting, the use of non-sterile gloves was not associated with a higher infection rate compared with sterile gloves.

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Artificial Intelligence in Primary Care: A Scoping Review of Perceptions, Adoption, and Emerging Implications of Generative AI

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ABSTRACT

Background: Artificial intelligence (AI) is increasingly becoming integrated into primary care, however, its adoption is shaped by clinician and patient perceptions, workflow, and the evolving ethical and system-level considerations. Also, the rapid emergence of generative AI have introduced additional complexities that remain poorly understood within primary care contexts.

Question(s): This scoping review examines the perceptions, barriers, and facilitators influencing AI adoption in primary care among clinicians and patients, with attention to the ethical, relational, and system-level factors shaping these experiences.

Methods/Methodology: We conducted a Scoping Review following PRISMA-ScR guidelines. Six databases (MEDLINE, PubMed, Embase, Scopus, Web of Science, and CINAHL) were searched for studies published from 2020 onward, supplemented by grey literature and targeted hand-searching. Eligible sources included empirical studies, reviews, and selected commentaries examining AI in primary care. Data were synthesized using descriptive and thematic analysis. Ethics approval was not applicable for this study.

Results/Findings: Thirty-two studies were included, most from North America and employing qualitative or mixed-methods designs. Clinician perceptions were mixed, with reported benefits including improved efficiency, documentation support, and clinical decision-making. Concerns of AI use centred on trust, accuracy, workflow integration, and medico-legal accountability. Patient perspectives were generally cautious but supportive when clinician oversight was maintained. Generative AI, particularly ambient documentation systems, demonstrated workflow benefits but introduced risks such as hallucinated outputs, authorship ambiguity, and increased verification burden. Ethical, relational, and system-level challenges, including governance, infrastructure, and equity, emerged as consistent cross-cutting themes.

Discussion: AI adoption in primary care is conditional, shaped by trust, workflow fit, and the preservation of clinician–patient relationships. Generative AI represents a notable shift, contributing directly to clinical documentation while introducing new challenges related to accuracy, accountability, and the human dimensions of care. Equity in AI use remains underexplored, with limited representation of diverse patient populations.

Conclusions: AI holds dual potential in primary care, to improve efficiency and reduce clinician burden, while also risking disruption to the relational foundations of care.

Recommendations: Future research should prioritize longitudinal, outcome-based, and equity-focused studies to better understand how AI is experienced across diverse populations and its long-term impact on clinical practice.

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Understanding Missed Appointments at West Winds Primary Health Centre: Perspectives and Opportunities

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ABSTRACT

Background: Missed appointments represent a persistent challenge in primary care, contributing to inefficiencies, lost capacity, and gaps in patient care. Hitherto, no formal examination of missed appointments has occurred within WWPHC. Understanding the nature, frequency, and contributory factors to missed appointments is important, as optimizing efficiency improves patient experience and outcomes, and staff satisfaction. This project addresses a local quality improvement gap – examining missed appointments at WWPHC and their implications for access, efficiency, and patient-centered care.

Question(s): This study asked: (1) Among WWPHC patients, what patient-level demographic, clinical, and access-related factors are associated with missed family physician appointments? (2) How do these factors differ between patients missing one appointment and those missing multiple appointments? Primarily addressed were quality dimensions of efficiency, access, and patient-centeredness.

Methods/Methodology: A retrospective EMR review examined the most recent 99 missed appointments over a one-month period at WWPHC. Data included demographics, postal codes, comorbidities, psychological factors, and appointment type. Data was analyzed in Excel using descriptive statistics and thematic qualitative analysis. This project received exemption from the University of Saskatchewan Research Ethics Board #E-Bio118.

Results/Findings: Missed appointments studied represented nearly one full working week of family physician time. Most patients missed single appointments; however, some missed multiple. Prescription refills and result follow-ups were most commonly missed. Missed appointments clustered in neighborhoods closest to WWPHC. Fewer missed appointments occurred among patients with household incomes above $75,000.

Discussion: Findings suggest that commonly missed appointments may represent opportunities for alternative care modalities, particularly virtual care, given their non-acute nature. With the high proportion of unattached patients provincially, addressing inefficiencies associated with missed appointments may improve access and overall system capacity.

Conclusions: Missed appointments at WWPHC are common, result in considerable lost clinical time, and are influenced by appointment type and socioeconomic factors. Addressing this could improve efficiency and support patient-centered care delivery.

Recommendations Future improvement initiatives include implementing EMR-based documentation of missed appointment reasons, expanding reminder and notification supports, testing flexible scheduling and virtual care options for appropriate visits. Examining over-users could provide insight for streamlining patient care for future improvement studies.

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Exploring the Relationship Between Clinical Scheduling Practices, Resident Wellness, and Patient Care in Saskatchewan's Family Medicine Training Programs

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ABSTRACT

Background: Medical residency is characterized by prolonged work hours that contribute to sleep deprivation, fatigue, and burnout, with well-established impacts on cognitive performance, decision-making, and patient care. Although extensive research, largely conducted prior to 80-hour workweek reforms in the United States, has examined these effects, less is known in the Canadian context, where resident work hours are provincially regulated. In Saskatchewan, call structures vary widely across family medicine training sites, with inconsistencies in shift lengths and post-call recovery periods. The purpose of this study was to illuminate residents' perspectives to optimize wellness and learning outcomes.

Question(s): Are higher clinical scheduling demands associated with increased emotional exhaustion among family medicine residents?

Methods/Methodology: This mixed-methods cross-sectional study combined quantitative survey data with open-ended qualitative responses. All PGY-1 and PGY-2 residents at urban, rural, and regional training sites in Saskatchewan's Department of Family Medicine residency program were invited to participate by email. Measures included scheduling burden (weekly work hours, call frequency, post-call recovery), fatigue exposure (frequency of sleep deprivation, sleep during call), emotional exhaustion (adapted from the Maslach Burnout Inventory), and psychological distress (GAD-7). Emotional exhaustion was dichotomized at the sample median. Descriptive statistics and bivariate analyses were conducted, followed by multivariable logistic regression. Ethics approval was obtained from the University of Saskatchewan Research Ethics Board (ID#5885).

Results/Findings: Residents reporting more frequent sleep deprivation and those working more than 60 hours per week were more likely to experience high emotional exhaustion, though these associations were not statistically significant. Psychological distress was strongly associated with emotional exhaustion, and residents reporting moderate-to-severe anxiety were significantly more likely to experience high emotional exhaustion ($p < 0.001$). Call frequency showed an inverse, non-significant association with emotional exhaustion, and other scheduling variables were not significantly associated in bivariate analyses.

Conclusions: Our study's findings suggest a pathway linking scheduling burden, fatigue, and emotional exhaustion. Emotional exhaustion was also linked to perceived impacts on clinical decision-making and patient safety. These findings underscore the importance of addressing structural scheduling practices to support resident well-being, physician retention, and high-quality patient care. Further longitudinal research is needed to inform targeted interventions.

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Exploration of Patient Perspectives of the Use of Artificial Intelligence (AI) Scribe in a Family Medicine Clinic

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Abstract

Background: Ambient artificial intelligence (AI) scribes are increasingly used in primary care to generate draft clinical notes by listening to patient–physician interactions. While they may improve efficiency and workflow, they also raise ethical concerns related to patient comfort, trust, understanding, and consent. Understanding patient perspectives is essential for transparent and ethical implementation.

Question(s): This study explored patients' perceptions of the use of ambient AI scribes in a primary care clinic, including awareness, comfort, perceived benefits, and concerns. It aimed to collect anonymous perspectives outside the clinical encounter to encourage candid responses.

Methods/Methodology: A mixed-methods design supported voluntary participation and minimized undue influence. Data were collected via a paper survey at clinic reception and an electronic SurveyMonkey® version accessed through a QR code. Participants could opt into a follow-up phone interview with three structured questions, recorded using Zoom®. Data collection occurred over six weeks. Ethics Approval was obtained from the University of Saskatchewan's Beh # 6026 and SHA OA-UofS-6026.

Results/Findings: Twenty-four participants completed the survey, and four completed interviews. About half (54.2%) had heard of AI scribes, though most reported limited understanding (62.5%). A slight majority (56.5%) were somewhat or very comfortable with their use, and most believed they could improve healthcare quality. Privacy and data security were the most common concerns (75.0%). Perceived benefits included improved physician focus, time savings, and reduced documentation burden. Concerns included trust, accuracy, and reduced human interaction. Many participants expressed a need for greater transparency and education.

Discussion: These findings contribute to emerging research on patient perspectives of AI in healthcare, which has largely focused on clinicians. Generalizability is limited by the single-site setting.

Conclusions: Patients demonstrated cautious acceptance of AI scribes, influenced by limited understanding and concerns about privacy and autonomy. Acceptance was closely tied to being informed and having a choice.

Recommendations: Clinicians should clearly explain AI Scribe use, including data security, accuracy safeguards, and patients' right to decline, to support trust and informed decision-making.

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Penicillin Allergy De-labelling at the Family Medicine Unit: A Quality Improvement Project

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ABSTRACT

Background: In the general population, 10-15% of people report a penicillin allergy but only 10% of these individuals have a positive penicillin skin test. Delabelling of patients without true allergy can reduce antibiotic resistance and adverse events. The PEN-FAST tool is a point-of-care risk assessment to determine low-risk or high-risk for a true penicillin allergy.

Question(s): The quality improvement project aimed to delabel 10% of adult patients documented at the Family Medicine Unit (FMU) as having a penicillin allergy in 6 months.

Methods/Methodology: The Model for Improvement was used. At baseline, patients with documented penicillin allergy could be referred to the clinical pharmacist for evaluation by their family physician. To increase delabelling, a standardized letter was mailed to patients with documentation of penicillin allergy inviting them to schedule an appointment. At the appointment, the PEN-FAST tool was used to identified low-risk patients eligible for oral amoxicillin challenge. If the patient completed the oral amoxicillin challenge without anaphylaxis, the allergy was refuted on their chart. The project received exemption from the University of Saskatchewan Biomedical Research Ethics Board (E-Bio-091) and Operational Approval from the Saskatchewan Health Authority (OA-UofS-E-Bio-091).

Results/Findings: Five-hundred and eight FMU patients were identified as having a penicillin allergy. Of these patients, 102 (20%) were sent letters early February 2026 in a 2-month PDSA cycle. Initial phone visits booked were 15 (14.7%), patients delabelled were 10 (9.8%), 2 (13.3%) met exclusion criteria, and 3 (20%) have an upcoming challenge scheduled with results pending. Of patients who completed an oral amoxicillin challenge, 0 experienced an anaphylactic reaction. Since FMU began delabelling in December 2024, 5.4% of patients have been delabelled with an increase 1.9% during the first PDSA cycle.

Discussion: Overall, the project's aim was not met after one PDSA cycle with only 28 (5.4%) patients delabelled of those with documented allergy. Delabelling increased during the first PDSA cycle.

Conclusions: Additional strategies are required to encourage uptake from patients beyond a mailed letter.

Recommendations: Future PDSA cycles could focus on advising the patient's family physician that a letter has been sent out to facilitate discussion recommending project uptake.

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Dance Movement Therapy's Role in Chronic Disease Management: A Systematic Review

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ABSTRACT

Background: Dance Movement Therapy (DMT) has been introduced to a variety of physical and mental health conditions in combination with standard models of care. With a growing interest in exercise prescribing across Canada, it is important to understand the benefits and challenges of DMT to better provide these programs to patients in primary care.

Question(s): What are the health outcomes of adding DMT in the management of chronic physical diseases compared to standard clinical care?

Methods/Methodology: This systematic review used the following databases: PubMed, Epistemonikos, and Cochrane Library. Only studies written in English, and which were published from 2000 onwards were included. Studies were excluded if the primary focus was a chronic mental health disease or had pediatric or cancer populations. For quality assessment, The Newcastle-Ottawa Scale, the Cochrane Risk of Bias Tool, and A Measurement Tool to Assess Systematic Reviews were used. Due to the situation of all study materials within the public domain, formal ethics approval was not required.

Results/Findings: Ten studies were identified which investigated physical and mental health outcomes and quality of life measures of DMT related to obesity, old age, diabetes, coronary artery disease, chronic heart failure, COPD and Parkinson's disease. The study design captured systematic reviews, randomized controlled trials, and prospective cohort studies. The included studies were conducted in a range of geographic regions: Canada, USA, Europe, Australia, Caribbean, and South Korea.

Discussion: Of the included studies, predominantly physical health outcomes were reported related to balance, gait, blood pressure, body weight and body fat – although it is unclear whether improved mobility translates to greater independence in daily activity or the lasting benefits of DMT. Improvements in self-esteem and body image were also noted compared to traditional activity training. In terms of feasibility, participants reported enjoyment and willingness to continue long term which is encouraging considering individualized exercise prescriptions.

Conclusions: The literature and other available data suggest that DMT has a beneficial role in chronic disease management with no reported adverse events. Further research is required to identify which DMT program would be most helpful for specific physical conditions.

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Enhanced Skills Program Evaluation: Graduate Survey of Career Satisfaction, Support Systems, and Work-Life Integration

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Abstract

Background: Literature suggests that enhanced skills training can expand access to care but also highlights burnout, evolving practice patterns, and discrepancies between intended and actual scope of practice. Evaluation of the University of Saskatchewan's Enhanced Skills (USASK ES) programs ensures alignment with evolving community health needs and the delivery of comprehensive, patient-centered care.

Question(s): How do graduates of the USASK ES Programs apply their enhanced competencies in practice, and how are these patterns associated with job satisfaction and perceived support in their current work environments?

Methods/Methodology: An anonymous cross-sectional survey was conducted among graduates of USASK ES Programs. The survey included closed- and open-ended questions on key domains, including demographics, practice patterns, enhanced skill utilization, workplace environment, and job satisfaction. Quantitative data were analyzed using descriptive statistics, while open-ended responses were analyzed using thematic analysis. This project received approval from the University of Saskatchewan's Behavioural Research Ethics Board (Beh-REB #6022).

Results/Findings: Thirty-five responses were analyzed (response-rate 18%). Most respondents practiced in ES-related focused areas (85.7%), with 62.9% spending 76–100% of their clinical time in ES work. Only 34.3% reported practicing comprehensive family medicine, with marked differences between ESS/FPA (61.1%) and Emergency-Medicine (5.9%). Satisfaction was high, with 94.3% reporting that training met or exceeded expectations and 97% indicating they would pursue ES training again. Most (84.8%) reported improved ability to address community needs. Challenges included work-life balance (63.3%), difficulty balancing ES and generalist roles (46.7%), and call burden (36.7%). While 82.4% reported feeling supported, qualitative findings identified system-level challenges, including privileging barriers and variable specialist support.

Discussion: These findings align with literature showing ES training improves access to care but is associated with evolving practice patterns and wellness challenges. High satisfaction despite burnout risk aligns with prior studies and reflects focused practice, particularly in Emergency-Medicine. System-level barriers, including workload, call burden, and privileging challenges, influence ES use and highlight the need for improved mentorship, clearer integration, and better alignment of ES roles within healthcare systems.

Conclusions: ES training supports physician satisfaction and healthcare system capacity; however, variation in practice patterns and structural barriers impact integration into comprehensive family medicine and long-term sustainability.

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Pyxis-Programmed Anaphylaxis Kit to Improve Testing of Suspected Intraoperative Anaphylaxis: A Quality Improvement Project

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ABSTRACT

Background: Intraoperative anaphylaxis is rare but potentially fatal. Confirming the diagnosis depends on timely serum tryptase sampling and proper documentation, yet these steps are often missed. National audit data show that guideline-concordant tryptase sampling is not consistently achieved. Without a standardized approach, diagnoses may be missed, triggers go unidentified, and patients face avoidable risk during future anesthetics.

Question(s): Does implementation of a Pyxis-programmed Anaphylaxis Kit improve adherence to recommended diagnostic testing, documentation, and follow-up planning for suspected intraoperative anaphylaxis? This project primarily addresses safety and effectiveness.

Methods/Methodology: This quality improvement project (PDSA Cycle 1) used a pre–post design in SHA operating rooms. The intervention was a Pyxis-programmed Anaphylaxis Kit bundling key emergency medications (epinephrine, diphenhydramine, famotidine, methylprednisolone) with an embedded cognitive aid checklist. Cases were identified through anesthesiologist self-report and laboratory records. Data collected included tryptase ordering, timing, documentation, and follow-up. An anonymous survey of pediatric anesthesiologists (10/16, 62.5%) assessed awareness, usefulness, and suggestions for improvement. This project was granted exemption by the University of Saskatchewan Research Ethics Board (E-BIO-111).

Results/Findings: Pre-implementation review identified 3 cases: tryptase was ordered and documented in 2/3 (67%). One case had no tryptase ordered, no anaphylaxis documented, and no follow-up plan. One post-implementation case has occurred so far—tryptase was ordered and anaphylaxis was documented, though some data fields are still pending. On the survey, 100% rated the kit as useful (50% extremely, 40% very, 10% somewhat), 100% agreed the medications were appropriate, and 90% wanted a weight-based dosing chart included.

Discussion: Because intraoperative anaphylaxis is uncommon (~5 cases/year locally), early evaluation focuses on usability and adoption rather than clinical outcomes. Survey responses suggest the kit helps standardize crisis management and reduces cognitive burden. The inconsistency seen in pre-implementation data supports the rationale for this kind of structured approach.

Conclusions: A Pyxis-programmed Anaphylaxis Kit is a practical, well-received intervention that can support the management of intraoperative anaphylaxis at the point of care.

Recommendations: Next PDSA cycles should add a weight-based dosing chart and tryptase blood tubes based on survey feedback, with continued data collection and expansion to other SHA sites.

Investigating Hypocalcemia in Trauma Patients: Trends in Detection and Treatment Timelines at RUH

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ABSTRACT

Background: Hypocalcemia is common in critically ill trauma patients and contributes to coagulopathy, impaired cardiac contractility, and poor outcomes. It may result from hemorrhage, citrate chelation during transfusion, and acid–base disturbances. Despite its clinical importance, the timing of detection and adequacy of calcium replacement in acute trauma care remain unclear.

Question(s): What is the local incidence of hypocalcemia in Level 1 trauma patients at Royal University Hospital (RUH)? What are the timelines for its identification and treatment? How is the effectiveness of calcium replacement to improve efficiency evaluated?

Methods/Methodology: A retrospective chart review of 150 Level 1 trauma patients presenting to RUH between July 2024 and August 2025 was conducted. Data were extracted from electronic and paper records, including laboratory timelines, transfusion data, and medication administration records. Injury severity was categorized using the Injury Severity Score (ISS). Primary outcomes included incidence of hypocalcemia, time to detection, time to calcium administration, and persistence of hypocalcemia after treatment. Approval from University of Saskatchewan's REB Bio #5946 and SHA OA-UofS-5946.

Results/Findings: Hypocalcemia was identified in 26/150 patients (18%) on presentation. Among these, 20 patients received calcium replacement; however, all remained hypocalcemic afterward. Fourteen patients with hypocalcemia received no treatment. Notably, hypocalcemia preceded transfusion in 11 cases. Laboratory turnaround times varied significantly (lab order to reporting: 21–120 minutes total). Blood transfusion was more common in major trauma (ISS >15), with 31/65 such patients receiving blood. Calcium dosing ranged from 1–9 g of calcium gluconate. One patient presented with hypercalcemia and died.

Discussion: Hypocalcemia occurs early in trauma and is not solely transfusion-related. Delays in laboratory reporting and inconsistent repeat testing may contribute to under-recognition. Current replacement strategies appear inadequate, as most treated patients remained hypocalcemic. These findings highlight a gap in timely correction and suggest that earlier, protocolized calcium administration may be necessary.

Conclusions: Hypocalcemia is frequent and often undertreated in trauma patients at RUH. Improvements in rapid detection and standardized calcium replacement—potentially integrated into massive transfusion protocols—may enhance patient outcomes.

Updated Assessment of Postpartum Hemorrhage in a Regional Saskatchewan Care Centre

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ABSTRACT

Background: Postpartum hemorrhage (PPH) remains a major contributor to maternal morbidity. A 2017 review of 2015 data within our hospital identified a PPH incidence of 19.4%, substantially higher than the Canadian average (~5%), and found that only approximately 70% of PPH cases were captured by Health Records, suggesting under-reporting (Switzer et al.). In 2024, our maternity unit transitioned from estimated blood loss (EBL) to quantitative blood loss (QBL) measurement. This study aimed to determine whether implementation of QBL was associated with PPH rates closer to the national average.

Questions:
1. What is the current incidence of PPH among patients delivering within our hospital?
2. What are the characteristics of these patients and their deliveries, compared to women identified as having experienced a PPH in 2015 prior to improved blood loss assessments?

Methods: This study received approval from the University of Saskatchewan's Biomedical Research Ethics Board (Bio ID 5958) and SHA Operational Approval. A retrospective chart review was conducted on the most recent 100 deliveries identified on the delivery log as complicated by PPH. Demographic, obstetric, and clinical variables were collected and compared with the 2015 cohort.

Results: Of the 100 charts reviewed, 83 met diagnostic criteria for PPH. The calculated incidence of PPH in 2025/2026 was 7.9%, representing a substantial reduction from the 19.4% incidence reported in 2015. Compared with the 2015 cohort, patients in 2025/2026 were more likely to have a BMI ≥30, be nulliparous, have diabetes or hypertension, receive epidural analgesia, or undergo assisted vaginal delivery or caesarean section. They were less likely to require manual removal of the placenta.

Discussion: Non-PPH deliveries from the same period were not reviewed, limiting assessment of causal relationships between patient characteristics and PPH incidence. Persistent under-capture of PPH cases by Health Records may also result in underestimation of the true incidence.

Conclusions: The incidence of PPH decreased significantly between 2015 and 2025, potentially reflecting improved blood loss assessment following implementation of QBL measurement. Characteristics of patients experiencing PPH appear to differ between the time periods.

Do Visual Reminders Improve Appropriate ASA Prescribing for Preeclampsia Prevention?: A Quality Improvement Study

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ABSTRACT

Background: Current guidelines by the Society of Obstetricians and Gynecologists of Canada indicate low-dose ASA for preeclampsia prevention for patients with a BMI ≥30 (2). In Northern Saskatchewan, obesity rates are among the highest in Canada (1), and providers have noted many patients presented beyond the window to initiate ASA. This project aims to reduce the negative impact of preeclampsia by improving early ASA initiation.

Question(s): In pregnant patients with a pre-pregnancy or early pregnancy BMI ≥30 receiving early prenatal care, does the implementation of a prenatal form visual reminder increase the proportion of patients appropriately prescribed ASA?

Methods/Methodology: A visual prompt was added to the prenatal record to encourage screening for BMI to initiate ASA. Chart reviews compared patients four months pre-intervention and four months post-intervention. As a continuation of a previous quality improvement research project, this project was exempted from the requirements of Research Ethics Board (REB), E-Bio-075.

Results/Findings: Among 139 patients (106 pre-intervention, 33 post-intervention), 39% had an ASA indication. Overall, 85% of patients presented before 16 weeks. Out of these, 18% did not have a prenatal record prior to 16 weeks. In addition, 18% of the total cohort lacked baseline BMI documentation representing a primary barrier to care. Among patients with an ASA indication presenting before 16 weeks, appropriate prescribing declined from 72.0% pre-intervention to 33.3% post-intervention ($p=0.23$). Patients with an ASA indication who received ASA had lower preeclampsia rates (8.7%) compared to untreated patients (33.3%; $p=0.15$).

Discussion: While most patients presented within the treatment window prior to 16 weeks, BMI was frequently undocumented and the prenatal record was often not utilized at those visits. Furthermore, the low sample size in the post-intervention group limits statistical power to determine benefit.

Conclusions: Passive visual reminders did not demonstrate a benefit in increasing appropriate ASA prescriptions for the prevention of preeclampsia.

Recommendations:

1. Request medical office assistants to capture height and weight during positive urine pregnancy tests or initial prenatal workups.

2. Keep the visual prompt and continue encouraging providers to use the prenatal record by 12 weeks gestation.

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