32nd ANNUAL RESIDENT SCHOLARSHIP DAY

University of Saskatchewan | Department of Academic Family Medicine

ABSTRACT BOOK

Department of Academic Family Medicine
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UNIVERSITY OF SASKATCHEWAN

Academic Family Medicine
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May 19, 2022

Congratulations to all of you who have contributed to the creation of these new pieces of scholarship in family medicine. This is the 32nd Annual Resident Scholarship Day in the Department of Academic Family Medicine. This day is one of my favourite events in the academic year. It is so incredible to hear about the questions you have asked and what you learned through this process. The diversity of your questions re-enforces the breadth of our discipline.

While it is disappointing to not be able to celebrate this work together, I hope that in reviewing the abstracts and participating virtually, you will learn new things and be inspired to ask more questions about how we practice our discipline in all its facets.

The last few years have highlighed how critical our skills in evaluating information, our knowledge of and participation in the research process, and our ability to implement, evaluate and adapt new processes are in our efforts to provide the best possible care to patients and communities.

To our graduating second year residents - I wish you all the best in your future careers.

Stay well,

Kathy Lawrence
Provincial Head
Family Medicine

UNIVERSITY OF SASKATCHEWAN

Department of Academic
Family Medicine

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

As a former participant in the Resident Scholarship Day in Saskatchewan, I am aware of the feelings and emotions associated with completing a resident scholarship project. It is highly unfortunate due to the pandemic that we are unable 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. In light of 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
Program Director
Department of Academic Family Medicine
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Colleagues

On this occasion, the 32nd Annual Resident Scholarship Day, I want to take this opportunity to recognize the 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,
- 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 32 years, we have come a long way but we must continue to transform to meet the needs of the peoples we serve and the standards used by the College of Family Physicians of Canada to accredit Residency Training Programs.

Winston Churchill indicated that, "to improve is to change; to be perfect is to change often". Viktor E Frankl said that, "when we are no longer able to change a situation - we are challenged to change ourselves." Mahatma Gandhi stated, "you must be the change you wish to see in the world." Improving practice provides these opportunities 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; and the University of Saskatchewan.

Let me also extend my heartfelt thanks to the Saskatchewan College of Family Physicians and the Department of Academic Family Medicine, University of Saskatchewan for facilitating the Resident Scholarship Awards presented at the Annual Resident Scholarship Day.

Due to COVID-19 and the fact that we cannot share a meal or celebrate in person, I want to take this opportunity to wish you much success and the very best as you move forward in your chosen vocation.

Yours sincerely,

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

Breastfeeding duration following frenotomy consultation in infants with suspected ankyloglossia and feeding difficulty at West Winds Primary Health Centre

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ABSTRACT

Background: Exclusive breastfeeding for the first 6 months of life and continued breastfeeding to 2 years and beyond is a widely accepted recommendation endorsed by multiple organizations including the World Health Organization and the Canadian Pediatric Society. Ankyloglossia has long been identified as possibly contributing to breastfeeding difficulties and can be treated with frenotomy procedure in office. Rates of both the diagnosis of ankyloglossia and frenotomy procedures are increasing, however, there remains limited evidence regarding the effect of frenotomy on breastfeeding outcomes. This quality assurance project seeks to evaluate breastfeeding outcomes in infants with suspected ankyloglossia who have undergone frenotomy consultation. The primary outcome evaluated was breastfeeding duration, with nipple pain, maternal satisfaction, and adverse effects as secondary outcomes. This is the first quality improvement project evaluating frenotomy outcomes locally. Notably, our proposed observational timeline over which breastfeeding will be followed (3 months) will be longer than that of most available studies.

Research Question(s): Are frenotomy procedures provided at West Winds Primary Health Centre effective at improving breastfeeding outcomes (duration, nipple pain, etc.)?

Methods/Methodology: This is a prospective observational quality improvement study evaluating breastfeeding duration in infants with ankyloglossia treated with frenotomy. This is being evaluated through phone surveys at 1 week, 1 month and 3 months post-consultation/procedure. We will use descriptive statistics to describe the full sample (means, medians, etc.), and frenotomy/non-frenotomy groups, at baseline. A generalized linear mixed model/time-to-event analysis will be used to account for repeated assessments on the same mothers to identify factors that appear to contribute to better outcomes. We will look for a statistically significant change in breastfeeding over time and potentially between those who were/were not treated with frenotomy. Ethics approval was obtained from the UofS Behavioural Research Ethics Board (Beh ID 3046) and Operational Approval (OA-UofS-3046) from the Saskatchewan Health Authority.

Results/Findings: Unfortunately, due to delays achieving ethics approval and difficulty with participant recruitment, no aggregate data is available for presentation.

Discussion: Participant recruitment could potentially be improved by including multiple clinics/providers, altering the timing of participant recruitment, or using a different method of data collection (e.g. online surveys).

Conclusions: N/A (Not Available – Not Applicable at this Time.)

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Did changing the induction time for nulliparous women lead to delivery during peak staff hours at Cypress Regional Hospital?

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ABSTRACT

Background: In rural hospitals, after hour deliveries can result in safety issues due to reduced staffing. Previous research at our institution examined induction times for uncomplicated post-term pregnancies to anticipate a delivery during peak staff hours (0800 to 1600). A policy change to the nulliparous scheduling time was implemented, but no follow up study has been performed.

Research Question(s): Did the new scheduling policy for nulliparous post-term inductions result in more deliveries during peak staff hours compared to the previous policy?

Methods/Methodology: A retrospective pre-post study of nulliparous post-term inductions at Cypress Regional Hospital between July 2017 and June 2021 was performed. The primary outcome was the number of deliveries during peak staff hours. This study was exempted by the University of Saskatchewan's Biomedical Research Ethics and received operational approval from the Saskatchewan Health Authority.

Results/Findings: Seventy-nine charts were reviewed. There was no significant difference in patient management or length of labor between the pre and post policy change groups. The number of deliveries during peak staff hours was not significantly different (25% vs. 31%, p=.527). Caesarean sections were more likely during peak staff hours in both groups (64 vs. 30%, p=.009). A large range in time from induction to delivery was observed. There was a wide distribution of induction start times in both groups.

Discussion: The wide distribution in induction start times shows poor adherence to policy, reasons for which are multifactorial. An oversimplistic model used to create policy change could have failed to account for large ranges in time to delivery and initial induction method used. Caesarean sections were more likely during peak staff hours, which could reflect postponement of non-emergent operations. The study was limited by a small sample size and lack of Bishop score data.

Conclusions: Our study indicated that local policy change did not result in more deliveries during peak staff hours. However, policy adherence was poor.

Recommendations: Future studies should investigate reasons for poor policy adherence. Additional factors affecting labour duration could be examined to develop a calculator used to predict timing of delivery.

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Evaluation of Exposure to Procedural Skills in Family Medicine Training

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ABSTRACT

Background: This project was designed to determine the current state of procedural skills training within the University of Saskatchewan Family Medicine program and to verify the gaps when compared to the College of Family Physicians of Canada (CFPC) Residency Training Profile.

Research Question(s): What is the current state of exposures to procedural skills in the program and what are the gaps when compared to the national standard?

Methods/Methodology: This program evaluation was deemed Exempt from Ethical Review by the University of Saskatchewan Research Ethics Board. A survey was sent to current residents and site directors to assess family medicine residents' exposure to procedures outlined in the CFPC Residency Training Profile Procedural Skills list (List A = required skills, List B = supplementary skills). Procedures were deemed to have "Adequate Exposure" if at least 80% of residents or site directors reported adequate or high levels of exposure, and "Inadequate Exposure" if this proportion was less than 80%. Using the Chi-Square test/Fisher's exact test, the exposures between post graduate year-1s (PGY1s) and PGY2s were also compared for List A procedural skills.

Results/Findings: A total of 50 residents and seven site directors responded to the survey. *Seven* of the 62 List A Skills (11.3%) were reported by residents as having "Adequate Exposure"; this proportion was 32/62 (51.6%) among site directors. From the 25 List B Skills, *none* of the procedures were indicated as "Adequate Exposure" by residents or site directors. Of the List A procedures, 9/62 (14.5%) showed statistically significant improvement from PGY1 to PGY2.

Discussion: Given the procedural skills outlined and the low number of required procedures reported as having "Adequate Exposure" by the residents, co-creation of a strategy to increase "Adequate Exposure" is critical. Significant differences between PGY1s and PGY2s for certain procedures only suggest increased exposure in PGY2, not necessarily increased levels of competence.

Conclusions: A small number of procedural skills had "Adequate Exposure" by resident assessment, highlighting the need to co-create a strategy that would ensure "Adequate Exposure" to List A Procedural Skills in all Residency Training Sites across Saskatchewan.

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Wellness Wheel Project Evaluation

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ABSTRACT

Background: Indigenous people experience barriers to health care for reasons including racism, cultural safety, transportation, or financial concerns The Wellness Wheel (WW) clinical care model works towards reconciliation through improving primary care access and building capacity within Indigenous communities. The WW consists of nurses, family physicians, specialists, and support staff with provided services growing. Since its inception, an objective evaluation has yet to be undertaken.

Research Question(s): What has been the primary care utilization for the communities served by Wellness Wheel as new community-based services have been implemented (January 2018 to December 2020)?

Methods/Methodology: Retrospective chart review of WW EMR of four Indigenous communities from January 2018 to December 2020. A timeline of services provided was generated and data parameters were agreed upon with the communities, deidentified, and descriptively analyzed. Approval was obtained from the Health Directors of the communities, and University of Saskatchewan's Biomedical Research Ethics Board, ID# Bio 3134.

Results/Findings: A total of 121 clinics with 1355 visits were provided to 526 individuals from 2018-2020. Patients were 60% female and 59% aged 19-59 years old. The most frequent concern was diabetes mellitus. Visits were complex, with an average of 1.7 diagnostic codes per visit. The number of prescriptions completed doubled in 2020 (1439) compared to 2019 (766) and 2018 (664). Of the physician EMR tasks, 42% were completed on non-clinic days in 2020, a three-fold increase from 2018. Three percent of relevant patient population received pap tests, 2% received a FIT test, and 29% received a Hba1c. Screening services included 222 hepatitis C and 223 HIV antibody tests with a positivity rate of 7% and 0%, respectively.

Discussion: Data reflected a growth in primary care services provided by WW from 2018 to 2020. Chronic disease management, especially diabetes mellitus, and infectious disease testing are mainstays of WW clinics, but guideline-based screening could be improved. Services provided were altered during the COVID-19 pandemic in 2020 including a switch to virtual care limiting screening and monitoring requiring in person visits.

Conclusions: WW is a well utilized community-based service. Current strengths include chronic disease management of adults and infectious screening with room for growth in cancer screening, pediatric, and prenatal patient populations.

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Evaluating screening and intervention for poverty in Family Practice settings in Saskatchewan in the context of the COVID-19 pandemic

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ABSTRACT

Background: Poverty is a major driver of health outcomes. The Clinical Poverty Screening Tool has been recommended to screen all patients for poverty, and to be used to assist patients in accessing resources and benefits. Research has found that there are low rates of poverty screening due to physician discomfort, time constraints, etc. There is a gap in routine poverty screening in primary care despite the evidence of the strong association between income and health.

Research Question(s): What are the practices, barriers, comfort-levels and knowledge of poverty screening and intervention amongst family physicians (FPs), family medicine residents (FMRs) and family nurse practitioners (NPs) in Saskatchewan during the COVID-19 pandemic?

Methods/Methodology: A cross-sectional survey on SurveyMonkey was developed and distributed by email and newsletters to FPs, FMRs and NPs in Saskatchewan from January-March 2022. The project was reviewed and approved by the University of Saskatchewan's Behavioural REB. Survey results were analyzed using IBM SPSS version 28 to perform descriptive statistics and intergroup comparisons using Kruskal-Wallis test, Likelihood ratio and Pearson Chi-squared test as appropriate.

Results/Findings: Eighty-three FPs, 35 FMRs and 25 NPs participated in the survey. Participants generally agreed that time, patient factors, practitioner knowledge and availability of community resources and services were barriers to screening. Comfort discussing government benefits with patients was generally low, with slight differences amongst provider groups ($p=.042$). Thirty-one (40.3%) of FPs, 7 (20.6%) of FMRs and 17 (68.0%) of NPs had referred a patient to a government benefit. However, this was rare as NPs 'rarely' and physicians 'very rarely' referred patient to tax clinics and income support ($p=0.001$). Only eight (6%) of participant had used the Poverty Screening Tool.

Discussion: The results are consistent with similar studies that primary health providers face many barriers in screening for poverty, including time constraints and lack of training. This demonstrates a need for further research and training to integrate poverty screening and intervention in primary care.

Conclusions: FPs, FMRs and NPs in Saskatchewan do not routinely screen for poverty, despite the COVID-19 pandemic, due to several barriers including time, comfort, and knowledge surrounding access to government benefits and resources.

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An Evaluation of the Buprenorphine-Naloxone Treatment Protocol Initiated at the Battlefords Union Hospital Emergency Department

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ABSTRACT

Background: The opioid overdose crisis in North America continues to be an urgent public health crisis, further exacerbated by the COVID-19 pandemic. Buprenorphine-naloxone opioid agonist therapy (OAT) is first-line treatment for opioid use disorder (OUD). Starting OAT in the Emergency Department (ED) is associated with improved treatment retention.

Research Question(s): What patient demographic presented to Battlefords Union Hospital (BUH) ED for OAT initiation? What was the program retention rate? How many referrals from ED were required for patients to successfully attend follow-up for buprenorphine-naloxone treatment at clinic? For patients who had ED referrals for buprenorphine-naloxone treatment but did not subsequently attend, how many referrals were made and what was the patient demographic?

Methods/Methodology: A retrospective chart review was performed on all patients initiated with buprenorphine at BUH for OUD between January 1, 2019 to March 21, 2022. Variables included: (1) months since treatment initiation; (2) number of previous buprenorphine-naloxone referrals from BUH (3) active prescription for buprenorphine-naloxone; (4) follow-up primary care attendance; (5) expected versus unexpected urine drug screen consistent with patient history; and (6) patient age and gender. Statistical analyses were performed via Fisher's exact test. The study was approved by the University of Saskatchewan's Behavioural Research Ethics Board (Beh ID 1466) and the Saskatchewan Health Authority.

Results/Findings: 15 participants were identified; nine females and six males, with the median age being 35. 67% were still undergoing buprenorphine-naloxone treatment at time of data collection, with males more likely to remain in treatment ($p < 0.05$). 7% required more than one ED referral to successfully attend follow-up at clinic. Of all ED referrals for buprenorphine-naloxone treatment, 58% did not attend their follow-up appointment, despite multiple referrals made.

Discussion: There was a higher treatment retention rate at BUH compared to other similar cohort studies, due to smaller sample size. Gender difference in treatment retention may stem from biopsychosocial factors that disproportionately affect females. Repeated ED referrals for treatment may not play a role in whether patients will successfully attend follow-up at clinic.

Conclusions: Buprenorphine-naloxone treatment initiated in a rural ED for OUD results in successful treatment retention, with males more likely to remain in treatment.

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Alcohol Use Related Presentations and Referral to Mental Health & Addictions in the Emergency Department of Moose Jaw, SK in 2019-2020

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ABSTRACT

Background: Alcohol-related emergency department (ARED) visits have not been studied in Moose Jaw, Saskatchewan. Alcohol-use interventions undertaken in the emergency department (ED) and impact of the pandemic on ARED visits are unknown.

Research Question(s): What were the incidence, demographics, poly-substances and ED management of ARED visits to FH Wigmore Regional Hospital (FHWRH) in 2019-2020?

Methods/Methodology: This retrospective chart review included ARED visits to FHWRH between January 1, 2019–December 31^{t}, 2020. Patients <12 years old were excluded. Presentations were assessed for age, gender, diagnosis, polysubstance use, investigations, disposition, and substance use support. The project was approved by University of Saskatchewan's Biomedical Research Ethics Board and received Operational Approval from the SHA (OA-UofS-2653/2735).

Results/Findings: There were 419 ARED visits over two years with a mean age of 43 years. The incidence of ARED visits was 67.8 and 66.5 per 10,000 people, with men representing 62.9% and 60.2% in 2019 and 2020, respectively. Marijuana was the most common co-ingested substance. 2020 demonstrated increases in chronic alcohol complications (4.7% vs 10.6%), blood alcohol levels (45.6 vs 53.5mmol/L), and alcohol withdrawal presentations (15% vs 23.8%). In 2020 18% of patients had multiple visits (MV), versus 15.1% in 2019. 2019 MVs vs single visits (SV) had a higher average age 48.3 years. MVs had higher rate of polysubstance use in 2020 compared to SV (50% vs. 28.2%). No differences were found between 2019 and 2020 MVs and SVs. More support services were offered for MV than SV patients. In 2019 and 2020, 31.0% and 29.1% of patients were discharged without any alcohol-use support.

Discussion: Moose Jaw demonstrated preserved incidence of ARED visits in comparison to studies suggesting increased consumption and a decline in ED visits. No change to ARED visits is consistent for rural area literature results. In keeping with increased provincial consumption in Saskatchewan, Moose Jaw showed increased withdrawal visits and average blood alcohol levels. An increase in counselling about harmful alcohol use in the ED may benefit the community.

Conclusions: No change to the incidence of ARED visits was observed between 2019-2020. 2020 demonstrated higher withdrawal visits and average blood alcohol levels.

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Alcohol related Emergency Department presentations in a Regional Saskatchewan Hospital during the COVID-19 pandemic

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ABSTRACT

Background: The COVID-19 pandemic and corresponding public health restrictions have resulted in reported increases in alcohol use and related morbidity across Canada, which has resulted in further strain on the healthcare system. It is prudent to examine the impact of the pandemic on alcohol related healthcare utilization in Saskatchewan, to identify unintended consequences of COVID-19 restrictions.

Research Question(s): 1) Did the number of Emergency Department presentations for alcohol intoxication and withdrawal increase during the pandemic? 2) Did the severity of these presentations increase as determined by disposition from the ED?

Methods/Methodology: Emergency visits at a regional Saskatchewan hospital with a diagnosis of alcohol intoxication and alcohol withdrawal were reviewed for demographic information and disposition during the period of November 17 to January 12, in 2019-2020 (pre-pandemic) and 2020-2021 (mid-pandemic). A generalized linear mixed model analysis was performed. The project was reviewed and approved by the Biomedical Research Board of the University of Saskatchewan.

Results/Findings: 141 visits representing 97 patients during the pre-pandemic period and 152 visits representing 89 patients during the pandemic period were reviewed. There were no significant differences in the number of visits for alcohol intoxication or withdrawal, nor in sex, age, or repeat visits during these time periods. Patients seen during the pandemic period were 2.7 times more likely to be discharged to detox rather than leaving without being seen or against medical advice ($p=0.04$).

Discussion: These results vary from trends seen in other Canadian provinces. The lack of increase in alcohol related presentations may be attributable to diagnostic coding, as patients often present with an alternative primary diagnosis such as pancreatitis or liver disease. We hypothesize that an overall reduction in ED volumes may have led to increased access to detox assessments and referrals locally during the pandemic period.

Conclusions: There was no increase in alcohol intoxication and withdrawal presentations at our regional Saskatchewan ED during the pandemic, however patients were more likely to be

referred to detox during the pandemic. Further research is needed to capture the impact of pandemic restrictions on other alcohol-related conditions.

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Impact of COVID Pandemic on Alcohol Use Related Presentations in the Emergency Department: A Rapid Review

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ABSTRACT

Background: During the COVID-19 pandemic, many conditions were not managed effectively by primary care physicians in the setting of a family physician office. With the severity of COVID-19 and ensuing restrictions on Canadians, many used substances as means to cope. This research project aims to highlight the alcohol use throughout the pandemic, in particular, presentations to the emergency department (ED) given it being the first line for presentations during the pandemic.

Research Question(s): Did COVID-19 have an impact on alcohol use related presentations in Canadian Emergency Departments?

Methods/Methodology: A rapid review was conducted using the CINAHL, CENTRAL, and OVID databases for scholarly articles on alcohol use related presentations in the emergency department from 2020 to 2022. A grey literature Internet search was also performed via Google, the World Health Organization, and CareSearch. As all results are within the public domain, we did not seek ethical review for the rapid review. However, a larger project was approved by the University of Saskatchewan's Biomedical Research Ethics Board (Bio-2735).

Results/Findings: Twenty articles were identified and three were included in the final synthesis.

Discussion: When compared to pre-pandemic, there was an overall decline in the total number of ED visits due to alcohol. However, when reported as a percentage of all-cause ED visits, there was shown to be an increase. Of note, while the proportion of acute intoxication presentations secondary to alcohol use decreased, the proportion of alcohol withdrawal presentations to the ED increased particularly in rural settings.

Conclusion: COVID-19 has and continues to play a consequential role on Canadians. As we are slowly catching up to the backlog of patient care, an undeniable source of presentations will come from substance use. Alcohol use has increased during the pandemic, with many individuals citing it as a means to cope with isolation that COVID restrictions have caused. Emergency room alcohol presentations increased, with more withdrawals than acute presentations. Whether it was drinking alone or in groups through online platforms, the effects of chronic and heavy use remain to be seen.

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The Impact of COVID-19 on Adult Type 2 Diabetic Management at the North Battleford Medical Clinic

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ABSTRACT

Background: Prior to COVID19, standard practice regarding diabetic patients follow up was to review blood work results, conduct an examination and screen for diabetes related complications. However, to prevent exposure to COVID19, physicians conducted virtual consultations.

Research Question(s): How has type two diabetes been managed among adult diabetic patients receiving care at the North Battleford medical clinic (NBMC) during the COVID19? How does this management and its effectiveness compare to pre-pandemic management?

Methods/Methodology: The project was approved by the UofS Biomedical REB (Bio ID 2987) and Operational Approval (OA-UofS-2987) was granted by the Saskatchewan Health Authority. A retrospective chart review of T2DM adult patients attending the NBMC was done from pre-pandemic (March 1, 2019, to February 29, 2020) to pandemic period (April 1, 2020 to March 31, 2021). A Quasi random sample was obtained. Every third patient was selected for inclusion. Data collected included demographics, clinical/lab markers, health care utilization, screening, and medication changes. Analysis was performed using SPSS.

Results/Findings: Seventy-seven of the 150 participants were male. The mean age was 64. There was no significant difference between the HbA1c pre-pandemic (7.5) and during the pandemic (7.6) p=0.43. Pre-pandemic vs pandemic screening of diabetic complications such as cardiovascular (48.7% vs 31.1%), renal (70% vs 51.3%), ophthalmologic (49.3% vs 35.3%), and neuropathy (16.7 vs 10%) was significantly decreased during the pandemic. Systolic and diastolic blood pressure (BP) were found to be increased (mean change was 6.8mmHg). Less people had hypoglycemic events during the pandemic compared to pre-pandemic (2.7% vs 8.7%, p=0.04)

Discussion: Glycemic control can be achieved in diabetic patients through virtual care, however, BP monitoring and screening for diabetic complications requires improvement in the virtual setting; as this could potentially lead to more patients presenting with stroke, nephropathy, neuropathy, myocardial infarctions in the future. Less hypoglycemia was noted during the pandemic which is a protective factor. There were increases with BP, however it is important to note that only 73 of the 150 patients had blood pressure values during both periods.

Conclusions: Virtual care is a great resource and can be used effectively for managing diabetic patients. However, screening for diabetic complications and better blood pressure monitoring requires improvement.

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The Art and Science of Opioid Conversion from Morphine to Methadone: A Rapid Review

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ABSTRACT

Background: Opioids form an indispensable component of pain management. Occasionally, related complications arise such as tolerance, side effects, toxicity, and hyperalgesia, which may be addressed by rotation from one opioid to another. Methadone remains an attractive option for rotation due to multiple benefits but, unlike other opioids, its use has been complicated by lack of robust data.

Research Question(s): What is the recommended dose conversion strategy from morphine to methadone? Can we explain methadone's unique dosing compared to other opioids?

Methods/Methodology: A Rapid Review was conducted using PubMed and Embase and the search terms "methadone" AND multiple variants of conversion ("conver* OR "switch*" OR "rotat*). A review of title and, if necessary, abstract was undertaken to narrow the results. Only articles in English that were related to general conversion of morphine to methadone in adults were considered. Due to article quantity, our search was further narrowed to review articles only with a specific focus on opioid conversion.

As all results are within the public domain, an Exemption from ethical review was requested and deemed unnecessary by the University of Saskatchewan's Behavioural Research Ethics Board.

Results/Findings: A total of 13 review articles were considered focusing on conversion between morphine to methadone. Despite some convergence between methods, there remains differences that cannot be reconciled and no single method stood out as superior. Rotation to methadone requires individualized care with close follow-up. Clinical decision making may be improved using the knowledge we have to explain methadone's unique properties, but none of these properties have been studied.

Discussion: Throughout the literature, high variability of inter-individual conversion ratios and the need for case-by-case management including consultation with chronic and cancer pain specialists is mentioned. Our current evidence does not account for the multitude of factors affecting the conversion ratio from morphine to methadone; as such, none of the ratio tables nor algorithms reliably predict conversion ratios or negate individualized care.

Conclusions: Multiple tools exist to convert daily oral morphine dose to anticipated daily oral methadone, but none have proven superior. Rotation requires a mix of clinical experience and individualized patient care with close follow-up.

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A Geographic Analysis of Youth Contraceptive Use in Prince Albert

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ABSTRACT

Background: Contraception is an essential part of healthcare, especially in the youth population, and yet access to contraception can be an issue for some individuals. This is especially true in areas with lower socioeconomic status or where healthcare resources are harder to access. Due to the strain that undesired pregnancy can place on an individual it is important to ensure that contraception is available to anyone that desires it.

Research Question(s): Are rates of contraception prescriptions different in Prince Albert based on geographic location of patient's residence?

Methods/Methodology: We conducted a chart audit at two different primary health clinics in Prince Albert for all females between the ages of 13 and 25. We used a bespoke Python program to extract and organize the desired information in order to use QGIS to map the contraception prescription rates based on geographic location in Prince Albert into Census Dissemination areas. We then used census information to also map mean household income to these same dissemination areas for analysis. A Certificate of Approval was received from the University of Saskatchewan Biomedical Research Ethics Board #3142, as well as letters of Consent from the involved clinics.

Results/Findings: Our results showed that there is a positive correlation between mean household income of a dissemination are and its rates of contraception prescriptions.

Discussion: The data shows that there are differences between the different areas of Prince Albert, but we also have only collected data from 2 clinics and so there may be significant information that is not being captured in this study. However, there does appear to be significant room for targeted education and outreach programs to improve access to certain areas of the city.

Conclusions: There are real differences in contraception prescription rates in the different areas of Prince Albert with different mean household incomes.

Recommendations: Further studies using similar methods in larger geographical areas would be useful for finding areas of inequalities so that they could be better targeted for quality improvement projects and education programs.

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Exploring the need for STI education among college student athletes

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ABSTRACT

Background: Studies suggest that college athletes engage in riskier sexual behaviors and have limited understanding of sexual health. However, most research has been done in countries with vastly different cultures than Saskatchewan, Canada.

Research Question(s): 1. What are Saskatchewan-based college aged athletes perceived and objective levels of knowledge on sexually transmitted infections (STIs)? 2. Do these athletes prefer certain methods of knowledge translation regarding sexual health information?

Methods/Methodology: A cross-sectional survey was distributed virtually to current athletes at the Universities of Saskatchewan and Regina. Participants were asked if they were confident in their level of STI knowledge, then completed the STD-K questionnaire, a collection of validated true/false questions to assess knowledge of STIs. Finally, participants were asked where they receive their sexual health information from, as well as their preferred format for STI information delivery. This study was approved by the University of Saskatchewan's Behavioural Research Ethics Board (Beh 3033).

Results/Findings: Ninety-four participants completed the survey (59%, Female). Participants had a median composite self-reported STI knowledge score of 2.8 out of 5 (IQR 2.4-3.6). The median participant scored 12 out of 27 (44%) on the knowledge questionnaire (IQR: 8-17). The three most popular methods of health information sharing were online modules (34%), in-person lectures/conferences (24%) and self-paced videos (20%).

Discussion: This is the first study focused on Canadian college athletes, and findings were consistent to those in other countries. This is the first study to investigate what type of educational materials athletes prefer and can be used to direct the creation of training materials.

Conclusions: This study highlighted that STI knowledge is low in college aged athletes, as made evident by perceived knowledge ratings and objective testing on STI knowledge. There were also preferred methods of knowledge sharing, which included online modules, self-paced videos, and in-person content.

Recommendations: College age athletes would benefit from resources and efforts focused on enhancing their level of knowledge on STIs.

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Digital X-ray light field holography: Is this novel imaging modality technically feasible for rural and regional areas that lack access to computerized axial tomography

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ABSTRACT

Background: Regional and rural Canadians face a large list of health inequalities, this project is trying to address whether currently deployed Xray equipment, with minimal adaptation, could provide more clinical meaning when advanced imaging is not feasible.

Research Question(s): Rural populations and especially remote populations do not have equal access to advanced imaging modalities. CT is an expensive imaging modality requiring special equipment, and radio shielded MRI even more so. Remote patients needing access to these methods must travel long distances. However, Xray is cheaper and can potentially go anywhere. Can we extract more information from currently deployed plain film Xray equipment to address equitable access for rural and remote patients?

Methods/Methodology: This is a desktop study where we review currently deployed Xray and light field technology to evaluate whether light field imaging could apply to Xray image acquisition in rural and remote Canada. (Bio ID: 3073) This study does not constitute research involving humans and is thus exempt from Research Ethics Board (REB) review and approval.

Results/Findings: Light field acquisition appears to be feasible if wavelength matched diffraction grating can be created. Further, the light field algorithm can be adapted to solve for wavelength which could give additional information currently filtered out of Xray and CT image capture.

Discussion: Initially this study investigated whether our Xray equipment would be able to calculate 3D volume information; additionally, as the light field calculation can extract “colour” from Xray wavelengths and this may potentially reveal additional information not available otherwise.

Conclusions: For diagnostic imaging 360° computer tomography will always remain a mainstay, however this study shows that with suitable Xray diffraction grating a single plain film Xray may allow 3D data and wavelength data which could potentially represent a new mode of medical imaging.

Recommendations: We recommend testing existing software presets (MATLAB) against image capture with various diffraction gratings with and without linear scatter filters to find the optimal diffraction grating for medical imaging, and further we recommend collaboration with the optics

community to further optimize the calculations of light fields for currently available diffraction gratings with Xray.

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A Consultancy Conundrum - An Assessment of Family Practice Hospitalist Consults at Pasqua Hospital

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ABSTRACT

Background: The process of navigating patients through the hospital system between hospitalists and specialists requires a consultation interface.

Research Question(s): In order to better understand and improve upon this process, the following information was gathered: (1) frequency of consultation by specialty, (2) themes for the reason of consultation, (3) time between request and fulfillment, and (4) manner in which consultation outcomes were communicated back to the hospitalist. This information will be utilized to identify quality improvement projects in the consultation process and be used within educational initiatives to provide broader awareness of current consultation practices.

Methods/Methodology: A retrospective chart review of all consults for patients at the Pasqua Hospital Accountable Care Units (ACU), 3 general medicine wards, in Regina who were discharged in February 2021 was completed. SCM and paper charts were used to gather data. This research was approved by the University of Saskatchewan's Biomedical Research Ethics Board (ID# 2858) and received Operational Approval from the SHA (OA-UofS-2858).

Results/Findings: Hospitalists on the ACUs at the Pasqua Hospital made 191 consultations to specialists during the study period. The most commonly consulted services were gastroenterology and internal medicine. Endoscopy for anemia, second opinions, and pre-operative assessments were the most prevalent reasons for consultation. The remaining consults were distributed among 19 other specialties. The median request fulfillment time was 33:55, (13:27 - 54:23). Overall, 157 of 191 consultations were dictated. Of the 191 consultations reviewed, 161 had some form of error found in the process.

Discussion: A total of 19 specialties had consultation requests. Consults to gastroenterology and internal medicine were commonest**.** The broad diagnostic themes of the gastroenterology consultations often necessitated procedural intervention to help elucidate more specific diagnoses. Clinical scenarios which required consultation were generally ones of diagnostic uncertainty involving an atypical clinical course. The majority of the consultation requests were met with an electronic, dictated response in a timely manner.

Conclusions: Changes to the process might include collaboration with frequently consulted services to streamline the process of consultation, standardization to help eliminate errors, and engaging with specific specialties to help identify obstacles to efficient patient care.

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Perspectives of Family Physicians on the Delivery of Telemedicine in Northern Saskatchewan

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ABSTRACT

Background: Telemedicine was widely adopted in 2020 to reduce the risk of transmission of COVID-19. Urban centers have their own unique perspectives and challenges with telemedicine, and they may face different issues or barriers than their rural counterparts. Now that there has been time for deployment and standardization of processes, the provision of telemedicine should be reviewed for improvement particularly through a rural lens.

Research Question(s): What are the perspectives of family physicians in northern Saskatchewan on the delivery of telemedicine?

Methods/Methodology: A recruitment email was sent to all family physicians employed by Northern Medical Services including a link to the anonymous and voluntary cross-sectional survey. The survey remained open for one month after the initial email was sent. There were no exclusion criteria. Results of the survey were examined as a whole and were compared, when available, to similar published literature from urban settings. The University of Saskatchewan Biomedical Ethics Research Board approved this study.

Results/Findings: A total of 16 responses were collected. Telemedicine was used by 53% of participants prior to the pandemic but is now used by 100%. More than half of all visits had taken place over the phone. Less than 20% of telemedicine took place over video or text. No respondents agreed that they make diagnoses and management plans with equal confidence in telemedicine visits compared to in-person visits.

Discussion: Telemedicine was used by more than half of the respondents prior to the pandemic, more than their urban counterpart. Overall, adoption of telemedicine occurred faster than expected, providing many perceived benefits which include improved patient access and increased number of patients visits in a day, all without delayed diagnoses. There is hope that telemedicine will continue to be utilized well beyond the COVID-19 pandemic.

Conclusion: Rural family physicians appear to have differing experiences with telemedicine compared to their urban counterparts. Further research should involve the patients' perspective to aid in making systemic change. Systemic areas for improvement include development of a user-friendly video-based application alongside addressing barriers for patients to access this service such as adequate service coverage at an affordable cost in northern Saskatchewan.

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Improving prevalence of Advanced Care Directives in Prince Albert: An EMR-Directed, primary care approach

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ABSTRACT

Background: The Covid-19 pandemic has highlighted the paucity of documented advance care directives (ACDs) for the Palliative Care team in Prince Albert, Saskatchewan. As these decisions are best made before an acute health crisis, family physicians are in an excellent position to have these conversations.

Research Question(s): To improve the percentage of patients ≥ 65 years with a documented ACD in the electronic medical record (EMR) at the Prince Albert Medical Clinic (PAMC) by 20 percentage points over three months.

Methods/Methodology: This was a quality improvement (QI) project conducted at PAMC. A query was performed using the EMR to identify all patients ≥ 65 years seen in a two-month period and whether they had an ACD documented. As an initial PDSA cycle, an EMR reminder tool was implemented, and a second identical query was performed three months later. This project received exemption from the University of Saskatchewan's Biomedical Research Ethics Board (BIO 3026).

Results/Findings: Of 921 patients ≥ 65 years seen in the pre-improvement period, 27 were found to have an ACD on their chart (2.9%). Of 830 patients seen in the post-improvement period, 39 were found to have an ACD on their chart (4.7%). Of the 39 patients in the post-improvement period with documented ACDs, 11 had an ACD uploaded into their chart following the implementation of the alert system.

Discussion: Although ACDs are an essential component of patient care, the rates of documented ACDs in patients ≥ 65 years at PAMC were lower than expected given previous studies by resident colleagues. (2) Following the introduction of an alert tool, 11 patients had an ACD uploaded into the clinic's EMR. While this is a small improvement, we were not able to reach our targeted increase of 20 percentage points.

Conclusions: This preliminary QI project identifies an opportunity for considerable improvement to ACD documentation at PAMC. An EMR-directed tool is a simple approach that may facilitate improvement.

Recommendations: Further PDSA cycles might include educational materials available for patients in the waiting room, educational sessions for physicians, or additional EMR prompts for ACD discussions (eg. chronic disease management visits, complete physicals, post-hospital admission, etc.).

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An Eye-opening Lecture: A Study of Confidence and Knowledge Change Yielded by a 45-minute Ophthalmologic Teaching Session for Family Medicine Residents

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ABSTRACT

Background: Up to 5% of patient presentations in Family Medicine are related to disorders of the eye. It is therefore critical that Family Medicine physicians acquire strong ophthalmologic clinical skills. Despite this importance, studies have demonstrated medical residents' self-perceived confidence with these skills to be low. Moreover, with the current curriculum, University of Saskatchewan Saskatoon site Family Medicine residents receive limited formal training in Ophthalmology.

Research Question(s): Does Family Medicine residents' perceived confidence and knowledge of the basic ophthalmological exam improve after receiving a lecture from a senior Ophthalmology resident?

Methods/Methodology: The project received an exemption from the University of Saskatchewan Research Ethics Board (ID E287). Family Medicine residents attending a University of Saskatchewan Family Medicine academic half day in Saskatoon were invited to participate in a 45-minute didactic and skills-based teaching session on the eye exam. Participants were asked to complete a pre- and post-test and a survey.

Results/Findings: There were n=13 participants (67% FMR I, 33% FMR II). 10 completed both pre- and post-tests, 9 completed the survey. 78% of residents reported <10 hours of dedicated Ophthalmology teaching in residency. The average pre- and post-test scores of 38.6% ± 18.5% and 87.14% ± 16.43%, respectively, showed significant improvement ($p<0.01$, paired t-test). Average resident confidence had significantly improved across all 8 skills ($p<0.02$ for each, paired t-tests). 100% of residents reported wanting additional Ophthalmology teaching sessions in residency training.

Discussion: Eye complaints are prevalent in primary care. Competent eye examination would yield benefits across the health care system. Yet, it is well documented that formal ophthalmologic training in Canadian medical schools and residencies is limited, and residents report low confidence in examination of the eye. Our study suggests this is not from lack of desire on the part of residents, and that a short teaching session can improve knowledge and confidence; this agrees with similar previous work with medical students. Limitations of our study include small sample size, incomplete response rates, and possible non-representativeness of resident Ophthalmology education and desire for further education.

Conclusions: These results suggest that additional Ophthalmology teaching should be integrated into the Family Medicine curriculum.

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Using an Escape Room as an Innovative Learning Model to Enhance Antimicrobial Stewardship amongst Family Medicine Residents

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ABSTRACT

Background: Gamification can be used to create a fun and engaging learning environment. Recently, escape rooms have been used as effective tools in medical education. Given the ever-growing need for improved antimicrobial stewardship training in primary care and the lack of structured antimicrobial stewardship teaching in family medicine residency, the potential for an escape room to help facilitate antimicrobial stewardship teaching for family medicine residents arose.

Research Question(s): Is an escape room an effective method for teaching relevant antimicrobial stewardship topics for first year family medicine residents?

Methods/Methodology: 3 groups of 3-4 first year family medicine residents participated in an antimicrobial stewardship-based escape room during one afternoon of scheduled academic half day teaching. A 5 point scale post-pre survey consisting of 9 questions was used to analyze the effectiveness of the escape room by addressing the level of comfort participants had in antimicrobial priority topics and their general appreciation of an escape room as a learning environment. As this project was an evaluation of teaching method within normal educational requirements, an Exemption was obtained from U of S Behavioural Research Ethics Board

Results/Findings: Among the 11 participants, there was a significant difference of +0.759, (95% CI 0.661-0.857 $P<0.001$) in the pre and post survey results for the combined 9 questions.

Discussion: Our research showed that using an escape room format for learning provided residents with a better level of comfort and knowledge with CFPC objectives related to antibiotic use. In addition, an escape room was a positive learning environment for family medicine residents. Further research in this area would benefit from a larger sample size and more robust qualitative research methods that would evaluate how group learning and a fun teaching environment has on learners' experience.

Conclusions: An escape room is an effective and fun way to teach antimicrobial stewardship to first year family medicine residents.

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Ultrasound Guided Intrauterine Device (IUD) Insertion during Family Medicine Residency Training: A Preliminary Analysis

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ABSTRACT

Background: Intrauterine devices (IUDs) are one of the safest and most effective methods of contraception. They are also used to manage abnormal uterine bleeding and provide hormone replacement. Preliminary evidence suggests that ultrasound-guided IUD insertions are associated with reduced pain and increased practitioner confidence in conducting the procedure. Benefits for family medicine trainees are not known.

Research Question(s): 1) Does transabdominal/transvaginal (US) versus non-ultrasound guided IUD placement improve patient pain scores when conducted in a family medicine training environment? 2) Will the confidence level of resident trainees in performing IUD placement be improved with ultrasound versus non-ultrasound guided IUD placement?

Methods/Methodology: A prospective randomized controlled study was conducted at West Winds Primary Health Center in Saskatoon, Saskatchewan. Ethics approval was obtained. Patients planning an IUD insertion (hormonal or non-hormonal) and Family Medicine residents at West Winds Primary Health Center were eligible to participate. Patients were randomized to undergo either non-guided IUD insertion (control group) or US-guided IUD insertion (experimental group). In the control group, uterine position and depth was determined by bimanual exam, and the IUD was inserted blindly. In the experimental group, uterine position determined by bimanual exam was confirmed/refuted using transvaginal sonography (TVS). IUD placement was confirmed during insertion with transabdominal sonography (TAS) and immediately after IUD placement with TVS. Resident confidence pre- and post- procedures as well as patient pain scores were recorded using Likert scales. Outcomes were compared between groups using linear mixed models (SPSS v28).

Results/Findings: A total of 41 participants were recruited (control group: n= 20; experimental group: n=21). Data from 30/41 participants were analyzed. On average, patient pain scores were not different between the US guided (2.1/10) and control groups (2.4/10), (p=0.59). However, greater confidence in performing the procedure was reported in the residents that inserted IUDs under ultrasound guidance (7.7/10) compared to the control group (6.3/10),(p=0.04).

Discussion: Preliminary data suggest that US-guided IUD insertion does not decrease patient pain but does increase confidence for family medicine residents to perform the procedure.

Conclusions: US-guided IUD insertions could be implemented into postgraduate primary care training to improve resident confidence to perform IUD insertions.

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Utilizing a Three-Dimensional Printed Low-Cost Shoulder Model for Ultrasound-Guided Injection Training of the Glenohumeral Joint

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ABSTRACT

Background: Simulation training is a well-known method of teaching. However, one of the largest barriers to simulation training is the cost of commercially available models needed to teach these procedures. One alternative method to overcome this barrier is to utilize a 3D printer to create a model at a lower cost. The researchers facilitated ultrasound-guided glenohumeral joint injection training using a 3D printed model of the shoulder.

Research Question(s): Do residents feel more confident in performing ultrasound-guided glenohumeral joint injections after training with a 3D printed model of the shoulder?

Methods/Methodology: An Ethics Exemption (E296) was obtained for this quality improvement project. Using 3D printed bones and low-cost molds for creating a shoulder replica, residents were taught and then had hands-on practice with the model for ultrasound-guided glenohumeral joint injections. Participants completed responses for pre- and post-session confidence, and the researchers will compile these responses to assess efficacy of the training session.

Results/Findings: Thirteen residents in an urban Saskatoon family medicine residency program participated. Statistically significant improvements were seen pre- and post-session for confidence with ultrasound-guided glenohumeral joint injections ($p<0.0001$) and non-ultrasound guided injections ($p=0.04$). There was an average increase of 2-points on a 5-point scale in confidence performing the injection.

Discussion: The findings of this study suggest that 3D printed models can be utilized as a lower cost option to commercially available models for teaching residents. Although this study did not directly compare the 3D printed model to a commercially available one, the increase in confidence did show that this model was effective.

Conclusions: Incorporating 3D printed models into residency training programs can potentially be a more accessible method to teach or improve skills of learners at a lower cost than commercially available models.

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Estimating volatile anesthetic emissions in a rural Canadian hospital using the Dräger Primus® and Dräger Innovian® data management system: what are the environmental and financial implications of a 'low-flow' technique?

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ABSTRACT

Background: Climate change represents the greatest threat to global health of the 21st century. Inhalation anesthetics have significant global warming potential due to their radiative efficiency and atmospheric lifespan. 'Low-flow' anesthesia reduces volatile and nitrous oxide (N_2O) consumption but prematurely exhausts carbon dioxide (CO_2) absorbents. For closed and semi-closed circuits, equilibration represents an opportunity to reduce fresh-gas flow (FGF) and maintain anesthesia via rebreathing of exhaled vapours. At Battlefords Union Hospital (Saskatchewan, Canada) the Dräger Innovian® clinical information system electronically archives all intraoperative parameters displayed by Dräger Primus® anesthesia workstations on a case-by-case basis. Access to a comprehensive digital dataset permits retrospective analysis of annual consumption at baseline and 'ideal' FGF.

Research Question(s): With regards to inhalation anesthetic consumption at Battlefords Union Hospital:

1. What is the annual carbon footprint?
2. What is the annual cost?
3. What are the potential net savings associated with reduced maintenance FGF?

Methods/Methodology: Ethical approval was obtained from the University of Saskatchewan Biomedical Research Ethics Board (ID# Bio 2805) and Operational Approval from the Saskatchewan Health Authority (ID# OA-UofS-2805). Mass extraction of Innovian® intraoperative parameters for the year 2019 enabled case-level modelling of inhalation anesthetic and CO_2 absorbent consumption at baseline and 'ideal' maintenance FGF (modelled as oxygen uptake plus inspired N_2O fraction plus circuit leak). This low-flow intervention was applied only to cases where model output at baseline FGF was accurate to within 5% of all corresponding Innovian® datapoints.

Results/Findings: In 2019, volatile and N_2O emissions from 1,314 cases totalled 137,675kgCO_2e. Desflurane accounted for 64% of total emissions (N_2O=29%, sevoflurane=7%) despite preferential use of sevoflurane (71% of maintenance hours). An 'ideal' maintenance FGF (average 0.8L.min^{-1}) was applied to 77% (n=922) of cases achieving equilibration (n=1,204), reducing the average maintenance FGF from 3.4L.min^{-1} to 1.6L.min^{-1}. This would have saved $10,453 and prevented 45,980kgCO_2e (33%) of emissions with negligible impact on CO_2 absorbent utilization (+$178.73 cost, +14.5kg$CO_2$e emissions).

Conclusion: Modelling suggests that reducing FGF after equilibration confers both environmental and financial benefits. Prospective analysis utilizing the Innovian® database is recommended.

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Family Medicine Resident Familiarity with Concepts of Developmental Trauma and Trauma-Informed Care

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ABSTRACT

Background: Child maltreatment affects one in three people; when it occurs on an ongoing basis it is termed developmental trauma. A child living in such circumstances feels chronically unsafe and this is associated with chronic activation of the body's physiological stress response, which predisposes to a range of physical and mental illnesses. Despite the prevalence of child maltreatment and the association between developmental trauma and negative health outcomes, primary care practitioners do not routinely practice trauma-informed care (TIC).

Research Question(s): What is the training exposure, attitude, knowledge, and practices of Saskatchewan-based family medicine residents regarding developmental trauma and TIC?

Methods/Methodology: This study employed a cross-sectional design wherein a cohort of Saskatchewan-based family medicine residents was surveyed about their familiarity with the concepts of developmental trauma and TIC. The University of Saskatchewan's Behavioural Research Ethics Board approved this study (Beh ID 3021).

Results/Findings: Of 110 invited, 43 family medicine residents completed the survey (39%). During their undergraduate medical training, 72% of respondents had learned about developmental trauma and 58% had learned about TIC. During their postgraduate medical training, 44% had learned about developmental trauma and 42% had learned about TIC. Respondents uniformly viewed developmental trauma as a medical problem. Overall respondents self-reported knowledge was neutral, and they reported low knowledge about neurotoxic stress, neurobiological outcomes, Felitti et al.'s original study, and evidence-based interventions. They rarely practice TIC and upon first meeting patients rarely screen for developmental trauma. They never connect patients with evidence-based resources.

Discussion: Respondents were more likely to have been exposed to these topics in their undergraduate medical training. Although they viewed developmental trauma as a medical issue, they were not knowledgeable about its neurobiological basis or about evidence-based treatment options. They did not routinely employ TIC.

Conclusions: In this cohort of family medicine residents, some knowledge of these topics did not translate into practice of TIC. Medical curricula should aim to address this knowledge and practice gap.

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Evaluating Electronic Health Record Communication among Family Physicians in the Saskatchewan Health Care System

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ABSTRACT

Background: Communication is paramount to provide accurate and effective medical care between patients, family physicians, specialists, etc. In an effort to facilitate this, the use of electronic medical records (EMRs) has grown dramatically. However, the system is not perfect. Currently, faxes and paper copies continue to be the mainstay of communication between providers in Saskatchewan. EMR system interoperability is a necessary step towards transforming health care into a system that can achieve goals of improved quality, efficiency, and patient safety.

Research Question(s): What are the current strengths and limitations of the EMR system in Saskatchewan? Would a more connected system between physicians be beneficial and is that feasible? What is the care transition process like for patients leaving the hospital? Are there improvements that could benefit Saskatchewan patients and physicians; and which would Saskatchewan doctors prioritize? Would these improvements save money for the province?

Methods/Methodology: The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named project, application ID 3127. The proposal was found to be acceptable on ethical grounds. A series of eight narrative inquiry interviews were conducted by telephone or Zoom with family physicians that have an interest/expertise in EMR use. The overall theme of responses was recorded by the resident researchers. A manual inductive analysis of the qualitative responses to categorical questions was conducted. The responses to open-ended questions were reviewed by each resident researcher and the most common themes identified. We looked at similarities and differences in the responses and identified any outliers.

Results/Findings: N/A (Not Applicable – Not Appropriate at This Time.)

Discussion: Initial impressions of interviews demonstrate a variety of strengths of EMRs, as well as room for improvement.

Conclusions: N/A (Not Applicable – Not Appropriate at This Time.)

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