



**McMaster Medical
Student Research Day**

May 3rd, 2023

2023

Dear Students, Faculty, and Community Members:

We are thrilled to welcome you to the 14th annual McMaster Medical Student Research Day (MMSRD)! As an integral part of our academic community, MMSRD consistently offers a unique stage for medical students to disseminate their research accomplishments and engage in stimulating conversations. The 2023 MMSRD committee has crafted an innovative program with panels, posters, and oral presentations, including a presentation from our keynote Dr. Mark Loeb, a renowned infectious disease specialist and professor at McMaster University.

We have received an exceptional quality of abstract submissions this year. The conference will feature various presentation formats, including poster presentations, 3-minute thesis (3MT), and 7-minute thesis (7MT), covering a broad range of research disciplines. Moreover, we have introduced interdisciplinary sessions to foster collaborations and broaden perspectives. In place of the Premedical Research Engagement Program (PREP), we have organized a special panel spotlighting student clinician scientists (future MD-PhDs) who will share their insights on balancing medical education and research pursuits.

We extend our gratitude to the individuals who have contributed to making this research day possible. We recognize and are grateful to the MMSRD 2023 committee chairs and members for their commitment to organizing this event. We are also grateful to Dr. Constantine Samaan and Katie Hood for their continuous support and valuable insight. Additionally, we appreciate the generosity of our sponsors, Royal Bank of Canada (RBC), McMaster University Medical Journal, and McMaster Medical Student Council.

Finally, we thank all participants for being a part of this year's research day. As we celebrate the innovative research on display, we are honored to facilitate an event that fosters intellectual curiosity and meaningful connections within our community. We hope this experience not only broadens our perspective on medicine but also sparks collaborations that drive progress in medical research.

With warm regards,

Catherine Andary and Joe Steinman

MMSRD 2023 CO-CHAIRS



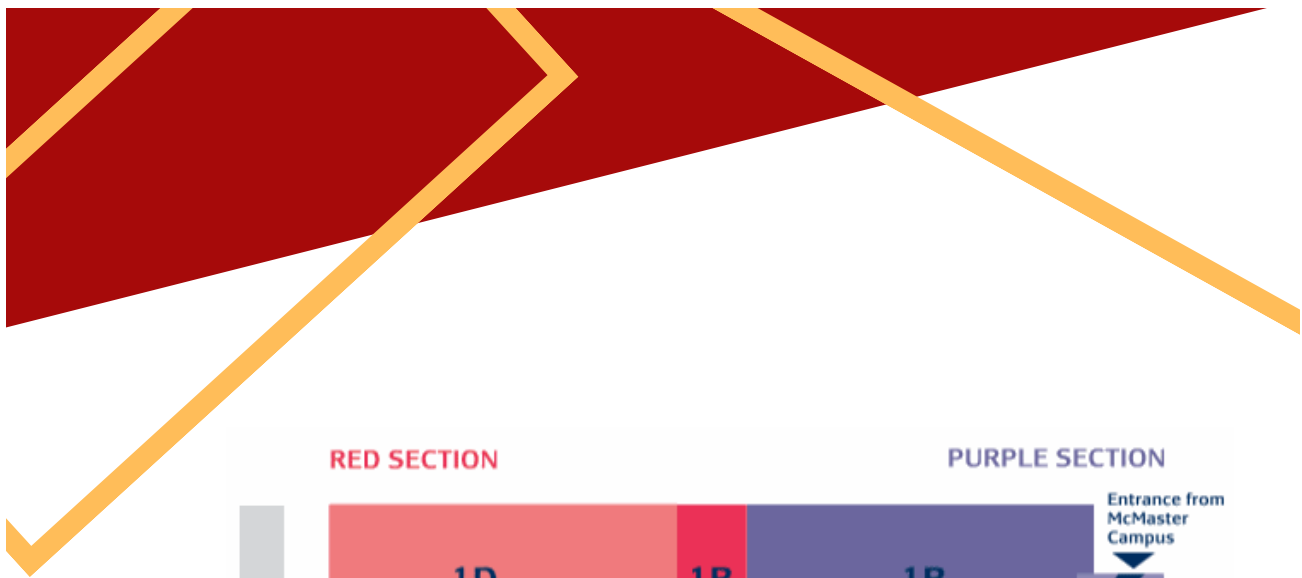
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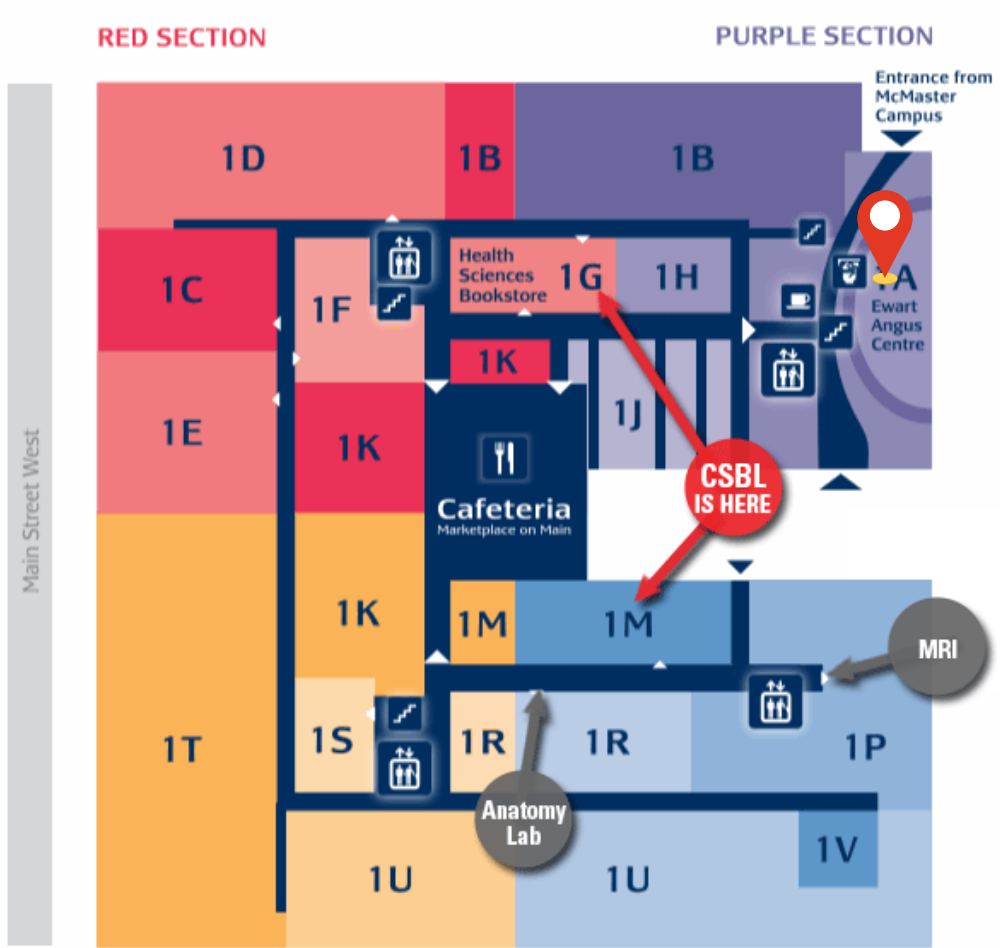
SCHEDULE



CHECK-IN & BREAKFAST	9:00-9:30AM
WELCOME REMARKS	9:30-9:45 AM
7-MINUTE ORAL PRESENTATIONS	9:45-11:00 AM
KEYNOTE SPEAKER: DR. MARK LOEB	11:00-12:00 PM
LUNCH	12:00-12:30 PM
POSTER PRESENTATIONS	12:30-2:00 PM
3-MINUTE ORAL PRESENTATIONS	2:00-3:00 PM
RESEARCHER PANEL EVENT	3:00-4:00 PM
CLOSING REMARKS & AWARDS	4:00-4:30 PM



MAP



RED SECTION

PURPLE SECTION

YELLOW SECTION

BLUE SECTION

1M1 Centre for Simulation-Based Learning (CSBL) & Standardized Patient Program

Legend

- Cafeteria
- Elevator
- Coffee Shop
- Stairwell
- Bank Machine

EWART ANGUS CENTRE
MCMASTER UNIVERSITY MEDICAL CENTRE
1280 MAIN STREET WEST, HAMILTON, ONTARIO



ACKNOWLEDGMENTS

Thank you to all of the staff, faculty, and sponsors without whom the 14th annual McMaster Medical Student Research Day would not have been possible!

KEYNOTE SPEAKER

Dr. Mark Loeb

JUDGES

Dr. Raja Bobba
Dr. Taylor Duda
Dr. Patricia Farrugia
Dr. Adam Fleming
Dr. Thomas Hawke
Dr. John Lee
Dr. Mitch Levine
Dr. Jakob Magolan
Dr. Jhanahan Sriranjani

Dr. Elizabeth McCready
Dr. Anna Mathew
Dr. Peter Margetts
Dr. Alim Pardhan
Dr. Ally Prebtani
Dr. Karen To
Dr. Christine Wekerle
Dr. Katherine Zukotynski
Dr. Marie Pigeyre

Dr. Andrés Gómez Aldana
Dr. Itai Malkin
Dr. Rakeeb Choudhury
Dr. David Putman
Dr. Mark Mohan Kaggwa
Dr. Abdullah AlGhamdi
Dr. Abdulrahman Alghamdi
Dr. Irene Turpie

FACULTY SUPPORTS

Dr. Constantine Samaan

Katie Hood

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McMaster University Medical Journal (MUMJ)
McMaster Medical Student Council (MMSC)



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MUMJ
McMASTER UNIVERSITY
MEDICAL JOURNAL
A PEER-REVIEWED, STUDENT-RUN PUBLICATION
VOLUME 19, ISSUE 1 | 2022

Commentary
MANAGING THE INFLOX: A PEER-LED SESSION ON COMMUNICATION AND PROFESSIONALISM IN MEDICINE

Case Report
IMMEDIATE BREAST RECONSTRUCTION POST-MASTECTOMY IN A PATIENT WITH PRIOR BREAST AUGMENTATION, MASTOPLEXY, AND LUMPECTOMY WITH RADIATION

Original Research
EVALUATION OF A PRE-CLERKSHIP FAMILY MEDICINE PLACEMENT: DOES IT INFLUENCE CANADIAN MEDICAL STUDENTS' INTEREST IN PERSUING FAMILY MEDICINE?

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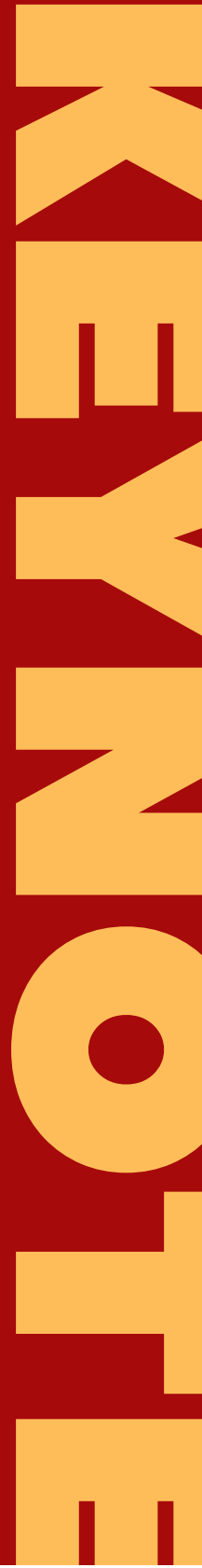
Dr. Mark Loeb

MMSRD 2023 KEYNOTE SPEAKER



Dr Mark Loeb is a Professor in the Departments of Pathology & Molecular Medicine and Health Research, Evidence, and Impact at McMaster University. Dr. Loeb is an Infectious Diseases physician and Medical Microbiologist. He holds the Canada Research Chair in Infectious Diseases and is Co-Director of the McMaster WHO Collaborating Centre on Infectious Diseases, Research Methods and Recommendations. Dr. Loeb has led cluster randomized trials of influenza vaccination in the Hutterite community establishing the importance of herd immunity as well as a large international trial of influenza vaccine to prevent adverse cardiovascular events.

He has 412 peer-reviewed publications, has established collaborations in 22 countries outside North America, and has served on 45 international and national advisory committees. Recognitions have included the Gold Medal in Medicine from the Royal College of Physicians and Surgeons of Canada for research, the Jonas Salk award from the March of Dimes for research contributions, and Fellowships in the Canadian Academy of Health Sciences and the Royal Society of Canada.



PANEL SPEAKERS



ALICE MAN, MD/PHD

Alice completed her Bachelor of Science degree at the University of British Columbia, during which she pursued research interests surrounding pharmacology, including nanotherapeutics, pharmacogenomics, and precision medicine. Most notably, Alice joined the Canadian Pharmacogenomics Network for Drug Safety led by Dr. Bruce Carleton, where she contributed to studies investigating the genetics of chemotherapy-induced adverse drug reactions in children. She entered the MD/PhD program at McMaster University in September 2021. Under the supervision of Dr. Guillaume Paré, Alice is developing novel approaches to identify treatment subgroups for cardiometabolic diseases. Through her project, she is exploring methods in quantitative genetics, large-scale biobank analyses, and causal inference in epidemiology. In her free time, Alice can be found walking her dog and exploring restaurants around Hamilton and Vancouver.



ALASTAIR MORRISON, C2024

Alastair Morrison received a Ph.D. in English and Comparative Literature from Columbia University in 2015, and taught at universities in Canada, the US, and Denmark before enrolling in the MD program of McMaster University as part of the class of 2024. His published research has dealt with modern and contemporary poetry, the question of instrumentality in the academic humanities, and topics in medical humanities, including literary representation and clinical epistemology, and the role of the humanities in medical education. His work has recently appeared in *Medical Humanities*, and he has chapters forthcoming in the volumes *A Poetic Language of Aging* (Bloomsbury) and *The Routledge Handbook of Medicine and Poetry*. He is also a published poet. He lives in Hamilton, Ontario with his spouse and two children.



SOPHIE NGANA, MD/PHD

Sophie completed three years of her undergraduate degree at the University of Toronto specializing in Molecular Genetics. She transferred to the Michael G. DeGroot School of Medicine in 2018 and entered the MD/PhD program as a first-year medical student in 2019. Sophie is currently in her fifth year of the MD/PhD program and in the final year of her PhD in the Department of Biochemistry under the supervision of Dr. Lesley MacNeil. Her project aims to identify individual microbial bacteria influencing neurodegeneration in Parkinson's Disease and the mechanisms mediating these effects, using a *C. elegans* model. Her work is funded by the CIHR Vanier Canada Graduate Scholarship. In her free time, you can find Sophie thrifting, enjoying musical theatre, and collecting eclectic reference material.

PANEL SPEAKERS



JOE STEINMAN, C2025

Joe Steinman is a 1st year medical student at McMaster (c2025). Prior to medical school, he received a BSc in Chemical Physics (Math minor) from Trent University, followed by an MSc and PhD in Medical Biophysics at U of T. From Jan 2020 until the start of medical school in August 2022, Joe was a Postdoctoral Fellow in Physiology at U of T. His research during graduate school focused on the development and applications of imaging technologies to investigate microvascular remodeling in a mouse model of traumatic brain injury (TBI). Through combining blood flow imaging with 3D microscopy of microvascular network structure, the research studied how changes to brain blood vessels influenced blood flow and recovery from TBI. During the postdoc, Joe studied brain-vascular recovery in neonatal hypoxic-ischemic injury. In the long term, he hopes to continue with a career in medical research as a clinician scientist. During medical school, Joe is the co-Chair of the MMSRD and continues to conduct research in the field of concussions. In his spare time, Joe is the goalie for the Mac Med Intramural Hockey team.



ANDREA WECKMAN, C2025

Andrea completed her BSc in neuroscience at McGill University, and a PhD in Laboratory Medicine and Pathobiology with Dr. Kevin Kain at the University of Toronto. Before starting her MD at McMaster, Andrea was a Postdoctoral Fellow at University Health Network in Toronto. Her PhD and postdoc research focused on the impact of malaria during pregnancy on placental and fetal development. Specifically, she studied maternal host response pathways contributing to placental vascular insufficiency, adverse birth outcomes (e.g., preterm birth), and fetal neurodevelopment. Long-term, Andrea hopes to continue her research in global maternal-child health, as a clinician scientist. Beyond her academic work, Andrea is a Grants Officer at Panzi Foundation, an organization that provides care to survivors of sexual violence in the DRC and works to end sexual violence as a weapon of war. Andrea can also be found coaching the U15AA Etobicoke Dolphins hockey team and parenting three very good boys, Laker, Jarvis, and Rebel (dogs and cat).

7-MINUTE ORAL PRESENTATION

- 01** Tara Behroozian
- 02** Alastair Morrison
- 03** Prushoth Vivekanantha
- 04** Brandon Woolfson
- 05** Matteo Di Scipio
- 06** Peyman Heidari
- 07** Irene Zhao

#01 - MEPITEL FILM FOR THE PREVENTION OF ACUTE RADIATION DERMATITIS IN BREAST CANCER: A RANDOMIZED MULTICENTER OPEN-LABEL PHASE III TRIAL

Tara Behroozian(1)*, Lauren Milton(1), Irene Karam(1), Liying Zhang(2), Keyue Ding(3), Julia Lou(4), François Gallant(1), Eileen Rakovitch(1), William Tran(1), Hany Soliman(1), Eric Leung(1), Danny Vesprini(1), Ewa Szumacher(1), Hanbo Chen(1), Elysia Donovan(4), Jacqueline Lam(5,6), Silvana Spadafora(6), Matt Wronski(1), Chris Lavoie(5), Natalie Walde(6), Emily Lam(1), Gina Wong(1), Erin McKenzie(1), Krista Ariello(1), Samantha Kennedy(1), Saba Shariati(1), Katherine Carothers(1), Glen Gonzales(1), Yulya Kagan(1), and Edward Chow(1)

(1) Odette Cancer Centre, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Ontario, Canada

(2) MacroStat Inc, Department of Biostatistics, Toronto, Ontario, Canada

(3) Canadian Cancer Trials Division, Queen's Cancer Research Institute, Queen's University, Kingston, Ontario, Canada

(4) McMaster University, Faculty of Science, Hamilton, Ontario, Canada

(5) Health Sciences North, Department of Radiation Oncology, Sudbury, Ontario, Canada

(6) Sault Area Hospital, Department of Radiation Oncology, Sault Ste. Marie, Ontario, Canada

PURPOSE: Radiation dermatitis (RD) is a common dermatologic adverse event experienced by 95% of patients undergoing breast radiotherapy. Mepitel film (MF) is a silicone-based barrier film that can reduce RD, but the results from two previous randomized controlled trials are conflicting. We aimed to conduct a confirmatory randomized controlled trial in patients at risk of RD, including large-breasted and post-mastectomy patients.

METHODS: Patients were randomly assigned to receive MF or standard care (2:1 ratio). Patients with large breasts after lumpectomy (bra size >36 inches or cup size >C) or after mastectomy were eligible. Stratification factors included surgery type, dose fractionation, and administration of boost/bolus. The primary end point was grade (G) 2 or 3 RD using the Common Terminology Criteria for Adverse Events v5.0. Secondary end points included patient- and clinician-reported outcomes.

RESULTS: Between January 2020 and May 2022, 376 patients were included in the modified intention-to-treat analysis. The incidence of G2 or 3 RD was significantly lower in MF patients compared with standard care (n = 39/251, 15.5%; 95% CI, 11.3 to 20.6% v. n = 57/125, 45.6%; 95% CI, 36.7 to 54.8%, respectively, odds ratio (OR): 0.20, P<.0001). Benefits of MF remained significant in patients who developed G 3 RD (n = 7, 2.8%; 95% CI, 1.1 to 5.7% v. n = 17, 13.6%; 95% CI, 8.1 to 20.9%, OR: 0.19) and moist desquamation (n = 20, 8.0%; 95% CI, 4.9 to 12.0% v. n = 24, 19.2%; 95% CI, 12.7 to 27.1%, OR: 0.36). Blistering/peeling, erythema, pigmentation, and edema were significantly reduced in the MF arm. Three patients removed the film prematurely because of rash (n = 2) and excessive pruritus (n = 1).

CONCLUSION: MF significantly reduces RD in patients undergoing breast radiotherapy and should be considered for use in high risk patients.

#02 - NARRATIVE AND ITS DISCONTENTS: CHANGING MODELS IN MEDICAL HUMANITIES

Alastair Morrison(1)*

(1) DeGroot School of Medicine, McMaster University, Hamilton, Ontario, Canada

Recent scholarship has reopened questions about the purpose of humanities education for physicians. Focusing on two new books in particular, Bleakley and Neilson's *Poetry in the Clinic* and Spencer's *Metagnosis*, this presentation will outline mounting dissatisfaction with narrative medicine, the most internationally recognizable model of humanities education in medicine, and growing interest in more open-ended, less diagnostically oriented approaches. Drawing on key theories of humanities education, the presentation argues that successful curricula along these new lines will require strategic thought about what has made narrative medicine itself so successful.

#03 - TIBIAL TUBERCLE TO TROCHLEAR GROOVE DISTANCE VERSUS TIBIAL TUBERCLE TO POSTERIOR CRUCIATE LIGAMENT DISTANCE FOR PREDICTING PATELLAR INSTABILITY: A SYSTEMATIC REVIEW

Prushoth Vivekanantha(1)*, Harjind Kahlon(2), Ali Shahabinezhad(3), Dan Cohen(4), Kanto Nagai(5), Yuichi Hoshino(5), Darren de SA(4)

(1)Michael DeGroot School of Medicine, McMaster University, Hamilton, ON, Canada (2)Faculty of Health Sciences, McMaster University, Hamilton, ON, Canada

(3)University Health Network, University of Toronto, Toronto, ON, Canada

(4)Division of Orthopaedic Surgery, Department of Surgery, McMaster University Medical Centre, Canada

(5)Department of Orthopaedic Surgery, Kobe University Graduate School of Medicine, Kobe, Hyogo, Japan

Purpose: To determine the reliability and diagnostic accuracy of tibial tubercle-trochlear groove (TT-TG) distance versus tibial tubercle-posterior cruciate ligament (TT-PCL) distance, and to determine cutoff values of these measurements for pathological diagnosis in the context of patellar instability.

Methods: Three databases MEDLINE, PubMed, and EMBASE were searched from inception to October 5, 2022 for literature outlining comparisons between TT-TG and TT-PCL in patellar instability. Data on inter-rater and intra-rater reliability, receiver-operating characteristic (ROC) curve parameters such as area under the curve (AUC), sensitivity and specificity, as well as odds ratios, cutoff values for pathological diagnosis and correlations between TT-TG and TT-PCL were recorded.

Results: A total of 23 studies comprising 2839 patients (2922 knees) were included in this review. Inter-rater reliability ranged from 0.71 to 0.98 and 0.55 to 0.99 for TT-TG and TT-PCL, respectively. Intra-rater reliability ranged from 0.74 to 0.99 and 0.88 to 0.98 for TT-TG and TT-PCL, respectively. AUC measuring diagnostic accuracy of patellar instability for TT-TG ranged from 0.80 to 0.84 and 0.58 to 0.76 for TT-PCL. Five studies found TT-TG to have more discriminatory power than TT-PCL at distinguishing patients with patellar instability from patients who do not. Sensitivity and specificity ranged from 21 to 85% and 62 to 100%, respectively, for TT-TG. Sensitivity and specificity ranged from 30 to 76% and 46 to 86%, respectively, for TT-PCL. Odds ratio values ranged from 1.06 to 14.02 for TT-TG and 0.98 to 6.47 for TT-PCL. Proposed cutoff TT-TG and TT-PCL values for predicting patellar instability ranged from 15.0 to 21.4 mm and 19.8 to 28.0 mm, respectively.

Conclusion: TT-TG resulted in overall similar reliability, sensitivity and specificity as TT-PCL; however, TT-TG has better diagnostic accuracy than TT-PCL in the context of patellar instability as per AUC and odds ratio values.

#04 - INITIAL DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE PEER SUPPORT MATCHING SYSTEM FOR CANCER PATIENTS: A LITERATURE REVIEW AND STAKEHOLDER CO-DESIGN

Brandon M. Woolfson(1)*, Andréa M. Laizner(2,3), John Kildea(1,2)

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(2) Cancer Research Program, Research Institute of the McGill University Health Centre, Montréal, Québec, Canada

(3) Ingram School of Nursing, McGill University, Montréal, Québec, Canada

Background: Peer support provides individuals with cancer an opportunity to give and receive guidance throughout their cancer trajectory. However, creating an effective match between the mentor and mentee is often challenging and may be overlooked when assessing oncology peer support programs. Within an oncology patient portal system (Opal) an artificial intelligence (AI) peer support matching system is being developed to facilitate matches.

Objective: The aim of this project is to use a combined stakeholder co-design and literature review approach to review peer support and technology matching systems. This will provide feedback and objectives to direct development of an AI oncology peer support system.

Methods: Major databases MEDLINE and Web of Science were searched using cancer, peer support, and technology/patient portal concepts. Title/abstracts and full texts were screened followed by qualitative data extraction. A total of 1482 articles were originally identified and of that, 20 eligible articles were included in review. A stakeholder co-design approach utilized weekly meetings with patients, researchers, and clinicians to further development of the AI peer support matching system.

Results: Four key categories of results emerged from the literature: (1) Preference based matching improves engagement and support, (2) changes over the cancer trajectory require flexibility in matching, (3) automated matching is time and cost efficient, and (4) privacy is the patient's main concern. These four areas were incorporated into the co-design and development of the pilot peer support matching algorithm. It also guided subsequent focus groups with oncology patients by providing key themes to discuss.

Conclusions: Stakeholder co-design continues to be a valuable tool and approach for design and development of health technologies. Using this approach, this study guided future development of an AI peer support matching system for cancer patients.

#05 - A MULTIPLE LINEAR REGRESSION ALGORITHM FOR FAST, ROBUST, AND VERSATILE QUANTITATIVE ESTIMATION OF GENE-BY-ENVIRONMENT INTERACTION EFFECTS ON BIOBANK-SCALE DATASETS

Matteo Di Scipio(1,2)*, Mohammad Khan(1,2)*, Shihong Mao(1), Michael Chong(1,3,4), Nazia Pathan(1,2), Conor Judge(1), Nicolas Perrot(1), Walter Nelson(5,6), Shuang Di(5,7), Jeremy Petch(1,2,5,8), Guillaume Paré(1,3,4,9)

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(9)Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, Canada

INTRODUCTION: Identification of gene-by-environment interactions (GxE) is crucial to understand the interplay of environmental effects on complex traits. However, current methods evaluating GxE on biobank-scale datasets are limited due to constraints such as high data dimensionality ($m \gg n$), weaker signals than marginal genetic and environmental effects, computational burden, and common sources of heritability biases.

OBJECTIVES: To develop a robust algorithm that can quantitatively estimate interaction effects on biobank-scale data.

METHODS: We introduce MonsterLM, a method based on multiple linear regression that does not rely on model specification and provides unbiased estimates of variance explained by GxE.

RESULTS: We estimated GxE interactions using waist-to-hip-ratio (WHR), smoking, and exercise as the environmental variables on 13 outcomes ($N=297,529-325,989$) in the UK Biobank. GxE variance was significant for 8 environment-outcome pairs, ranging from 0.009 – 0.071. The majority of GxE variance involves SNPs without strong marginal or interaction associations and can be largely explained by weaker association SNPs. We also observed modest improvements in polygenic score prediction when incorporating GxE.

CONCLUSIONS: Through extensive simulations and real-data analyses of 325,989 individuals, we show that MonsterLM is well-purposed to handle biobank-scale data efficiently and robustly while offering advantages compared to existing GxE methods.

#06 - IS LIMB POSITION SENSE PRESERVED DURING INTERACTION TORQUE-DRIVEN MOVEMENT?

Peyman R. Heidari(1)*, Natalia Mangos(1), Olivier Codol(1), J. Andrew Pruszynski(1,2), Paul L. Gribble(1,2)

(1) Department of Psychology, Western University, London, Ontario, Canada

(2) Department of Physiology and Pharmacology, Western University, London, Ontario, Canada

Background: During multijoint limb movement, the motion of limb segments can be driven actively, by muscle torque, and/or passively, by interaction torque—rotational force that arises passively at one joint due to motion of an adjacent limb segment about another joint. Proprioception plays a critical role in compensating for interaction torques, and deafferented patients have marked deficits in this aspect of motor control. This observation is seemingly at odds with the widely-held belief that proprioceptive sense is poor during motion that is not driven by active muscle contraction, and suggests that proprioceptive acuity might be preserved during motion that is driven by interaction torque. We designed a study to determine experimentally whether the nature of the torques driving joint motion influences proprioceptive sense at that joint.

Methods: We quantified proprioceptive acuity at the elbow joint while human participants were midway through each of two kinds of reaching movements that both involved elbow extension: one in which extension was primarily driven passively by interaction torques, and another in which extension was primarily driven actively by elbow muscle torques. We delivered equally sized and timed flexion or extension perturbations to the elbow joint during motion.

Results/Conclusion: Participants' ability to correctly sense the direction in which the elbow was perturbed (flexion or extension) differed depending on if the perturbation was delivered during interaction torque-driven motion or active muscle torque-driven motion. Specifically, we found that participants had superior perceptual acuity when joint motion was driven by interaction torque, suggesting that proprioceptive sense is preserved during this type of motion.

#07 - VALUES AND PREFERENCES OF PATIENTS AND CAREGIVERS REGARDING TREATMENT OF ATOPIC DERMATITIS (ECZEMA): A SYSTEMATIC REVIEW

Irene X. Zhao (1)*, Keon Maleki-Yazdi (1), Anja Fog Heen (2), Gordon H. Guyatt (1,3), Lynda Schneider (4), Derek K. Chu (1, 3, 5)

(1) Department of Medicine, McMaster University, Hamilton, Ontario, Canada

(2) Department of Medicine, Lovisenberg Diaconal Hospital, Oslo, Norway

(3) Department of Health Research Methods, Evidence & Impact, McMaster University, Hamilton, Ontario, Canada

(4) Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts, USA

(5) The Research Institute of St. Joe's Hamilton, Hamilton, Ontario, Canada

Background: Understanding patient values and preferences are important to inform atopic dermatitis (AD) care. However, systematic summaries of evidence addressing patient values and preferences have not been conducted. To inform optimal AD care, we systematically synthesized patient and caregiver values and preferences in the management of AD.

Methods: Paired reviewers independently screened MEDLINE, EMBASE, PsycINFO, and CINAHL databases from inception until March 20, 2022 for studies of patients with AD or their caregivers eliciting values and preferences about treatment. Data was extracted and studies were rated for risk of bias. We used thematic and inductive content analysis to qualitatively synthesize the findings. Patients, caregivers, and clinical experts provided triangulation. GRADE-CERQual informed rating of quality of evidence. PROSPERO registration: CRD42021234473.

Results: We identified 7780 studies of which 62 (n=19442; median age across studies 15 years [range 3-44]) proved eligible. Six key themes were elicited. High certainty evidence showed that 1) patients and caregivers prefer to start with non-medical treatments and to step-up therapy with increasing AD severity. Moderate certainty evidence showed that 2) side-effects from treatment are a significant concern. Low certainty evidence showed that patients and caregivers 3) value treatments capable of relieving itching and burning skin, 4) prefer to apply topical corticosteroids sparingly, 5) value a strong patient-provider relationship, and 6) desire treatments that have limited impact on activities of daily living.

Conclusion: In this first systematic review to address patient values and preferences in management of AD, we identify 6 key themes to inform optimal clinical care, practice guidelines, and future research. Our review demonstrates gaps in the literature with respect to values and preferences beyond topical therapies and identifies the need for robust and industry-independent analyses of values and preferences of new AD treatments. The themes elicited from this systematic review support optimal and individualized AD care.

3-MINUTE ORAL PRESENTATION

08 Karanpreet Bath

013 Anisa Khalfan

09 Jason Wang

014 Humaira Niazi

010 Jeffrey Chen

015 Hargun Kaur

011 Jigish Khamar

016 Hanson Liu

012 S. Ming Chen

#09 - BENEFITS AND HARMS OF SYSTEMIC STEROIDS FOR MANAGING ACUTE AND CHRONIC URTICARIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Jason Wang (1)*, Xiajing Chu (2), Leonardo Ologundudu (3), Derek K. Chu (2, 4, 5)

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(3) Faculty of Health Sciences, McMaster University, Hamilton, Ontario, Canada

(4) Division of Clinical Immunology and Allergy, Department of Medicine, McMaster University, Hamilton, Ontario, Canada

(5) The Research Institute of St. Joe's Hamilton, Hamilton, Ontario, Canada

Background: The use of systemic corticosteroids as adjunctive management for acute and chronic urticaria has been a longstanding controversy. Despite many physicians routinely prescribing steroids for urticaria in the ED and various outpatient settings, the evidence surrounding their utility is conflicting. Despite this, there has not yet been a review that synthesizes the available data on this topic to guide clinical decision-making.

Objective: We set out to perform a systematic review and meta-analysis to characterize the benefits and harms of systemic steroid therapy compared to placebo/standard of care without steroids in patients with urticaria.

Methods: MEDLINE, Embase, CENTRAL, and the ICTRP were systematically searched until July 2022 for RCTs comparing systemic steroids with one another or to placebo/standard of care in the treatment of urticaria. Screening, extraction, and risk of bias assessment were completed in duplicate. Primary outcomes were control of urticaria activity, itch severity, and adverse events. Data was pooled using fixed- and random-effects models, then expressed as weighted mean differences and odds ratios with 95% confidence intervals (CI).

Results: A total of 551 patients from 8 RCTs were eligible for analysis. Pooled analysis showed a greater decrease in urticaria activity score (UAS; 0-6 scale, with higher values representing worse symptoms) with the addition of systemic steroid therapies compared to regimens without steroids (WMD = -1.80; 95% CI -2.34, -1.27). Numerical rating scale reports of itch severity were also more greatly reduced with steroids (WMD = -1.08; 95% CI -1.46, -0.69). Meta-analysis showed that adverse effects were minimal, and that steroids were generally well tolerated.

Conclusion: We conclude that a course of systemic corticosteroids is safe and indeed provides modest symptom relief in patients with urticaria. These findings suggest that steroids serve an important role as a therapeutic adjunct in managing urticaria.

#010 - BREAST SURGERY WITHOUT GENERAL ANESTHESIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Jeffrey Chen (1)*, Patrick Jinhyung Kim (1), Xi Ming Zhu (2), Minh NQ Huynh (2), Michael Van der Westhuizen (3), Christopher Coroneos (2)

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Purpose: Breast surgery without general anesthesia has gained popularity given patient preferences, and secondary to the ongoing COVID-19 pandemic. No review has analyzed related process of care and patient outcomes, and no single trial is adequately powered to compare complications versus general anaesthesia.

Methods: This review was conducted as per PRISMA guidelines (PROSPERO ID: CRD42023395158). MEDLINE, Embase, and all evidence-based medicine (EBM) review databases were searched from their respective inception dates to October 30, 2022, to identify reports of studies comparing cosmetic and reconstructive breast surgeries performed with and without general anesthesia. Primary outcomes were operative time, length of stay (LOS), postoperative nausea/vomiting (PONV), postoperative analgesic and opioid consumption, and postoperative pain. Secondary outcome was conversion to general anesthesia. Outcomes were analyzed with a random effects model and risk of bias was assessed for all studies.

Results: A total of 48 studies were included for data extraction. Breast surgery without general anesthesia is associated with significantly lower length of stay (SMD: -1.007, 95% CI: [-1.559; -0.456], I² = 86%, p<0.01), rates of post-operative nausea and vomiting (OR: 0.139, 95% CI: [0.070; 0.276], I² = 60%, p<0.01), pain (MD: -1.628, 95% CI [-2.379; -0.877] I² = 87%, p<0.01), and post-operative analgesia (OR: 0.370, 95% CI: 0.165-0.830, I²: 43%, p: 0.02) and opioid consumption (OR: 0.035, 95% CI: [0.003; 0.404], I²: 85%, p: < 0.01). No significant differences were found in operative time between the two groups. Overall pooled proportion of patients requiring a conversion to GA was 0.4%.

Conclusion: Breast surgery without general anesthesia is associated with significantly lower LOS, pain, and PONV compared to general anesthesia, with no significant differences in surgical complication profile. Surgeons should consider conducting breast surgery without general anesthesia. Further research will help elucidate which patients may benefit most from this approach.

#011 - EVALUATION OF THE USAGE OF AN ELECTRONIC VENOUS THROMBOEMBOLISM ASSESSMENT TOOL FOR AMBULATORY ONCOLOGY PATIENTS AT A CANADIAN COMMUNITY CANCER CENTRE

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Background: The incidence of venous thromboembolism (VTE) is 10-fold greater in cancer patients. There is limited data on the usage of VTE assessment tools and subsequent rates of thromboprophylaxis in a community-based hospital setting.

Objective: To assess the effectiveness of an automated VTE assessment tool on the rates of VTE assessment, thromboprophylaxis, and VTE events in ambulatory cancer patients at a community cancer centre.

Methods: A Khorana score was integrated into the electronic medical record of the Walker Family Cancer Centre. This single-institution cohort study utilized data extracted from the Niagara Health Decision Support database of ambulatory cancer patients (n = 6698) from June 2015 to December 2021. Alerts for thromboprophylaxis were issued to oncologists for patients with high-risk Khorana scores (≥ 3). Practitioner compliance with the VTE risk assessment tool within 7 days or at any point following the initiation of chemotherapy, and the administration of thromboprophylaxis were assessed.

Results: The average practitioner compliance rate for completing the assessment tool within 7 days of starting chemotherapy was 52.9%, with a 14.7% decrease since 2016. The average compliance rate for completing the assessment tool at any point following chemotherapy was 83.1%, with a 12.8% decrease since 2016. Of these, an average of 8.2% had a high-risk Khorana score, with a 2.1% decrease since 2018. 13.9% of high-risk Khorana score patients were started on thromboprophylaxis, with a 5.3% decrease since 2017. On average, 3.2% of assessed patients had a VTE event within 6 months of assessment, with a 1.4% increase since 2018.

Conclusions: There was a decrease in adherence to the VTE risk assessment tool, decrease in administration of thromboprophylaxis, and an increase in VTE events in cancer patients since 2016. Further research into the steady decline in tool usage and thromboprophylaxis should be investigated to determine the etiology and generalizability.

#012 - UTILITY OF A MEDICAL OPTIMIZATION CLINIC IN HEART FAILURE PATIENTS WITH AN IMPLANTED CARDIAC DEVICE

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BACKGROUND: Guideline-directed medical therapy (GDMT) reduces mortality in patients with heart failure with reduced ejection fraction. However, GDMT is not uncommonly de-escalated following implanted cardioverter defibrillator (ICD) implantation. We describe our experience with the Device Medical Optimization Clinic (DMOC) at Hamilton Health Sciences, which was established to facilitate medical therapy optimization in cardiac device patients.

METHOD AND RESULTS: All patients who visited DMOC between September 9, 2020, and December 22, 2021, were analysed (n=121). Mean age was 70.5 (\pm 9.8) years, and 77.7% of patients were male. A total of 32.2% had ischemic cardiomyopathy, 23.1% had heart failure hospitalization within the previous year, and 43.0% had a CRT-D. Mean left ventricle ejection fraction was 32.4% (\pm 11.4%). At baseline, 76.9%, 89.3%, and 24.8% were on an ACE inhibitor/ARB/ARNI, beta blocker, and mineralocorticoid receptor antagonist (MRA), respectively. After the first DMOC visit, the use of ACE inhibitor/ARB/ARNI increased to 85.1%, which was driven by an overall increase in the use of ARNI from 27.3% to 44.6% (p <0.001). In addition, 14.9% of patients had their ACE inhibitor/ARB/ARNI dose increased. Use of beta blockers increased to 92.6% (p =0.13), and 14.9% increased their beta blocker dose (p <0.001). Use of MRAs increased to 34.7% (p =0.0015). An SGLT-2 inhibitor was started in 14.0% of patients (p <0.001).

CONCLUSION: Participation in DMOC led to an increase in the proportion of patients on GDMT and dose increases in prognostically-significant medical therapy. Cardiac device clinics present a unique opportunity to identify patients on suboptimal GDMT who would benefit from medical therapy optimization.

#013 - IDENTIFYING CARDIOVASCULAR DISEASE RISK ENDOTYPES OF ADOLESCENT MAJOR DEPRESSIVE DISORDER USING EXPLORATORY UNSUPERVISED MACHINE LEARNING

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Background: Adolescents with major depressive disorder (MDD) are at increased risk of premature atherosclerosis and cardiovascular disease (CVD). The ability to identify MDD adolescents at increased CVD risk would facilitate personalized interventions and advance knowledge regarding the MDD-CVD association. This study aimed to identify adolescent MDD endotypes of increased CVD risk.

Methods: Youth with MDD (n=189; 74% female, mean 15.03 ± 1.85 years) were recruited through an outpatient psychiatry program in a large urban hospital. Individual and family (demographics, depression, anxiety symptoms, family conflict), physical examination (vital signs, body mass index [BMI]) and laboratory measures (lipid profile, glucose, C-reactive protein) were collected. K-means clustering was performed using demographic, clinical, and laboratory data; a subsequent model included only lipids. Continuous and categorical measures were compared between clusters.

Results: The all-variable model yielded one high and one low CVD risk cluster which differed significantly in ethnicity, anthropometrics, laboratory data, and family conflict, and not in depression or anxiety severity. The lipid-only model yielded two high and two low CVD risk clusters that differed significantly in sex, ethnicity, BMI lipids, depression, and anxiety severity. Among the two CVD risk clusters, one was indicative increased cardiometabolic risk while the other was comprised of MDD adolescents with high LDL and without other cardiovascular risk factors.

Conclusions: Endotypes of adolescent MDD associated with varying levels of CVD risk were identified. Results highlight the heterogeneity of adolescent MDD and the need for precision medicine approaches in the management of MDD to improve both CVD and depression outcomes.

#014 - CLINICAL IMPACT OF TRANSFERRING A COLLAPSED BLASTOCYST (CB) AFTER VITRIFICATION AND THAW PRIOR TO A FROZEN EMBRYO TRANSFER (FET)

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Objective: The aim of this retrospective study was to evaluate the clinical affect of transferring a CB on pregnancy outcomes during a FET cycle.

Methods: Patients (n=466) who underwent a FET at ONE Fertility between January 2015 and December 2022 were age-matched (1:2 ratio, blinded and randomized) by embryo quality at time of vitrification and divided into two groups (Collapsed, n=155 vs. Not collapsed, n=311) for comparison. Groups were further stratified into good (\geq 3BB) or low ($<$ 3BB) embryo quality (Gardner's blastocyst scoring system) and age ($<$ 38 vs. \geq 38) prior to vitrification. The primary outcome was clinical pregnancy rate (CPR). Data was analyzed by chi-square analysis with a Yates correction and considered statistically significance when $p < 0.05$.

Results: Among patients with a good embryo during freezing the CPR was significantly lower in the CB group compared to those transferring an expanded blastocyst, regardless of age ($<$ 38: CPR = 46.2% vs. 67.3%, $p=0.018$, and \geq 38: CPR = 21.1% vs 55.3%, $p=0.030$). However, there was no significant difference in CPR for patients with low quality embryos at freezing ($<$ 38: CPR = 37.3% vs 52.9%, $p\text{-value}=0.07$, and \geq 38: CPR=16% vs. 36%, $p=0.127$) between the two age groups.

Conclusion: Our findings suggest that a FET with a CB is associated with a lower CPR with good quality embryos pre-freeze. In contrast, for low quality embryos, there was no significant difference in CPR between the groups. Despite these differences, clinically relevant pregnancies can be achieved after the transfer of a CB and should be reassuring to patients. Better understanding of the mechanism(s) associated with re-expansion of blastocysts after vitrification may help improve future success rates.

#015 - LONG-TERM RECURRENCE OF NEW-ONSET POST-OPERATIVE ATRIAL FIBRILLATION IN CARDIAC SURGERY PATIENTS AS DETECTED BY AN IMPLANTABLE LOOP RECORDER: A SYSTEMATIC REVIEW AND INDIVIDUAL PARTICIPANT DATA META-ANALYSIS

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Introduction: New-onset atrial fibrillation (AF) occurs in 25-50% of patients after cardiac surgery. For some, post-operative AF (POAF) is thought to be a transient entity, while in others it represents a first presentation of paroxysmal or persistent AF. The long-term AF recurrence rate in patients with POAF is unknown.

Objective: Estimate AF recurrence in patients with new-onset POAF following cardiac surgery as evaluated with an implantable loop recorder (ILR). **Methods:** We searched MEDLINE, Embase and Cochrane CENTRAL to August 18, 2022 for studies of adult patients without a history of AF, who had POAF detected following cardiac surgery and received an ILR. We defined POAF as occurring in the first 30 days postoperatively and recurrence as occurring beyond this. We contacted authors of eligible studies to request individual participant time-to-event data on AF recurrence. When individual data were not available, we estimated events from study figures. We constructed a Kaplan-Meier curve illustrating the time to first recurrence.

Results: From 8111 screened records, we identified 8 eligible studies. We received data for 6 studies and estimated events for one study; data were not available from one study. We pooled data from 186 participants, with a median follow-up of 1.7 (interquartile range (IQR): 1.3-2.8) years. 19.7% of participants were female, 79.8% had isolated CABG, and the median (IQR) CHA2DS2-VASc was 3 (1-6). Rates of AF recurrence beginning after the 30-day post-operative period were: 15.1% (95% CI 10.5%-21.2%) at 3 months, 23.9% (18.1%-31.0%) at 6 months, 30.7% (24.1%-38.1%) at 12 months and 39.2% (32.0%-47.0%) at 18 months.

Conclusions: For patients with new-onset POAF following cardiac surgery, AF recurrence, as detected by an ILR, is common, with approximately 1 in 3 experiencing recurrence in the first year postoperatively. The optimal strategy for monitoring for recurrence and its clinical sequelae in this population remains uncertain.

#016 - PEDIATRIC OSTEOCHONDRAL LESIONS OF THE TALUS: A SYSTEMATIC REVIEW AND TREATMENT ALGORITHM

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Introduction: Osteochondral lesions of the talus (OLT) peak in incidence during childhood, yet there exists a paucity of research on treatment among skeletally immature populations due to their high potential for spontaneous recovery without interventions. Unfortunately for those patients requiring treatment, existing guidelines are based on adult studies, which differ in prognoses and outcomes due to varying capacity for regeneration.

Objective: This paper compares outcomes across conservative and various surgical interventions for pediatric OLTs, with the synthesized evidence forming the basis of a treatment algorithm.

Methods: An electronic literature search was conducted across PubMed, EMBASE, and MEDLINE databases for studies published prior to January 2022. The main outcomes were clinical and radiological success rates, obtained for each treatment method via simple pooling.

Results: 35 studies involving 714 lesions were included. Studies were categorized into five overarching treatment methods – (1) conservative treatment, (2) bone marrow stimulation, (3) retrograde drilling, (4) fixation, and (5) osteochondral transplantation. These interventions had pooled clinical success rates of (1) 45%, (2) 85%, (2) 90%, (4) 82%, and (5) 74%, respectively. The pooled radiological success rates were (1) 58%, (2) 85%, (3) 55%, (4) 89%, and (5) 81%. Escalation from conservative to surgical treatment occurred at a rate of 62% among studies in which this was reported.

Conclusions: Conservative treatments yielded lower clinical and radiological success rates than surgical interventions, but warrant an initial trial in stable lesions due to their cost-effective and non-invasive nature. Surgery should be indicated for unstable lesions or failed conservative treatment. Drilling and bone marrow stimulation are effective in lower grade lesions, while fixation should be considered for loosened fragments, and transplantation for large, non-salvageable lesions. Future research utilizing more robust methodology and reporting outcomes according to baseline lesion characteristics will consolidate these guidelines.

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#P1 - ABERRANT FUNCTIONAL HYPEREMIA IN THE CEREBRAL CORTEX AND CEREBELLUM OF THE FMR1 KNOCKOUT MOUSE MODEL OF FRAGILE X SYNDROME

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Fragile X syndrome is a neurodevelopmental disorder caused by mutations in the Fragile X Messenger Ribonucleoprotein 1 (FMR1) gene. Functional hyperemia is the localized increase in blood flow mediated by vasodilation in response to neuronal activity within the brain. Multiple mechanisms underlying disrupted neurotransmitter signaling and plasticity are implicated in Fragile X syndrome, but the role of dysregulated neurovascular coupling has not been previously described. Thin slices of cerebellar vermis or cerebral cortex were obtained from Fmr1 knockout mice in order to image blood vessels and quantify vasodilation in response to neuronal activation. Fmr1 knockout mice demonstrated significant deficits in vasodilation compared to controls. Vasodilation was rescued in Fmr1 knockout mouse brains by the implementation of sildenafil, a PDE-5 inhibitor with vasodilatory effects, and N-acetyl cysteine, an antioxidant precursor. The improved vasodilation in the presence of sildenafil and N-acetyl cysteine may lead to a potential therapeutic avenue for Fragile X syndrome.

#P2 - THE ROLE OF SIRTUINS IN TRAUMATIC BRAIN INJURY: A SYSTEMATIC REVIEW

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Traumatic brain injury (TBI) leads to complex cellular and molecular processes, many of which remain to be elucidated. Sirtuins (SIRT1-7) are a group of proteins involved in a myriad of cellular functions including DNA maintenance, metabolism, longevity, and homeostasis. Recently, evidence has also suggested the role of sirtuins as potential mediators of TBI recovery via modulation of cellular pathways involved in injury response. We conducted a systematic review investigating the role of sirtuin activity following traumatic brain injury. The electronic databases EMBASE, MEDLINE, Cochrane Central Register of Controlled Trials, and PUBMED were searched from data inception to November 10, 2022. Systematic screening was employed for data analysis. 1,217 articles were screened, 111 were selected for full article review, and 38 were selected for data analysis. The review included 37 animal studies (89.3% male) and 1 human study (n= 10 males). The mean sample size with at least one TBI was 11.2 (mean age of 8.91 weeks) for animals, and 35.81 years for humans. The most commonly assessed sirtuins were SIRT1 (n = 23), SIRT2 (n = 9), SIRT3 (n = 5), and SIRT7 (n = 1). The expression of SIRT1, SIRT2, and SIRT3 were significantly increased (n = 10) up to 24 hours post-TBI. Following 24 hours the expression of these sirtuins, including SIRT7, significantly decreased (n = 12). Some studies did not report the timeframe in which data were collected. Future investigations should focus on the anatomical distribution of sirtuins, quantifying their expression, and their temporal relationships post-TBI.

#P3 - MASCC CLINICAL PRACTICE GUIDELINES FOR THE PREVENTION AND MANAGEMENT OF ACUTE RADIATION DERMATITIS: INTERNATIONAL DELPHI CONSENSUS-BASED RECOMMENDATIONS

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Introduction: Acute radiation dermatitis (RD) is a prevalent adverse effect of radiotherapy, in which patients often experience erythema, pruritus, burning, and moist desquamation. Unfortunately, standardization of modalities for care of acute and chronic RD is currently lacking. The last clinical practice guidelines by the Multinational Association of Supportive Care in Cancer (MASCC) were published in 2013, highlighting the need for an update to the clinical recommendations. A systematic review conducted in September 2020 identified 235 original studies on RD prevention and management modalities. Due to the conflicting evidence and variability in current guidelines, we used a Delphi consensus process to compile expert opinions on RD care based on evidence in the existing literature.

Methods: A Delphi consensus process was conducted over seven months, in which a panel of 42 experts were asked to rank their likelihood of recommending each intervention. Interventions that reached $\geq 75\%$ consensus were recommended. Invited experts who participated in at least one round of the Delphi consensus process were included in the Expert Panel.

Results: After four Delphi-consensus rounds (response rates $>80\%$), six interventions could be recommended for the prevention of ARD, including photobiomodulation therapy and Mepitel® film (in breast cancer patients), Hydrofilm®, mometasone furoate, betamethasone, and olive oil. Mepilex® Lite dressings were recommended for the management of ARD. Most interventions were not recommended due to insufficient evidence, conflicting evidence, or lack of consensus to support use, suggesting a need for further research.

Conclusions: Despite the vast amount of available literature on RD care modalities, further research is needed for interventions with strong support (i.e. 60-75% consensus for use) where a panel consensus could not be reached. Clinicians may consider implementing recommended interventions in their practice to prevent and manage ARD until additional evidence becomes available.

#P4 - EFFICACY AND SAFETY OF IVERMECTIN FOR THE TREATMENT OF COVID-19: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: In late 2020, ivermectin gained popularity as a repurposed COVID-19 treatment. However, early reviews recommending its use were based mainly on low-quality clinical trials on pre-print servers and independent websites, which may not be robust. Optimistic results from early non-peer-reviewed studies and in-vitro studies had led to extensive off-label use of ivermectin for COVID-19 treatment by both clinicians and the general public.

Objective: This systematic review and meta-analysis assessed the efficacy and safety of ivermectin for treating COVID-19 based on peer-reviewed randomized controlled trials (RCTs) and observational studies.

Methods: MEDLINE, EMBASE and PubMed were searched from 1 January 2020 to 1 September 2021 for relevant studies. Outcomes included time to viral clearance, duration of hospitalization, mortality, incidence of mechanical ventilation and incidence of adverse events. RoB2 and ROBINS-I were used to assess the risk of bias. Random-effects meta-analyses were conducted. GRADE was used to evaluate the quality of evidence. The review was prospectively registered in PROSPERO (CRD42021275302).

Results: Three observational studies and 14 RCTs were included in the review. Most RCTs were rated as having some concerns in regard to the risk of bias, while observational studies were mainly rated as having a moderate risk of bias. The use of ivermectin was not associated with a reduction in time to viral clearance, duration of hospitalization, incidence of mortality and incidence of mechanical ventilation. Ivermectin did not significantly increase the incidence of adverse events.

Conclusions: The current review was conducted during an influx of misinformation regarding the efficacy of ivermectin. Based on a lack of efficacy, ivermectin is not recommended for use in the treatment of patients with COVID-19.

#P5 - RELATIONSHIP BETWEEN VISION DIFFICULTY AND DISEASE AND TREATMENT FACTORS IN DIABETES MELLITUS IN THE NATIONAL HEALTH INTERVIEW SURVEY: A CROSS-SECTIONAL, POPULATION-BASED ANALYSIS

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Background: Vision difficulty is a common complication for individuals with diabetes. At a population level, the relationships between disease and treatment factors of diabetes and vision difficulty remain largely unknown.

Objective: To investigate the relationship between disease and treatment factors in diabetes and participant self-reported vision difficulty.

Methods: This study is a cross-sectional, population-based analysis of the 2021 National Health Interview Survey (NHIS), which provides self-reported data on demographic, socioeconomic, and health factors. Participants of the NHIS that responded to the vision difficulty question "Do you have difficulty seeing, even when wearing glasses or contact lenses?" were included in this analysis. The main outcome was self-reported vision difficulty. The relationship between disease and treatment factors for diabetes and vision difficulty was analyzed through univariable and multivariable logistic regression analysis.

Results: 29,464 participants were included in the analysis. Univariable logistic regression showed an increased odds of self-reported vision difficulty among participants with diabetes, prediabetes, or gestational diabetes compared to healthy participants. In participants with diabetes, those who reported having diabetes for more than a year had higher odds of vision difficulty, as did those who were taking insulin, had taken less insulin to save money within the past year, or reported overwhelming stress related to managing their diabetes. Multivariable analysis confirmed an association of vision difficulty with a diagnosis of diabetes, prediabetes, gestational diabetes, or those who experienced diabetes-related stress, adjusting for relevant confounding factors.

Conclusions and Relevance: Multiple disease and treatment-related factors in diabetes are associated with self-reported vision difficulty across a large sample of the U.S civilian population age 18 and older. Increasing vision difficulty was found in diabetic participants who had a longer duration of disease, stress related to managing their condition, as well as those who required insulin but had taken less to save money.

#P6 - SOCIAL DETERMINANTS OF SEPSIS: A CASE-CONTROL CHART REVIEW

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Objectives: To identify whether (1) social determinants of health (SDoH) affect the development of sepsis among patients presenting to the emergency department (ED); and (2) to assess differences between individuals living within geographical regions in Hamilton with poor health outcomes due to social and economic factors (Code Red Zone), compared to individuals living outside the Code Red Zone.

Design: Single-center, case-control study.

Setting and Patients: Adults (≥ 18 years old) who presented to the emergency department of a large academic tertiary care hospital in Hamilton, Ontario, Canada over a 6-month period.

Interventions: Not applicable.

Measurements and Main Results: Among the 7156 patients included in the dataset, 100 randomly selected septic patients with a median age of 75 and 200 non-septic patients with a median age of 72 were included in the study. SDoH variables, including neighborhood household income, frailty, mental illness, smoking history, social support, and alcohol disorder history, were collected. Factors significantly associated with sepsis included arrival by ambulance, having a family physician, an elevated Hamilton Early Warning Score, and a recorded history of dyslipidemia. In patients with SDoH available in their medical records, SDoH were not significantly associated with sepsis. However, there was an increased number of patients presenting to the ED with sepsis and a disproportionate number of deaths among patients living in the Code Red Zone.

Conclusions: This is the first study in Canada to assess the effects of social determinants of health on the development of sepsis and highlights the paucity of available SDoH data, including self-reported data, in electronic health records. The inclusion of SDoH in electronic medical records is important for informing early and equitable care and identifying Canadians at increased risk of sepsis.

#P7 - PATIENTS WITH DISCOID MENISCI HAVE SIMILAR CLINICAL OUTCOMES TO THOSE WITHOUT DISCOID MENISCI WHEN UNDERGOING SURGICAL INTERVENTION: A SYSTEMATIC REVIEW

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Purpose: To compare post-operative clinical outcomes of discoid meniscus tear procedures such as saucerization with or without repair with those of non-discoid meniscus tears such as meniscectomy or repair in skeletally mature patients with no concomitant injuries.

Methods: Three databases MEDLINE, PubMed and EMBASE were searched from inception to July 3rd, 2022 for literature describing patient-reported outcome measures after meniscus surgery in discoid or non-discoid meniscus tears. Clinical outcome data on Lysholm, Tegner, International Knee Documentation Committee (IKDC), revision rates, and complications were recorded, with MINORS and Detsky scores used for quality assessment.

Results: A total of 38 studies comprising 2213 patients were included with a mean age of 38.6 years (range: 9.0-64.4). The mean change between pre-operative and post-operative Lysholm scores ranged from 21.0-39.0, 7.4-24.1, and 24.2-48.4 in the discoid, non-discoid meniscectomy, and non-discoid repair groups, respectively. The mean change in Tegner scores ranged from 0.0 to 2.3, 1.3, and 0.4-1.3 in the discoid, non-discoid meniscectomy, and non-discoid repair groups, respectively. Pre-operative IKDC scores were not reported, however mean post-operative IKDC scores ranged from 77.4 to 96.0, 46.9 to 85.7, and 63.1 to 94.0 in discoid, non-discoid meniscectomy, and non-discoid repair groups, respectively. Revision rates for discoid procedures, non-discoid meniscectomies, and non-discoid meniscus repairs ranged from 3.2 to 44.0%, 8.3 to 56.0%, and 5.9 to 28.0%, respectively. The most common reasons for revision were acute trauma and persistent pain.

Conclusion: Discoid saucerization procedures with or without repair leads to similar Lysholm scores as non-discoid repair procedures, and similar IKDC scores and revision rates compared to non-discoid meniscectomy or repair procedures. This information can help guide surgeons in the decision-making process when treating patients with discoid menisci, and should guide further investigations on this topic.

#P8 - A NOVEL APPROACH TO IDENTIFY TREATMENT SUBGROUPS FOR CARDIOMETABOLIC DISEASES

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Background: Medical treatment decisions involve a fine balance of risks and benefits. These clinical decisions are often made using a population-based approach. The failure to account for interindividual variability results in interventions being more harmful or less effective than predicted. To accelerate the adoption of precision medicine, the effect of interventions in different patient groups needs to be better understood. Mendelian Randomization (MR) is a tool which uses genetic variants related to a risk factor to determine how the risk factor is causally related to a disease. To date, MR has not been used to identify subgroups of patients that will derive increased efficacy or harm to interventions.

Objective: To develop and validate a novel MR method to identify subgroups of patients differentially affected by cardiometabolic disease risk factors.

Methods: Polygenic risk scores were calculated for cardiometabolic disease risk factors using genetic and clinical data for British participants in the UK Biobank (N=408K). These genetic scores were used to determine the causal relationship between risk factors and disease outcomes for different quantiles of clinical variables using MR. Trends in causal estimates across quantiles were assessed for significance using linear regression. For example, the relationship between blood cholesterol levels and coronary artery disease was assessed for participants split into quantiles of blood glucose levels. A trend across quantiles would suggest that cholesterol-lowering medications could be more effective at lowering cardiovascular disease risk depending on glycemic status.

Results: A bioinformatics pipeline was developed for the processing and analysis of data. Preliminary results were generated using thirty-eight stratifying variables, twelve risk factors, and eleven dichotomous cardiometabolic disease outcomes. Of the 5016 combinations tested, twenty-two were found to be significant ($p < 9.97 \times 10^{-6}$). Conclusions: This novel MR methodology will open a new paradigm of studies for determining treatment effects in patient subgroups.

#P9 - THE INTERSECTION OF ATOPIC DERMATITIS AND MACHINE LEARNING: A SCOPING REVIEW OF NOVEL THERAPEUTIC APPROACHES

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Treatment response in atopic dermatitis (AD) is important in maintaining patient quality of life (QOL), so predicting treatment response is useful for physicians and patients. Machine learning (ML) offers an opportunity to address this challenge. ML is a type of artificial intelligence that refers to the ability of machines to create a model based on patterns found within large datasets. We performed a scoping review reported using PRISMA-ScR guidelines. Search terms included "atopic dermatitis," "eczema," and ML keywords. The last updated search of Embase, Medline, ACM Digital Library, Scopus, Web of Science, and IEEE Xplore was completed on September 1st, 2022. Of 510 screened articles and a citation analysis of included articles, we included seven. Two studies classified patients based on predicted therapeutic outcomes using serum biomarkers. One study was able to classify patients with 95% accuracy and found IgE, eosinophils, and thymus and activation-regulated chemokine (TARC) to be deterministic. The second, and the only article in this review that produced negative results, found that 26 serum cytokines/chemokines had a non-significant effect on predicting future AD severity scores. Treatment response was measured in a variety of ways in the included studies. Measuring treatment response with recordings of AD severity scores and treatments shows promise for future precision treatment. There were no computer vision studies included that demonstrated value in therapeutic decisions. Limitations of this scoping review include the heterogeneity of ML models in the existing literature and the variability in the ethnic diversity of study participants included in these articles. ML has the potential to provide objective predictions of treatment response, enabling personalized patient education and therapy choice, but there are substantial gaps in the current literature. For future studies, we suggest larger prospective data sets, and improved research methodologies that involve a more fulsome spectrum of AD.

#P10 - IMPROVING KIDNEY DISEASE SCREENING IN DIABETES: CLINICAL UTILITY OF MULTIPLE HOME-BASED URINE ALBUMIN: CREATININE RATIOS (UACRS) VERSUS A SINGLE CLINIC UACR.

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Background: Albuminuria in type 1 diabetes (T1D) is associated with kidney and cardiovascular complications. Clinical guidelines recommend regular screening for albuminuria in patients with T1D. However, there is heterogeneity in recommendations and practices for albuminuria screening in patients with T1D.

Objective: This study aimed to determine an accurate and acceptable screening strategy for nephropathy using urine albumin: creatinine ratio (UACR) in patients with T1D, given the high variability in this measure.

Methods: This retrospective cohort study included patients aged 10 to 22 years with T1D who were part of the Adolescent Type 1 Diabetes Cardio-Renal Intervention Trial (AddIT). UACR was measured either at home in the morning or in-clinic at two timepoints. Coefficient of variation (CV) and intra-class correlation coefficients (ICC) were calculated to determine the accuracy and variability between home-based early morning UACR assessments and in-clinic UACR.

Results: Both home-based and in-clinic UACRs showed high variability with low agreement (ICC: 0.33, 95% CI: 0.21, 0.44), with in-clinic UACRs showing greater variance (CV: 213) than home-based UACRs (CV: 118). Subgroup analysis showed the least agreement between home-based and in-clinic UACRs among females aged 17-22 years (ICC: 0.14, 95% CI: -0.04, 0.31). In these patients, there was much less variation in home-based UACRs (CV: 69) compared to in-clinic UACRs (CV: 305). The highest agreement between home-based and in-clinic UACRs was seen in males aged 10-17 (ICC: 0.42, 95% CI: 0.27, 0.55).

Discussion: A home-based approach to UACR were found to have less variability and higher agreement in relation to the in-clinic collection, particularly in young females. These results underscore the clinical variability of this measure and the need for better approaches for accurate screening for albuminuria in T1D to intervene and prevent diabetes-related complications.

#P11 - HEMIARTHROPLASTY FOR UNSTABLE INTERTROCHANTERIC HIP FRACTURES: A MATCHED COHORT STUDY

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Background: Geriatric intertrochanteric fractures remain a major public health concern due to the considerable disability, morbidity, mortality, and health care costs associated with these injuries. The underlying poor bone quality and unstable nature of these fractures makes them difficult to treat. The main purpose of this study was to evaluate the outcome of hemiarthroplasty for unstable intertrochanteric hip fractures when compared to the traditional treatment options of open reduction internal fixation (ORIF).

Methods: A retrospective 1:1 matched cohort of 150 patients who had intertrochanteric fractures treated with either hemiarthroplasty or ORIF was developed using a local institutional database. Demographic, perioperative, and postoperative variables were collected with at least 1 year of patient follow-up. Statistical analyses were performed with use of Student's t-tests, chi-square tests, and analysis of variance.

Results: Unstable intertrochanteric fractures treated with ORIF were associated with significantly more blood loss and an increased need for revision surgery. This effect was most pronounced in Arbeitsgemeinschaft für Osteosynthesefragen Orthopaedic Trauma Association classification type 31.A3 fractures, as patients treated with ORIF experienced significantly slower postoperative mobilization, increased blood loss, increased readmission, and revision surgery rates. Hemiarthroplasty was associated with an increased risk of greater trochanter escape, which did not appear to effect outcomes in this subset of patients.

Conclusion: Hemiarthroplasty may improve outcomes for patients with unstable intertrochanteric fractures. The benefit of this technique is likely maximized in Arbeitsgemeinschaft für Osteosynthesefragen/Orthopaedic Trauma Association type 31.A3 fractures. It remains a good option in the hands of experienced surgeons.

#P12 - ULTRASOUND-GUIDED TREATMENTS OF CALCIFIC TENDONITIS IN ROTATOR CUFF (CT-RC): A SINGLE-CENTRE RETROSPECTIVE STUDY ON THE EFFICACY OF CALCIFIC LAVAGE VERSUS FENESTRATION

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Introduction: Calcific tendonitis of the rotator cuff (CT-RC) results from calcium deposits narrowing the rotator cuff-acromion space, causing subacromial impingement pain. In the last decade, ultrasound-guided needle intervention has grown popular due to its minimally invasive outpatient treatment. However, there is limited research on the effects of different techniques of ultrasound-guided interventions in improving pain and function.

Objective: To compare the efficacy of ultrasound-guided calcific lavage versus fenestration of the calcification, both with subacromial subdeltoid bursal corticosteroid injection in pain reduction for treatment of calcific tendonitis in the supraspinatus tendon.

Methods: This is a retrospective study with 21 patients for ultrasound-guided treatment of CT-RC from December 2016 to September 2021 at a single institution. Patients received ultrasound-guided lavage of the calcifications and when lavage was not technically successful due to the hard calcification, fenestration of the calcification was performed. All patients in both groups received subacromial subdeltoid bursal injection of corticosteroid. Pain score of 0-10 was used to record the primary treatment response of pain reduction at pre-injection, 3 weeks, 3 months, and 6 months from injection. A student t-test was utilized to compare the change in pain ratings between the 2 treatment groups.

Results: At the 3-week follow-up, the mean reduction in pain score was 3.438(SD=3.417) for the lavage group and 5.423(SD=2.225) for the fenestration group. At the 3-month and 6-month follow-up, the reduction in mean pain scores was maintained at 4.125(SD=4.155) and 4.563(SD=4.625) respectively for the lavage group and at 6.385(SD=2.551) and 6.154(SD=3.436) respectively for the fenestration group. No statistically significant difference at 3 weeks($p=0.172$), 3 months($p=0.195$) or 6 months($p=0.417$).

Conclusion: Our study supports that both lavage and fenestration combined with subacromial subdeltoid bursal corticosteroid injection for treating CT-RC are not only effective in reducing pain, but also successful in sustaining pain reduction at 3 months and 6 months.

#P13 - ADHERENCE AND DISCONTINUATION RATES IN SCHIZOPHRENIA PATIENTS RECEIVING LAI ANTIPSYCHOTICS (PP1M VS. PP3M)

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Schizophrenia is a debilitating psychiatric disorder causing hallucinations, delusions, and thought and movement disorders. While antipsychotics improve functional capacity and reduce relapse, adherence is a significant challenge. Paliperidone Palmitate is a long-acting injectable (LAI) designed to improve adherence for schizophrenia patients by reducing dosing frequency. The LAI can be administered as a 1-month (PP1M) or, more recently, as a 3-month (PP3M) formulation. Current evidence suggests comparable efficacy of PP3M compared to PP1M. However, minimal research on adherence, discontinuations, and psychiatric crises to support PP3M over PP1M exists to guide clinical decisions. We conducted a retrospective analysis comparing the adherence, discontinuation, and emergency department (ED) visits of patients receiving PP1M to patients on PP3M between 2019 and 2022. Patients ages 18-64 with a diagnosis of schizophrenia or related psychosis disorder treated through the outpatient psychiatry units at Brampton Civic Hospital or Etobicoke General Hospital were eligible. Patients concurrently receiving other antipsychotic medications were excluded. Discontinuation was defined as a switch to a different antipsychotic medication, or an interval between injections exceeding the acceptable limit by the drug monograph. Adherence rates were calculated as a medication possession ratio; the supply of medication provided was divided by the time between injections. Emergency visits with a mental health F-code were used to calculate an ED visit rate per patient. Patients on the PP3M regimen had significantly improved adherence than those prescribed PP1M. Patients on PP3M also had significantly fewer ED visits compared to PP1M patients. No differences were found between the discontinuation rates of both drug formulations. Our study supports the use of PP3M over PP1M and substantiates evidence available to clinicians for psychosis management decisions. Better adherence to antipsychotics suggests improved health outcomes for patients while fewer ED visits implicate a reduced burden of psychosis-related emergencies on healthcare institutions.

#P14 - FUNCTIONAL AND RADIOLOGICAL OUTCOMES OF EXTREME LATERAL INTERBODY FUSION: A SINGLE-CENTRE EXPERIENCE IN THE MIDDLE EAST

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Introduction: Extreme lateral interbody fusion (XLIF) is a minimally invasive procedure used in the management of degenerative disc disorders, trauma, infections, and deformities. Few studies have reported the functional and radiological outcomes perioperatively. In this study, we aim to report these outcomes in patients with an average follow-up period of 5 years.

Methods: Baseline data on the patient's gender, age, BMI, ASA, level operated, and posterior fixation type was collected. Primary outcome measures included Oswestry Disability Index (ODI), Roland-Morris Disability Index (RMDI), Euro-Qol (EQ)-5D, visual analog scale (VAS), and EQ-5D index scores. The secondary outcomes were radiological measures including the analysis of sagittal balance, lumbar lordosis, sacral slope, pelvic tilt, and pelvic incidence.

Results: Fifty-one patients were included in the study. Nine female and 42 male patients with a mean age of 58.6 years and a mean BMI of 29.3 were included. Mean follow-up duration of 5.2 years. Assessment of the clinical primary outcome revealed a statistically significant improvement in ODI, RMDI, EQ-5D VAS, and EQ-5D index scores. A significant reduction in lumbar lordosis was observed. However, non-significant increase in mean pelvic incidence and pelvic tilt, and a reduction in sacral slope were noted.

Conclusion: XLIF procedure is an effective and less invasive approach to managing degenerative disc diseases. The reported functional and radiological outcomes are satisfactory. Although effective, randomized clinical trials compiling the results are necessary to develop clinical recommendations.

#P15 - INDIVIDUALS WITH DUAL DIAGNOSIS IN FORENSIC AND CORRECTIONAL PSYCHIATRY SETTINGS: A SYSTEMATIC REVIEW OF LITERATURE

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INTRODUCTION AND OBJECTIVES: Individuals with dual diagnosis (IDD) constitute a special population with both an intellectual disability and mental illness. IDD in forensic-correctional psychiatry settings present unique challenges for assessment and management. The study is aimed to (1) synthesize existing literature to assist in understanding their characteristics and psycho-legal needs and (2) develop a set of generic recommendations and action plan to inform specialised services for optimum care.

METHODS: This study followed the preferred reporting for systematic reviews and meta-analyses. Ovid MEDLINE and PsycINFO were searched using intellectual disability, mental health, and correctional/forensics concepts. Screening of abstract/title and full-text data extraction were completed by two independent reviewers. Of a total 681 articles, 21 eligible studies were included in the final analysis.

RESULTS: Most studies were completed in the UK (n=11) and had forensic psychiatry settings (n=16) compared to only correctional settings (n=5). Up to 92.1% of IDD were males and were often younger at first contact with the forensic-correctional system (29.62 to 38.07 years old). IDD were at increased risk of developing psychotic disorders (RR 4.65) and is the most common psychiatric comorbidity (12.5 to 68.7%). Both suicide attempts (17.6 to 21%) and other self-harm (12.8%) were prevalent in studies when recorded (n=3). IDD were more likely to require the highest level of forensics care, have longer stays, and an increased risk of post-release hospitalizations (RR 1.76 to 4.51). Index and past crimes included fire-setting and/or property destruction (OR 4.44) and sexual/violent offences. Criminogenic factors include history of neglect (OR 2.72), limited social support, and increased adverse life events (e.g., sexual abuse, violence).

CONCLUSION: IDD in forensic-correctional settings have unique attributes that may require nuanced expertise. Future research can support understanding criminogenic and risk factors in this population and we will discuss recommendations to inform specialized services for optimal care.

#P16 - TIME-RESTRICTED EATING AS A POSSIBLE ADJUNCT THERAPY FOR PSORIASIS: A REVIEW OF THE LITERATURE

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Non-pharmacological lifestyle interventions remain a mainstay of psoriasis management and dietary changes are currently of great patient interest. Caloric restriction has shown some promise in previous 16-week RCTs for patients with psoriasis, and improvements remain after one year. Multiple databases were searched on November 30, 2022. Our search yielded 702 articles, of which four were included. There was one RCT and three open-label trials. In an RCT, 24 adult patients with mild plaque psoriasis underwent 12 weeks of modified-intermittent fasting, no significant reductions in PASI or body surface area were observed at week 12 although fasting patients self-reported a reduction in scaling and thickening more frequently at weeks 6 and 12. Two observational studies included patients participating in Ramadan. In both, adults with stable chronic plaque psoriasis were followed over the month and had mean reductions of PASI reported as -0.85 and -0.89. Significant improvements in PASI scores and in BMI, 37.8 ± 2.4 and 25.5 ± 2.1 respectively. This literature review indicates that TRE may have a minimal benefit on psoriasis. Research supports dietary restrictions whereby intermittent bouts of fasting, without chronic caloric restriction, have numerous health benefits related to chronic inflammation. The two observational studies which included Muslim patients observing TRE during Ramadan did result in a significantly improved PASI score, however, their PASI reductions are minimal. Patients with psoriasis may experience benefits from TRE; however, the results are minimal at best. When safely indicated, TRE can be used to supplement patients' standard medical therapies to reduce disease severity. TRE has been shown to improve many of the co-morbidities associated with psoriasis, and physicians should be aware of these findings to properly counsel patients on dietary changes that can improve their skin health. Future larger-scale research is needed to further study the physiological effects of TRE on psoriasis.

#P17 - INCIDENCE OF CREATINE PHOSPHOKINASE ELEVATION IN PATIENTS RECEIVING IMMUNOMODULATORY THERAPIES FOR ATOPIC DERMATITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Atopic dermatitis (AD) is an IgE-mediated hypersensitivity reaction involving the IL-4/13 and JAK-STAT pathways. While IL-4/13 inhibitors are the standard AD treatment, JAK-1 inhibitors have now become indicated for severe AD. However, recent evidence suggests that JAK inhibitors may elevate creatine phosphokinase (CPK) and the risk of rhabdomyolysis due to uncertain mechanisms.

Objective: We performed a meta-analysis to elucidate whether patients with AD incur an increased incidence of CPK elevation when taking immunomodulatory therapies.

Methods: Systematic searches were conducted in Ovid Medline and Embase that included AD, CPK and immunomodulatory therapies. Only RCTs and prospective studies were included and analyzed. Canada has an elderly population who are severely affected by musculoskeletal conditions. The primary outcome was the incidence of CPK elevation in AD patients receiving control or at least one of the following therapies: tralokinumab, dupilumab, abrocitinib, or upadacitinib. Secondary outcomes assessed include clinically significant rhabdomyolysis, inflammation, and other treatment emergent adverse events (AEs) such as musculoskeletal and connective tissue AEs, renal AEs, among others.

Results: Preliminary results for our research indicate that JAK-1 inhibitors have a significant effect on increasing CPK production. The included studies have shown an increase of 9-12% in JAK-1 inhibitors (upadacitinib and abrocitinib) when compared to IL-4/13 inhibitors. In terms of secondary outcomes, upadacitinib led to a significant increase in musculoskeletal AEs such as lower back pain and clinically significant rhabdomyolysis. For safety outcomes, some common side effects included herpes simplex and zoster infection, herpetic neuralgia, urinary symptoms, nasopharyngitis and gastrointestinal disturbances.

Discussion/Conclusion: The preliminary results show JAK-1 inhibitors are associated with significant CPK elevation. Our research will be imperative to improve long-term health outcomes in seniors undergoing immunomodulatory therapies with possible concomitant musculoskeletal conditions. IL-4/13 inhibitors are efficacious with tempered adverse events and may be favoured.

#P18 - A CASE OF PERONEAL COMPRESSION DUE TO OSTEOCHONDROMA IN A ONE YEAR OLD

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Osteochondroma, a cartilage-capped bony projection on the external surface of a bone, is the most common benign bone tumor, occurring in 3% of the general population. It is generally diagnosed before the age of 20 incidentally due to its asymptomatic nature, along with the diagnosis of multiple hereditary exostoses (HME), a genetic condition. However, although rare, significant symptoms may occur due to compression of adjacent bony, vascular, or neurologic structures. Patients may present with numbness and tingling in the limb, or signs of abnormal blood flow. Severe complications include nerve compression, aneurysms, thrombosis, bone deformities and fractures, and malignant transformation. While the popliteal artery and nerve are the most commonly affected structures, common peroneal nerve (CPN) compression secondary to osteochondroma is extremely rare in pediatric patients. While the mainstay of conservative management is observation and rehabilitation, including orthotic devices and physiotherapy, surgical resection is indicated in cases with pain, cosmetic deformities, risk of malignancy or symptomatic nerve injury. If left untreated, CPN neuropathy can cause foot drop, equinovarus deformity and limb disability ranging from 30-35%. A multidisciplinary approach with collaboration between oncoplastic surgery, orthopedic surgery, neurology, and physiotherapy is paramount. We report the multidisciplinary treatment of the youngest case of proximal fibular osteochondroma with associated CPN neuropathy to date. Following diagnosis and lesion characterization with MRI and EMG, the patient underwent surgical decompression of the CPN at the right fibular head and excision of osteochondroma by orthopedic and plastic surgery. We further discuss the existing literature surrounding osteochondroma-related nerve disorders in pediatric patients, and explore the interdisciplinary care required for optimal outcomes and the unique challenges faced with diagnosing a patient at such a young age.

#P19 - ANESTHETIC MANAGEMENT OF CESAREAN SECTION IN A PATIENT WITH LÉRI-WEILL DYSCHONDROSTEOSIS-A CASE REPORT

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When providing spinal anesthesia for patients with achondroplasia, a dose reduction is often recommended to prevent respiratory arrest and total spinal blocks as patients with achondroplasia present with spinal complications such as spinal cord stenosis, kyphoscoliosis and lumbar lordosis. This case report describes why this dose reduction is unnecessary in patients with Léri-Weill dyschondrosteosis (LWD) dwarfism and how a regular spinal neuraxial approach is safe and efficacious. A 38-year-old pregnant woman with physical findings consistent with LWD and unremarkable past medical history presented for a repeat elective Cesarean section. On examination, the patient was noted to have conserved spinal length and anatomy. In accordance with current recommendations, this patient received a 20% reduced spinal anesthetic dose for her Cesarean section based on her height. The Cesarean was uneventful. Additional dose reduction was found to be unnecessary due to normal spinal length and anatomy. This characteristic of LWD warrants a review of the clinical recommendations surrounding the anesthetic management of patients with LWD.

#P20 - SAFETY AND EFFICACY OF NEMOLIZUMAB FOR PRURITUS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction/Background: Pruritus significantly worsens quality of life by affecting sleep, self-image, and mood, and worsens dermatological conditions. Interleukin-31 (IL-31) has been implicated in the pathogenesis of pruritus, but the exact mechanism remains unknown. Nemolizumab is a novel treatment for severe pruritus that targets the IL-31 receptor; however, its safety and efficacy has not yet been determined. We performed a systematic review and meta-analysis of randomized controlled trials to elucidate whether patients' pruritus is ameliorated with Nemolizumab, and whether there are significant side effects or safety concerns associated with its use.

Methods: Systematic searches were conducted in Ovid MEDLINE and EMBASE that included terms that captured pruritus, nemolizumab, safety, and efficacy, amongst others. Only RCTs and prospective studies were included and analyzed. The primary outcome assessed was reduction in pruritus, measured by various validated scales including: PP-NRS, 5-D Itch scale, Shiratori Severity Score, and other visual analogue scales. Secondary outcomes assessed include sleep disturbance, inflammation, and other treatment emergent adverse events (TEAEs) such as upper respiratory tract AEs, gastrointestinal AEs, among others.

Results: Preliminary results indicate that nemolizumab has a significant effect on decreasing pruritus. Many studies have shown a decrease of 20-30% in pruritus when compared to placebo. There also seems to be significant improvements in sleep quality and a reduction in sleep disturbances. Some of the most common side effects noted include nasopharyngitis, gastrointestinal disturbances (constipation, diarrhea, GERD, abdominal pain, etc.), and headache. Severe AE's that led to discontinuation from the trials were very uncommon in comparison.

Conclusion: Preliminary results show Nemolizumab to be a very promising novel treatment for severe pruritus. With significant efficacy and minimal adverse events at reasonable dosages, the only limiting factors are the lack of long term studies and the prohibitive cost of the treatment.

#P21 - EXAMINING CURRENT EVIDENCE FOR TRAUMA RECURRENCE PREVENTIONS SYSTEMS

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Background: Trauma is a leading cause of morbidity and mortality in Canada, yet research and interventions addressing recurrence have not received the same focus as other leading causes. Successes of post-event recurrence prevention programs for myocardial infarction (MI) and stroke, focusing upon important risk factors, highlight the potential impact of an injury prevention strategy for trauma patients. These existing programs build on well understood epidemiology backed by level I evidence. Therefore, to explore possible implementation of such a post-event prevention system for trauma, a scoping review to assess the current extent of evidence and intervention was conducted.

Methods: PRISMA-ScR methodology was followed. Electronic search of Pubmed and Cochrane using the terms trauma AND (tertiary prevention OR recurrence prevention OR follow up) was completed. Titles, abstracts and full texts were screened independently by two reviewers, conflicts were resolved by a third. Articles adhering to inclusion and exclusion criteria (Table 1) were included in the review. Data was extracted in accordance with the Joanna Briggs Institute framework.

Results: 17,106 articles were identified. After title screening, 724 studies underwent abstract screening, 76 underwent full text review, and 47 were included in the final review. Among selected articles, types of initial trauma were: general, falls, musculoskeletal, alcohol-related, violence, pediatric, brain injury, burns, and animal bites. Targets of prevention were: falls, psychological illness, musculoskeletal, alcohol related trauma, general, violence and pediatric injury (Figure 1).

Conclusion: There are evidence based post-trauma injury prevention interventions; however, they are heterogeneous in initial trauma and prevention targets, inconsistent in risk factors addressed, and generally supported by level II/III evidence. In order to build a trauma recurrence prevention system comparable to other leading causes of morbidity and mortality, further research to better define and target modifiable trauma risk factors and integrate current piecemeal interventions is necessary.

#P22 - A COMPARISON OF CLINICAL PRACTICE GUIDELINE RECOMMENDATIONS ON POSTOPERATIVE ATRIAL FIBRILLATION AFTER CARDIAC SURGERY

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Introduction: Postoperative atrial fibrillation (POAF) is a common complication of cardiac surgery and is associated with longer hospital stays and risks of recurrent atrial fibrillation, stroke, and mortality. Many societies have produced clinical practice guidelines on the prevention and management of POAF following cardiac surgery.

Objective: We compared these recommendations to determine whether there are any differences across guidelines.

Methods: We considered the most recent guidelines that include recommendations on POAF after cardiac surgery. We sorted these recommendations into three domains: prophylaxis, rate control vs. rhythm control, and stroke prevention. Within each domain, we assessed for similarities and differences in recommendations made. We also collected information on the values and preferences that influenced recommendations.

Results: We found guidelines from the European Society for Cardiology (ESC), the European Association for Cardio-Thoracic Surgery (EACTS), the Canadian Cardiovascular Society (CCS), and the American College of Cardiology/American Heart Association/Heart Rhythm Society (ACC/AHA/HRS). The 2020 ESC/EACTS and 2020 CCS guidelines recommend beta-blockers as first-line prophylaxis. The ESC/EACTS bundles amiodarone in the same recommendation—the CCS recommends amiodarone be reserved for patients with contraindications to beta-blockers. The 2014 ACC/AHA/HRS guideline recommends amiodarone for patients at high risk of POAF. The CCS recommends that rate or rhythm control may be used; the 2017 EACTS guideline instead recommends rhythm control in patients with hemodynamically stable POAF and that rate control may be considered in hemodynamically stable, asymptomatic patients. The 2020 ESC/EACTS guideline makes no recommendations in this area. The ACC/AHA/HRS recommends rate control as first-line therapy. The most recent guidelines made no strong recommendations specific to stroke prevention and did not discuss risk stratification for anticoagulation in detail, instead pointing to anticipated clinical benefits or individualized risk assessment.

Discussion: Further evidence is needed to inform risk stratification for stroke prevention and the provision of rate or rhythm control for POAF after cardiac surgery.

#P23 - CANNABIS USE IN PREGNANCY ASSESSED USING UMBILICAL CORD SAMPLES

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Objective: The objective of the study was to compare self-reported cannabis use in pregnancy with umbilical cord samples of a cannabis metabolite to provide information about the true prevalence of use in an urban Canadian city.

Methods: This study took place at two tertiary level academic institutions. Patients with live singleton pregnancies at 24 weeks or more gestation were invited to participate in the study. Participants were randomly allocated to group one or group two. The first group completed a survey, which asked questions about cannabis use in pregnancy. The second group completed the same survey and a sample of their umbilical cord was taken at delivery. Umbilical cords were analyzed for evidence of a metabolite of cannabis, 11-nor-delta-9- tetrahydrocannabinol-9-carboxylic acid.

Results: Overall, 88 participants completed the survey. Participants were asked if they used cannabis before they knew they were pregnant and 18.2% said yes (16/88). There were 3 participants who self-reported continued use of cannabis throughout pregnancy including first, second and third trimester (3.4%). The most common reason for using cannabis in pregnancy reported was for recreation/social purposes followed by sleep and anxiety. In total, 50 umbilical cords were analyzed for a cannabis metabolite and 4 (8%) were positive.

Conclusions: This study showed that cannabis use in pregnancy, as detected via umbilical cord sampling, is higher than self-reported data (8% vs. 3.4%, respectively). Therefore, health care providers should universally counsel their patients on cannabis use in pregnancy, rather than only directed at those who self-report use.

#P24 - PULSED RADIO-FREQUENCY IN THE TREATMENT OF CARPAL TUNNEL SYNDROME: LITERATURE REVIEW

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Neuropathic pain (NP) is a relatively common condition, defined by the International Association for the Study of Pain (IASP) as pain due to a “direct consequence of a lesion or disease of the somatosensory nervous system”. NP is particularly disabling, not only because of the pain’s quality and intensity but also because NP does not typically abate with time. The advent of pulsed radio-frequency (PRF) allows for the generation of significant electric fields that have been shown to have therapeutic benefit in various NP conditions. Unlike continuous radio-frequency, PRF does not produce anatomical lesions or tissue damage in the intended target and unlike surgery, PRF is minimally invasive. As a result of these benefits, PRF is being increasingly utilized in modern practice to treat a variety of NP conditions, including carpal tunnel syndrome (CTS). Although PRF is showing benefit to patients in clinic, there is minimal research exploring the use of PRF to treat CTS hence the motivation for this review. This literature review explores the documented utilization of PRF on CTS, highlighting the recorded results as well as attempting to consolidate equipment specifications from various PRF trials to further guide treatment protocols.

#P25 - COMPARISON OF THE SEDENTARY BEHAVIOUR GUIDELINES FOR OLDER ADULTS: A REVIEW OF THE LITERATURE AND QUALITY APPRAISAL WITH AGREE II

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Background: Most older adults (≥ 65 years) accumulate >8.5 hours/day of continuous sedentary time, which is associated with increased risk of metabolic syndromes and falls. The impact of increased sedentary time in older adults globally has prompted the development of national and international sedentary behaviour guidelines.

Objective: The purpose of our review was to identify and compare national and international sedentary behaviour guidelines for older adults and appraise the quality of the guidelines to promote best practice in guideline development.

Methods: We conducted our search in Medline, Embase, Global Health and relevant grey literature. We included the most updated guidelines for older adults written in English. AGREE II was used to assess the quality of the recommendations.

Results: We identified eight national and international sedentary behaviour guidelines for older adults. The guidelines were developed from reviews, cohort studies, knowledge user's opinions, or other guidelines; all guidelines were based on low quality and certainty of evidence. The terms "sedentary behaviour" and "sedentary time" were used interchangeably, and the definitions of both terms were not consistent between guidelines. Six guidelines recommended a reduction in total time with one suggesting limiting sedentary time to <8 hours/day. Three guidelines suggested reallocating sedentary time to light activity, with one recommending to stand-and-stretch every hour for 5-minutes.

Conclusion: Most sedentary behaviour guidelines for older adults are based on low quality and low certainty evidence. Terminology, definitions, and recommendations were not consistent between guidelines. Further work is needed to develop evidenced-based recommendations specific to older adults.

#P26 - CHARACTERIZING THE RELATIONSHIP BETWEEN PSYCHOSIS AND VIOLENCE IN THE FORENSIC PSYCHIATRIC POPULATION: A SCOPING REVIEW

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Introduction: Psychosis and violence are prevalent in the forensic psychiatric population. Despite robust evidence that psychosis is associated with violence, less is known about the precipitants of violent behaviour in this population. This scoping review discusses mediating factors between psychosis and violence in forensic studies and recommendations for incorporating them into risk assessment and management. Objectives: (i) Describe the prevalence of violence in the forensic population; (ii) summarize established risk factors for violence in this group; (iii) characterize the relationship between psychosis and violence in this group; (iv) discuss recommendations for assessing and managing violence in forensic settings.

Methods: Following PRISMA guidelines, we searched five databases using keywords for violence, psychosis, and forensic psychiatry. The search yielded 914 articles that are currently undergoing screening, extraction, and analysis of emerging themes.

Results: Preliminary findings show evidence for a variety of biopsychosocial factors proposed to explain the association between psychosis and violence. Forensic patients with psychosis and a history of violence have a high prevalence of traumatic brain injury and associated neuroimaging findings. They are more likely to experience threat/control-override symptoms paired with specific beliefs and present with concurrent substance abuse. Antisocial personality, negative affect, cognitive impairment, and poor insight are frequently overlooked as important contributors to violence in this population. Past history often reveals childhood trauma, loss to follow-up, and treatment non-adherence. Evidence is reviewed for assessment measures that incorporate these factors. Suggestions are made about how to intervene at each level.

Conclusion: Psychosis is an important predictor of violence. Conducting an accurate risk assessment in this population requires an integration of various factors to contextualize symptoms. By the end of the presentation, the audience will have learned about key factors that explain the relationship between psychosis and violence, ways to incorporate them into practice, and areas requiring further research.

#P27 - FINANCIAL TOXICITY RISK AMONG PATIENTS WITH GASTRIC BANDING COMPLICATIONS IN THE UNITED STATES: ANALYSIS OF THE NATIONAL INPATIENT SAMPLE

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BACKGROUND: Laparoscopic gastric banding (LAGB) was historically among the most performed bariatric procedures but has fallen out of favour in recent years due to poor long-term weight loss and high revisional surgery rates. Significant financial hardship of medical care, known as “financial toxicity”, can occur from experiencing unexpected complications of LAGB. We investigated the risk of financial toxicity among patients being admitted for LAGB complications.

METHODS: All uninsured and privately insured patients who were admitted for LAGB complications were identified from the National Inpatient Sample 2015-2019. Publicly available government data (U.S. Census Bureau, Bureau of Labor, The Centers for Medicare and Medicaid Services) were utilized to estimate patient income, food expenditures, and average maximum out-of-pocket expenditures. Financial toxicity was defined as total admission cost from LAGB complications >40% of post-subsistence income.

RESULTS: Among survey-weighted total of 28,005 patients, 66% patients had private insurance and 44% patients were uninsured. Median total admission cost was \$12,443 (IQR \$7,959-\$19,859) and \$15,182 for those who received revisional bariatric surgery. Approximately 55% of the uninsured patients and 1% of insured patients were at risk of financial toxicity after admission for banding-related complications. Patients who had an emergency admission, revisional surgery, or post-operative ICU admission were more likely to experience financial catastrophe following admission ($P<0.01$).

CONCLUSION: About 1 in 2 uninsured patients who are admitted for LAGB-related complications were at risk of financial toxicity. In addition to surgical risks, providers should consider the potential financial consequences of LAGB when counselling patients on their choice of surgery.

#P28 - STARTING POSITION DURING COLONOSCOPY: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

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BACKGROUND: Traditional endoscopic teaching has been for patients to be placed in the left lateral decubitus position at the start of colonoscopies. This approach is rather dogmatic, however, without high-quality data supporting its use. As such, recent randomized controlled trials (RCTs) have been designed to compare left lateral decubitus starting position to other approaches. The aim of this systematic review and meta-analysis was to compare different starting positions for colonoscopies in terms of efficiency and effectiveness.

METHODS: MEDLINE, Embase, and CENTRAL were searched from inception to November 2022. Articles were eligible for inclusion if they were RCTs comparing at least two different starting positions for adults undergoing diagnostic or surveillance colonoscopy. The main outcome was cecal intubation. A meta-analysis was performed using an inverse variance random effects model. Risk of bias (RoB) of the included studies was assessed with the Cochrane RoB Tool for RCTs 2.0.

RESULTS: After screening 1,523 citations, 14 RCTs were included. Four studies compared left lateral decubitus to right lateral decubitus, four studies compared left lateral decubitus to left lateral tilt-down, three studies compared left lateral decubitus to prone, and three studies compared left lateral decubitus to supine. There was no significant difference in cecal intubation time across all of the pairwise comparisons: left lateral decubitus vs. right lateral decubitus (MD 14.9, 95%CI -111.8 to 141.6, $p=0.82$, $I^2=85\%$); left lateral decubitus vs. left lateral tilt-down (MD -31.3, 95%CI -70.8 to 8.3, $p=0.12$, $I^2=82\%$); left lateral decubitus vs. prone (MD 17.2, 95%CI -174.9 to 209.4, $p=0.86$, $I^2=94\%$); left lateral decubitus vs. supine (MD -149.9, 95%CI -443.6 to 143.9, $p=0.32$, $I^2=89\%$).

DISCUSSION: The starting position for diagnostic or therapeutic colonoscopies likely do not influence cecal intubation time. The present review was limited by between study heterogeneity.

#P29 - LEVEL OF EVIDENCE OF GUIDELINES FOR BARIATRIC AND METABOLIC SURGERY: AN EVALUATION USING THE APPRAISAL OF GUIDELINES FOR RESEARCH AND EVALUATION II (AGREE II) TOOL

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Background: In recent years, multiple guidelines on bariatric and metabolic surgery were published, however, the quality of these guidelines remains unknown, leaving providers with uncertainty when using them to make perioperative decisions.

Objective: This study aims to evaluate the quality of existing guidelines for perioperative bariatric surgery care.

Methods: A comprehensive search of MEDLINE and EMBASE were conducted from January 2010 to October 2022 for bariatric clinical practice guidelines or statements. Guideline evaluation was carried out using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) framework.

Results: The initial search yielded 1,483 citations, of which, 25 guidelines were included in the primary analysis. The overall median domain scores for guidelines were: 1) scope and purpose: 89% (55.5%-93.5%), 2) stakeholder involvement: 49% (38.5%-64.5%), 3) rigor of development: 38% (19.5%-58%), 4) clarity of presentation: 85% (76%-90%), 5) applicability: 7% (3-23%), 6) editorial independence: 50% (48%-64.5%), 7) overall impressions: 46% (31%-60.5%). Only five guidelines achieved an overall score >70%.

Conclusion: Bariatric surgery guidelines effectively outlined their aim and presented recommendations. However, many did not adequately seek patient input, adequately state search criteria, use evidence rating tools, and consider resource implications. Future guidelines should reference the AGREE II framework in study design.

#P30 - BEAT THE CLOCK: PREDICTING SURGICAL TIMES FOR EXCISION OF ENDOMETRIOSIS USING PRE-OPERATIVE ULTRASOUND—A RETROSPECTIVE STUDY

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Background: Incorrect estimation of surgical case booking times can result in suboptimal usage of operating room (OR) time, leading to case cancellations and reducing systems efficiencies. Traditionally, surgeons would subjectively estimate operating times for laparoscopic excision of endometriosis, which has been notoriously difficult to predict due to preoperative uncertainty of disease extent. However, ultrasound is an established diagnostic tool used to map disease preoperatively.

Objective: This study aimed to use ultrasound to predict case times for laparoscopic excision of endometriosis.

Methodology: This was a retrospective study. Surgical case times were compared with the predicted times using two estimates. These estimates were based on subjective estimation (traditional method) and ultrasound-informed estimation. The surgical times were stratified by the location and type of endometriosis diagnosed by ultrasound.

Results: A total of 35 patients were included in the analysis. It was shown that the OR time predicted by the ultrasound scan was significantly lower than both surgeon's estimated OR time (mean difference= 75.6 min, P-value<0.001) and actual OR time (mean difference= 67.2 min, P-value<0.001). Moreover, there was a strong and significant correlation between number of disease sites and OR time (Pearson correlation coefficient= 0.7, P-value<0.001). It was also found that there's a significant difference between number of disease sites predicted by ultrasound compared to the OR. In other words, number of disease sites predicted by ultrasound (Mean (SD)= 2.5 (1.1)) was significantly lower than the number of disease sites detected during the surgery (Mean (SD)= 5.8 (2.7)) (P-value<0.001).

Discussion: Based on our study, ultrasound predicted OR times were lower than surgeon predicted OR time and measured OR times. However, ultrasound predicted disease sites were also lower than actual disease sites. This suggests further work-up in accurate preoperative assessment of endometriosis is needed at this time. This also suggests that use of ultrasound in preoperative assessment is more accurate than subjective measures alone.

#P31 - IMPROVING KNOWLEDGE OF SICK DAY MANAGEMENT AMONG PATIENTS AND FAMILIES WITH TYPE 1 DIABETES

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Background: For patients with Type 1 Diabetes, sick day management is a critical component of diabetes education. Complications such as hypoglycemia or ketosis are more likely to occur during times of illness contributing to more frequent emergency department visits and hospital admissions. Sick day management is often challenging for families, requiring more calculations and problem-solving, using knowledge that is less frequently used. The goal of this study was to evaluate the impact of an online chatbot on sick day management in terms of patient satisfaction, knowledge retention and behavior change.

Methods: This is a pre-post study. Our study population includes patients with Type 1 Diabetes followed at McMaster Children's Hospital, aged 0-18. We assessed baseline knowledge of sick day management among patients/parents via pre-test questionnaire, which was developed using a standardized diabetes knowledge assessment tool. Participants were provided with an online chat bot regarding illness management to use as much or as little as they wanted. Satisfaction and knowledge retention were assessed 3 months following the administration of the pretest.

Results: To date, patient recruitment has been limited by competing recruitment for research studies in our diabetes clinic and the many virtual diabetes tools that are available to families. 6 patients/families have been recruited to date. Results indicate general knowledge of sick day management is high, however there is insufficient data to understand the utility of the chatbot. Our next steps will be to consider modifications to our intervention to increase acceptability and utility.

#P32 - CONCEPTUALIZING MATERNAL MORBIDITY: ARRIVING AT A PERSON-CENTRED LIST OF PREGNANCY- RELATED ADVERSE EVENTS

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INTRODUCTION: Maternal morbidity refers to a range of adverse maternal outcomes associated with pregnancy and childbirth. Current research on the topic relies heavily on the use of coding systems, such as ICD-10 codes, for understanding epidemiologic trends at a population level. These codes, developed by researchers, emphasize physical adverse events of pregnancy, but neglect many of the social and psychological events that may also arise. As a result, these codes, and hence subsequent research, fail to capture the true nature and prevalence of pregnancy-related adverse events.

OBJECTIVE: To devise a comprehensive list of pregnancy-related adverse events that accurately reflects the breadth of issues as defined by all stakeholders, including those with lived pregnancy experience.

METHODS: The current study utilized data gathered previously by the research group, in which those with lived pregnancy experience and their providers were interviewed regarding their perspectives of what constitutes maternal morbidity. These statements were then analyzed to ensure relevancy to the focus prompt, and further condensed by removing duplicates and non-morbidities. These statements were then cross-referenced with clinical taxonomies, well-established lists including the WHO ICD-10 codes, CPSS perinatal morbidity indicators, and CDC indicators, and published qualitative literature.

RESULTS: Results indicate a significant discrepancy in the perception of maternal morbidities, specifically in the realm of non-physical adverse events, between those with pregnancy experience and established taxonomies/coding systems.

CONCLUSION: This study will act as a critical first step towards a person-centred definition of maternal morbidity. It will also aid in ensuring that the patient-perspective is considered while designing epidemiologic studies, prioritizing quality improvement initiatives, and selecting primary composite outcomes for clinical trials.

#P33 - REDUCING WAIT TIMES IN THE OUTPATIENT GERIATRIC ASSESSMENT PROGRAM (GAP) AT NIAGARA HEALTH

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Background: The outpatient geriatric assessment program (GAP) is a consultative, case-managed, clinical program that offers urgent and non-urgent comprehensive geriatric assessments by a geriatrician in collaboration with a geriatric nurse. The most common reasons for referral include dementia, delirium, depression, frailty, behavioural and psychological symptoms of dementia, medication optimization, and falls. New consultations take a minimum of 90 minutes. The comprehensive geriatric assessment has been shown to increase the likelihood that patients are alive and living in their own homes at 6-12 months.

Objective: Decrease median wait time from referral to appointment to 200 days (32% improvement) for new, non-urgent GAP consultations by June 31, 2023.

Methods: We analyzed GAP referral data from April 2021 to November 2022 for all referrals made to the GAP and Geri-RAC programs. Following this analysis, initial changes made included freeing up geriatrician time by scheduling follow up visits with dedicated RNs, and hiring an NP to run outpatient clinics.

Results: Total data analyzed from April 2021 to November 2022 included 2399 new referrals. Of these, there were 2101 new GAP referrals (87.6%) and 291 new Geri-RAC referrals (12.1%). Of the 2399 GAP referrals, only 994 were given appointments (47.3%), leaving 1107 (52.7%) of patients who were given referrals who were not scheduled an appointment. These patients still received intake and triage phone calls, amounting to almost 1000 hours of RN time (given each intake call roughly takes 45 minutes).

Conclusion: The GAP at Niagara Health currently has a wait time of 15 months. The purpose of this quality improvement initiative is to implement short-term solutions for this problem. Longer term goals include eliminating “low impact” referrals, collaborating with MINT clinics, and engaging the NOHT Dementia Working Group to create new avenues for patients to be seen outside of the GAP.

#P34 - A SCOPING REVIEW: NEURAL CORRELATES OF SOMATIC SYMPTOM DISORDER

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Somatic Symptom Disorder (SSD) is a psychiatric illness affecting up to seven percent of the population, accounting for almost one fifth of all primary care visits. SSD places significant systemic and financial burdens on healthcare systems and is associated with poor outcomes and high morbidity. Neuroimaging studies have proven to help guide effective therapies, and our scoping review aims to outline the current state of research surrounding the neural correlates of SSD. Our review follows a previously-established framework: 1) identify research question 2) identify relevant studies 3) study selection 4) data charting 5) collating, summarizing, reporting. Four independent databases (PubMed, Medline, Embase, PsycInfo) were searched with carefully selected search terms, two independent reviewers screened study titles/abstracts to determine inclusion eligibility utilizing screening and extraction software. Disagreements were managed with an unbiased third-party reviewer. Grey literature was also searched to provide the broadest "scope" to the research question. Preliminary results suggested a relative paucity of primary studies conducted with adequate power and appropriate control groups investigating the neural substrates of SSD. There is, however, consistent demonstration of both functional and structural differences across multiple brain regions implicated in the networks of attentional salience, conflict monitoring, motor processing, and emotional salience. Regions that have consistently shown differences in structure and/or function include aspects of the Default Mode Network (eg. dorsal posterior cingulate cortex (ACC) and insula).The ACC is repeatedly implicated without clear consensus across studies. Further evaluation of the data being extracted will continue to guide our conclusions as well as potential application of the available research. The potential for informing effective treatments for SSD will be discussed. SSD remains a significant burden for individual patients as well as the Canadian healthcare system. Our in-progress scoping review aims to evaluate the current state of research into the neural substrates of SSD, as a means to help guide both future research as well as treatment options.

#P35 - IMAGE-GUIDED TUMOUR ABLATION: INITIAL EXPERIENCES FROM A COMMUNITY HOSPITAL IN ONTARIO

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Background: Interventional radiology has increasingly played a key role in oncology, often being described as the fourth pillar of cancer treatment. Niagara Health (NH) provides a variety of ablation options for patients including cryoablation and radiofrequency ablation (RFA). The literature is unclear, especially in community centers, if one modality of ablation is superior.

Objective: This study is a retrospective chart review evaluating post-procedural outcomes of ablative techniques for patients with solid tumours treated at NH.

Methods: Patients who received RFA or cryoablation at NH between 2018-2022, were included in the study. Patients <18 years old or who did not complete the procedure were excluded. Data regarding patient demographics, tumour characteristics, and post-procedural outcomes following ablation therapy were extracted. The primary outcome studied was tumour recurrence following the procedure. The data was assessed for statistical significance using χ^2 and student t-tests, wherever applicable. HiREB (#15284) approval was obtained.

Results: 73 RFA (mean age: 69.6, 31.5% female) and 47 cryoablation (mean age: 67.5, 31.9% female) procedures were performed during the study period. Tumour recurrence for cancers of the kidney (25.6% RFA vs. 32.6% Cryo, $p=0.476$), lung (11.1% RFA vs. 25% Cryo, $p=0.522$), and liver (30% RFA vs. N/A Cryo) were higher in cryoablation procedures but not statistically significant. Of the patients receiving a re-ablation, 76% showed no recurrence after one repeat. Complications were not statistically significant between both modalities and included hematuria, hemoptysis, and hematoma, none requiring hospital admission.

Conclusions: There are minimal differences between RFA and cryoablation with regards to tumour recurrence and post-procedural complications. Furthermore, re-ablations showed a high curative rate following one repeat. Tumour recurrence was comparable to rates stated in previous literature, demonstrating that ablative therapy is a safe modality to offer in community centers.

#P36 - HOW COVID-19 HAS IMPACTED ACCESS TO HEALTHCARE AND SOCIAL RESOURCES AMONG INDIVIDUALS EXPERIENCING HOMELESSNESS IN CANADA: A SCOPING REVIEW

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Objectives: In Canada, individuals experiencing homelessness (IEH) rely on public health and social services for healthcare, food and basic necessities. The COVID-19 pandemic has disproportionately affected marginalised populations, in part by impacting their access to such services. We performed a scoping review to identify from the published literature how access to services has changed for Canadian IEH during the pandemic.

Data sources: OVID Medline, Web of Science, Sociological Abstracts, CINAHL and OVID EmCare databases, and websites for the Salvation Army, Homeless Hub, Canadian Alliance to End Homelessness, Canadian Network for the Health and Housing of People Experiencing Homelessness and BC Centre for Disease Control

Study design: We used the scoping review methodology developed by the Joanna Briggs Institute framework and defined access to healthcare and social services using the 10-component Levesque framework. Academic databases and grey literature searches were used, with the final searches for each taking place 24 May and 1 June 2021, respectively. Data were compiled into an Excel spreadsheet. Title and abstract screening and full-text review were completed by two independent reviewers (RG and MM). Data extraction was completed by MM and cross checked by RG.

Results: In total, 17 academic and grey literature articles were included. Positive and negative changes in service access were reported in the literature. During the COVID-19 pandemic, access to social and healthcare resources was generally reduced for Canadian IEH. A new component of access, digital connectivity, was identified. Unexpectedly, coordination and collaboration of services improved, as did the number of outreach services.

Conclusions: Positive changes to service access such as improved coordination of services should be scaled up. Further work should be done to improve access to digital technologies for IEH.

#P37 - ENABLERS AND BARRIERS TO ESTABLISHING FAMILY PHYSICIAN-LED MEDICAL ABORTION SERVICES: A QUALITATIVE STUDY

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Introduction: In 2015, Health Canada approved the combination mifepristone/misoprostol medical abortion (MA) pill¹ allowing for MA services to be implemented in Canada. This paved the way for primary care clinicians to provide patients with MA, a development which promised less invasive options and better access to abortions for patients. There is currently a significant gap in the literature regarding the enablers and barriers to establishing a family physician-led medical abortion program in Canada, which this study seeks to address.

Methods: We conducted and recorded interviews and focus groups with providers, referring clinicians, and support staff involved in the MA service. Drawing on principles of rapid qualitative analysis, we used an iterating “summary template” to identify participant perspectives on the strengths and weaknesses of the service, and opportunities for future improvement.

Results: Strengths of the MA service that participants identified included familiarity and continuity of care for patients, opportunities for providers and trainees to learn new skills in a supportive environment, and community relationships developed to support the service. Weaknesses participants identified included the infrequency with which clinicians who were part of the service were called upon to provide MA, and the subsequent challenge this posed when providers found themselves needing to ‘refresh’ their knowledge. Opportunities participants identified for the service in the future included expanding the range of support accessible through the clinic to include counselling where desired by patients and to develop a broader network of community partners, including diagnostic imaging, to assist with streamlining the service for patients.

Conclusions: This study also provides preliminary support for a model of MA service provision in a primary care setting. These findings address the gap in the literature while simultaneously helping provide guidance for other family physicians looking to establish MA care provision in their settings. Furthermore, this research highlights areas of improvement for existing programs. This work could be generalized to other emerging areas of care provision. Clinicians can use the key takeaways from this study to optimize MA services that are provided to patients and maximize positive outcomes.

#P38 - PARENT PERSPECTIVES ON HEALTH CARE NETWORKS OF YOUNG CHILDREN WITH INHERITED METABOLIC DISEASES (IMD): A MIXED METHODS STUDY

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Objectives: We sought to understand parents' perceptions of the health care networks of children with inherited metabolic diseases (IMD).

Methods: This mixed methods study was embedded in a prospective cohort study. Parents/guardians of children ≤ 12 years with IMD were enrolled from one of 11 Canadian metabolic clinics. Parents created a 'care map' depicting their perceptions of their child's network of health care providers and connections between providers. We used social network analysis to describe network size, interconnectedness (density: ratio of perceived vs possible connections among providers, 0-1) and centralization (degree to which connections in a network centre around one provider, 0-1). A subset of participants participated in a semi-structured interview about their care map. We analyzed interviews thematically and integrated quantitative and qualitative results narratively.

Results: 71 parents provided care maps and 10 participated in interviews. Parents identified a median of 15 providers in their children's care networks; metabolic doctors and lab technicians were most commonly included (92% of care maps each). Networks had a median density of 0.08, meaning that approximately 8% of possible pairwise connections between providers were identified by parents. Networks had a median centralization of 0.23, meaning that the most connected provider was included in approximately 23% of pairwise connections. A majority of participants (80%) identified at least one key provider who knew the family very or fairly well; parents we interviewed strongly valued this relational continuity. Parents generally perceived that their children's care needs were being met but described that this required extensive effort by families to establish and coordinate care.

Discussion/Conclusions: Our findings highlight the complexity of care for children with IMD, the importance of positive relationships with clinical providers, and gaps in care coordination that place high demands on parents.

#P39 - SKIN CURRICULUM: A NOVEL APPROACH TO SUPPLEMENTING MEDICAL EDUCATION IN DERMATOLOGY AND BEYOND

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Background: Despite the pervasiveness of dermatologic conditions across virtually every medical specialty, the dermatology curriculum within medical school is limited, spanning as low as 3 hours at some Canadian medical schools. Previous research highlights the positive student responses to accessible virtual curricula and innovative approaches to education, calling for the expansion of novel e-learning tools to improve student learning in dermatology.

Objectives: To (1) create an effective supplemental medical education curriculum for dermatology and (2) evaluate Skin Curriculum's (SC) reach and engagement as a pilot project.

Methods: SC was launched in January 2023. The curriculum was created to accommodate various learning styles through offering diverse modalities: cases, videos, quizzes, virtual clinics, research summaries, treatment algorithms and podcasts. Twenty-two medical students from Canada and the United States have joined to collaborate on curriculum development using a peer-review process. Traffic and content engagement were evaluated across SC's social media platforms over a 3-month period using built-in analytic tools, and website using Wix-Analytics.

Results: SC's website has received over 2,200 visitors (84% Canada, 13% United States, 3% other). Our platform has a social media following of over 1,600 users with 49,600 impressions, and has reached ~5,900 visitors (37% Canada, 21% United States, 42% other).

Discussion: Since its launch, SC has gained overwhelming interest from medical students worldwide. SC will continue to develop as a medical education tool and pilot research endeavor. Given the importance of assessing and validating novel learning tools in developing evidence-based curricula, the next step of this project will evaluate the efficacy of our approach in promoting student learning, career exploration, and confidence within the field of dermatology.

Conclusion: SC is an innovative approach to addressing and supplementing gaps within medical education, which can be utilized as a framework for improving learning and exploration of other specialties.

#P40 - ARE FOAM USERS WILLING TO PAY FOR WHAT THEY GET FOR FREE? A WILLINGNESS-TO-PAY STUDY OF END-USERS FROM THE FREE OPEN ACCESS MEDICAL EDUCATION (FOAM) MOVEMENT

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Introduction: The Free Open Access Medical education (FOAM) movement has sought to disrupt traditional business models of education. However, nothing is truly free. Prior research has sought to value FOAM using various methods based on traditional advertising revenue mechanisms, but did not consider end-users perspectives on the value of the open educational resources. Market research processes have shown that it is possible to generate useful modeling by seeking valuation data from end-users directly. We aimed to apply these principles to a selection of top FOAM resources.

Methods: We designed a survey-based study aimed at determining the Willingness-to-Pay (WTP) of FOAM users. The 42-question survey was piloted upon non-participating members of our research team. Then we sent the survey to those registered for our study (the METRIQ 4 study) from July 26, 2021-Jan 25, 2022. We then conducted a Willingness-to-Pay (WTP) analysis to determine a theoretical value for 7 FOAM sites: Academic Life in Emergency Medicine, CanadiEM, LITFL, REBEL EM, Emergency Medicine Cases, EMCrit, and St. Emlyn's.

Results: A total of 132 registered to participate. A total of 128 (97.0%) completed the survey. Of these, 89.4% of all respondents expressed WTP for at least one of the 7 FOAM sites included for analysis. We found a high average WTP to access educational content (M=\$317.09 (USD), SD=312.46). Average WTP values for individual sites ranged from a high of \$63.89 (USD) (SD=82.97) to a low of \$23.78 (SD= 41.36).

Conclusions: Based on our WTP analysis of 7 selected FOAM sites, there appears to be a monetary value to their end-users. Further research is required to better model the anticipated economic value of FOAM. Research that profiles the exact demographic characteristics of various FOAM users would allow for an accurate theoretical value of each resource using the data we have generated.

#P41 - DOES MEDICAL LEARNER INVOLVEMENT IN PATIENT CARE AFFECT PATIENT OUTCOMES: A SCOPING REVIEW

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Background: Clinical involvement of medical learners in patient care is an essential aspect of medical education. Additionally, adverse events related to medical care have been a major concern for patients, healthcare providers, and policymakers. Accrediting bodies and professional organizations have emphasized the need for patient safety education in medical curricula. Medical students and residents are now required to receive training in patient safety to ensure safe and effective care for patients. However, the impact of medical learner involvement in patient care on patient outcomes, particularly with respect to patient safety, is unclear. This scoping review aims to identify gaps in research on patient safety concerning medical learner involvement in patient care.

Methods: A comprehensive search was conducted using keywords such as "medical students," "medical learners," "patient safety," "patient outcomes," and "patient satisfaction." The search was conducted in electronic databases, including PubMed, OVID, and WebofScience. The retrieved articles were screened based on the inclusion and exclusion criteria using Covidence software. Inclusion: medical students, medical residents, patient outcomes, patient safety, patient satisfaction. Exclusion: nursing students, PA, Dental students, NP students, physicians and nurses.

Results: Preliminary results indicate a gap in the literature investigating the impact of medical learner involvement in patient care on patient outcomes. Most studies focused on medical students' perception and attitudes towards patient safety. Studies have outlined that patient outcomes depend on many variables, which poses a challenge to draw cause and effect.

Conclusion: This review highlights the need for more empirical studies to explore the relationship between medical learner involvement and patient safety. The findings of this study can inform the development of educational strategies that prioritize patient safety and enhance the quality of medical education. Ultimately, this can lead to improved patient outcomes and a safer healthcare system.

#P42 - STRATEGIES FOR SPECIALTY TRAINING OF HEALTHCARE PROFESSIONALS IN LOW-RESOURCE SETTINGS: A SYSTEMATIC REVIEW ON EVIDENCE FROM STROKE CARE

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Background: The greatest mortality and disability from stroke occurs in low- and middle-income countries. A significant barrier to implementation of best stroke care practices in these settings is limited availability of specialized healthcare training.

Objective: We conducted a systematic review to determine the most effective methods for the provision of speciality stroke care education for hospital-based healthcare professionals in low-resource settings.

Methods: We followed the PRISMA guidelines for systematic reviews and searched PubMed, Web of Science and Scopus for original clinical research articles that described or evaluated stroke care education for hospital-based healthcare professionals in low-resource settings.

Results: A total of 1,182 articles were identified and eight were eligible for inclusion; three were randomized controlled trials, four were non-randomized studies, and one was a descriptive study. A “train-the-trainer” approach to education was found to have the most positive clinical outcomes (lower overall complications, lengths of stay in hospital, clinical vascular events) and increased patient reception of eligible performance measures. When technology was used to provide stroke education there was an increased frequency in diagnosis of stroke and use of antithrombotic treatment, reduced door-to-needle times, and increased support for decision making in medication prescription. Task-sharing workshops for non-neurologists improved stroke knowledge and patient care. Multidimensional education demonstrated an overall care quality improvement and increased prescriptions for evidence-based therapies; however, no significant differences in secondary prevention efforts, stroke reoccurrence, or mortality rates were reported.

Discussion: The “train the trainer” approach is likely the most effective strategy for specialist stroke education, while technology is also useful if resources are available. If resources are limited, basic knowledge education should be considered at a minimum, and multidimensional training may not be as beneficial. Communities of practice, led by those in similar settings, may be helpful to develop educational initiatives with relevance to local contexts.

#P43 - CLINICAL EMPATHY TRAINING AND PRACTICE: A QUALITATIVE STUDY OF STUDENT PERSPECTIVES ON EMPATHY IN MEDICAL EDUCATION

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Background: “Clinical empathy” is defined as the ability for physicians to understand the patient’s whole illness experience, communicate this understanding, and act on this understanding to inform patient-centered care. The clinical benefit for empathic care is evidenced by improved health outcomes and patient psychological distress. However, surveys have demonstrated declines in empathy throughout medical students’ education.

Objective: Our project aim is to explore and define medical students’ perceptions of empathy education in Ontario institutions. By interrogating students’ practical experiences, we intend to identify the strengths and shortcomings of formal versus informal training to build empathy. Ultimately, these analyses will inform future curriculum development to improve trainees’ clinical empathy.

Methods: Ontario medical students in their second year of study or above are recruited via class forums and student newsletters. In a semi-structured interview format, virtual focus groups are held to engender discussion on empathy-teaching curricula, the hidden curriculum, interactions with healthcare professionals, and potential curricular improvements. Using the constant comparative method, transcripts of the focus groups are coded iteratively to capture broader themes. With grounded theory analysis, we will ultimately construct themes to reflect students’ perspectives.

Results: Preliminary results from coding highlight a preponderance of patient interactions in moulding students’ empathy. In addition, at three of the six medical schools in Ontario, the most frequently quoted influence on clinical empathy is preceptor-related. Meanwhile, challenges in maintaining clinical empathy is associated with logistical barriers, emotional burnout, and disconnect between curriculum and clinical practice.

Discussion: The thematic patterns from the initial three focus groups suggest the importance of preceptors as role model, as well as the centrality of informal learning experiences in developing clinical empathy. Completion of the outstanding focus groups of students from Ontario medical schools will provide insight into the inter-institutional differences and potential curricular advancements in empathy training.

#P44 - BARRIERS TO CANADIAN MEDICAL SCHOOL ADMISSION FOR STUDENTS WITH DISABILITIES

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Background: Although people with disabilities have historically been underrepresented within medical training, inclusion of these students engenders countless benefits to their fellow students, patients, physicians, and society. Unfortunately, there is abundant evidence that physicians harbour implicit bias against patients, trainees, and even other physicians with disabilities.

Objective: The aim of this analysis was to review current admissions policies and resources from Ontario medical schools, identify areas of discrimination and inaccessibility, and suggest steps toward remediation.

Methods: Online admission resources from Ontario medical schools were reviewed to identify barriers to accessibility. This was contextualized within existing literature on medical students with disabilities in order to generate recommendations for improvement in identified areas of deficiency.

Results: Lack of transparency regarding accommodations during interviews and medical school discourages students from proactively seeking out accommodations that they need to protect their health, and inhibits the detection of discriminatory processes. Technical standards unnecessarily exclude students who would be capable of safe and effective practice as physicians, and rigid admissions criteria imposed without exception can disqualify students for disability-related reasons and devalues the strengths that living with a disability can impart. Moreover, the OMSAS Disability-based Consideration Request system does not meet the needs of applicants with disabilities and may, in fact, cause harm to this population. Effective accommodations policies must go beyond the legal minimum, consider intersectionality, and be informed by people with lived experience. Sustainable barrier reduction requires formal data collection regarding the number of students with disabilities who apply and are admitted to Ontario medical schools.

Conclusion: Currently, students with disabilities face many accessibility-related barriers to medical school admission. Increasing acceptance of and support for medical students with disabilities involves implementing changes that support the health and well-being of all medical trainees through increased compassion, adaptability, and focus on trainee health.

#P45 - PEDIATRIC ENDOCRINOLOGY EDUCATION AMONGST TRAINEES: A SCOPING REVIEW

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Background: Pediatric endocrinology (PE) education is a fundamental part of all pediatric residency and PE fellowship programs. Understanding the current teaching methods in PE is necessary to improve quality of training and consequently, improve patient care. Objective: To explore training and assessment strategies used in PE training across undergraduate and postgraduate medical education.

Methods: We identified main topics in PE and using these topics, developed a search strategy that was then applied to several bibliographic databases (e.g. MEDLINE, EMBASE, PsycINFO, Compendex). Full-text articles were included if they were empirical studies, editorials, letters and commentaries related to pediatric endocrinology education, and focused on medical students, interns, residents and/or fellows.

Results: Our scoping review yielded a total of 5017 sources of evidence, of which 4935 were excluded during the title/abstract screening. After full-text review, 39 articles were included for data extraction. We found that most studies on PE education were focused on type 1 diabetes and diabetic ketoacidosis (N=15). We also identified that despite technology, such as insulin pumps, being widely used, a limited number of these studies targeted technology and related skills that trainees should be competent at. The most frequently used training method was didactics and the majority of studies focused on knowledge as an outcome, assessed through written knowledge assessments (N=26). Finally, we found that no studies targeted common PE topics such as thyroid, bone health and adrenal insufficiency.

Conclusion: These findings suggest that further research should a) explore education innovation in pediatric endocrinology topics outside of diabetes, b) target skills and abilities that go beyond knowledge that are important for patient care, such as technical skills, teamwork, and communication, and (c) link performance outside of the clinical setting to performance in the clinical setting.

#P46 - IMPACT OF COVID-19 ON FAMILY MEDICINE RESIDENT WELLBEING AND SOCIAL NETWORKS

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Background/Purpose: The COVID-19 pandemic has led to significant disruptions in medical education globally. While there has been increasing literature surrounding the impact of COVID-19 on the acquisition of clinical skills among residents in training, there is a paucity of data on its effect on resident social networks and well-being. This study aims to provide insight on the ongoing impact of COVID-19 on the well-being and social support networks of family medicine residents over the course of the pandemic.

Methods: A mixed-methods longitudinal analysis was conducted using an existing national survey instrument, the Family Medicine Longitudinal Survey, modified to query COVID-19 impact. Survey items included 5-point Likert-scale questions and open-ended short answer questions. Participants included 238 graduating Family Medicine Residents (FMR) between 2021 and 2022. Likert-scale responses and multiple-choice questions are reported as summary statistics. Short answer responses underwent thematic analysis. Main outcome measures include resident perception of impact of COVID-19 on well-being and relationships with peers and teachers.

Results: Survey response rate was 81.8% (126/154) in 2021 and 74.6% (112/150) in 2022. Significant themes for both cohorts included: negative impact on well-being, social isolation, decreased interactions and relationships with peers, and difficulty establishing relationships with teachers. In 2022, 78% of residents reported a negative impact on their personal well-being due to social isolation and 43% reported a loss of interpersonal relationships.

Conclusion: Graduating FMR in both the 2021 and 2022 cohorts perceived negative impacts of the pandemic on their well-being as a result of social isolation and decreased relationships with co-residents and teachers. This study provides insight on the ongoing impact of COVID-19 on the experiences of FMR beyond curricular losses. This includes residents' perspectives on the path forward, such as administrative changes. These results may serve to inform programmatic initiatives to mitigate these impacts.

#P47 - A SYSTEMATIC REVIEW OF THE REPORTING QUALITY OF QUALITATIVE RESEARCH IN HAND SURGERY

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Introduction/Background: Qualitative research uses non-quantitative methods to contribute new knowledge and perspectives to healthcare. One precondition of credible clinical research is the development of core outcome sets (COS), i.e. clinically important outcomes amongst stakeholders. An area in need of COS is hand surgery due to the heterogeneity of outcomes seen in current literature. Qualitative research can assist in the development of COS. Proper interpretation of qualitative results, however, starts with proper reporting. The Standards for Reporting Qualitative Research (SRQR) is a guideline recommended in reporting qualitative research.

Hypothesis/Question/Objective: The primary objective of this study is to evaluate the reporting quality of hand surgery qualitative research according to the SRQR. The secondary objectives include: 1) recording and reporting methodology (such as data saturation, use of reporting guidelines, etc.); 2) determining if there was an improvement in SRQR scores after the publication of the SRQR checklist and 3) analyzing reporting quality by journal publication.

Methods: Medline, Embase, Psycinfo, and Emcare were searched to identify qualitative studies in hand surgery. Findings will be presented with descriptive analysis. Reporting quality will be evaluated using the Standards for Reporting Qualitative Research (SRQR), a 21-item checklist. This study will determine the best to least reported SRQR sections and if the SRQR had an impact on the reporting quality of qualitative studies in hand surgery. The types of qualitative research in the field of hand surgery will also be summarized.

Results: A total of 1598 records were identified, for which 55 were included in extraction. They covered a variety of topics including Dupuytren's disease, congenital thumb anomalies, and carpal tunnel. Extraction and analysis will determine their reporting quality according to the SRQR.

Discussion/Conclusion: Various qualitative studies in hand surgery were identified. The reporting quality of these studies will be determined in this review.

#P48 - ASSESSING THE USE OF THE TERMS RACE, ETHNICITY, AND ANCESTRY IN KIDNEY RESEARCH

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Background: The terms race, ethnicity, and ancestry are often used interchangeably and incorrectly. Guidance on their use has recently been published. Inappropriate use of race has been highlighted in nephrology due to challenges in calculating estimated glomerular filtration rate. We sought to assess the use of these terms in the nephrology literature in 2021.

Objective: Perform a systematic literature review to determine the frequency and appropriate use of the terms race, ethnicity, and ancestry in articles published in high-impact nephrology journals in 2021.

Methods: We searched MEDLINE for randomized trials, cohort studies, and case-control studies published in nephrology journals in 2021. We excluded reviews, editorials, and without the words race, ethnicity, and ancestry. Two independent reviewers screened 215 studies, and 125 studies were included in the review. To date, 81 studies have been analyzed.

Results: In preliminary results, the terms race, ethnicity, and ancestry were used in 70%, 53%, and 17% of the studies, respectively. Among the 81 studies, 37% used both of the terms race and ethnicity, and 31% and 9% of papers used race or ethnicity exclusively. Only 2 studies provided a definition for race, and no studies defined ethnicity or ancestry. Most studies (75%) did not specify how these variables were identified. Of the 25% that did, 20% used principal components of ancestry, 50% used self-reporting, 0% used researcher observation, and 30% used other methods.

Discussion: Our preliminary results suggest that the terms race and ethnicity are commonly used in high-impact nephrology research papers but are rarely defined and often used interchangeably. Most studies do not specify how participant race, ethnicity, or ancestry are identified, emphasizing the need for a consensus on the appropriate use of these terms. Appropriately incorporating measurement of race, ethnicity, and ancestry in kidney research is essential for avoiding systemic racism.



MMSRD

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Welcome to the 14th annual McMaster Medical Student Research Day (MMSRD)! MMSRD was initially established in 2010 by Alex Kaplan (c2012) with the aim of highlighting the crucial role of research in connecting laboratory discoveries with clinical practice. Offering a forum for interdisciplinary exchange, in-depth analysis, and networking, MMSRD became a vehicle for promoting educational ideals that went beyond traditional classroom settings, inspiring participants and attendees to employ both scientific inquiry and inventive thinking to address medical challenges across all aspects of health care. Over the years, MMSRD has expanded in both scale and reach, drawing upon the expertise of previous years and guided by the following medical student co-chairs:

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