Resident Project Day

Abstract Collection

Department of Family Medicine

June 10th, 2026

Schulich MEDICINE & DENTISTRY

Western

Overall Learning Objectives:

By the end of this program and within each session, participants will be able to:

1. Identify research and scholarly work in Family Medicine.
2. Acquire primary care knowledge through research.
3. Assess resident projects through feedback evaluations.
4. Participate in discussions about resident projects.

CFPC (Mainpro+ Certification)

This activity meets the certification criteria of the College of Family Physicians of Canada and has been certified by Continuing Professional Development, Schulich School of Medicine & Dentistry, Western University for up to 2.25 Mainpro+® Certified Activity credits.

Non-Financial Sponsorship Statement

This program has received no financial support.

25% of this program is dedicated to participant interaction. Each presenter will complete a 7-minute presentation followed by a 3-minute question period.

Resident Project Day 2026

June 10th, 2026
9:30 a.m. – 1:30 p.m.
Western Center for Public Health and Family Medicine (WCPHFM)

9:00 a.m. – 9:30 a.m.	Registration
9:30 a.m. – 10:00 a.m.	Opening Remarks Dr. Daniel Grushka, Postgraduate Program Director Dr. Scott McKay, Chair Dr. Amanda Terry, Centre for Studies in Family Medicine
10:00 a.m. – 12:10 p.m.	Concurrent lightning oral presentations (Session A in Room 1120, Session B in Room 1150, Session C in Room 4006)
12:10 p.m. – 12:30 p.m.	Closing Remarks
12:30 p.m. – 1:30 p.m.	Lunch

Lightning Oral Presentations – Concurrent Rooms 1120, 1150, and 4006

Room 1120: Session A

Time	Presenter	Presentation
10:00 am	Dr. Donia Al-Zwaylif, Dr. Md Rezaul Ekram, Dr. Maha Alkurd, and Dr, Randa Yosef	Improving the rate of abdominal aortic aneurysm (AAA) Screening in Males Aged 65 – 80 at Byron Family Medicine Clinic
10:10 am	Dr. Griffins Misati and Dr. Tammy Ng	Strengthening Smoking Cessation Care: A Quality Improvement Initiative at Byron Family Medical Centre
10:20 am	Dr. Audrey Gruneberg	Advancing Connected Care: Increasing Patient Email Documentation at BFMC
10:30 am	Dr. Seyedeh Taravat Sadrosadat	Improving Accuracy of Allergy Documentation in Primary Care: A Quality Improvement Initiative Using PDSA Cycles
10:40 am	Dr. Jasmine Yip	Evolving First-Choice Specialty: The Influence of Curricular Activities on Students' Interest in Family Medicine
10:50 am	Dr. Alexandra Ferrara and Dr. Jared Tschirhart	Optimizing Asthma Management: Reducing SABA Overuse and Enhancing ICS Adherence in Young Adults
11:00 am	Dr. Gloria Chandi, Dr. Hira Chaudhry, Dr. Farheen Mushtaq, Dr. Anmol Nisar, and Dr. Michael Qaqish	Enhancing Preventive Eye Care for Diabetic Patients in Primary Care Settings
11:10 am	Dr. Noor Faisal, Dr. Gowri Jayaram, and Dr. Bazgha Saad	Quality improvement measures to enhance COPD smoking cessation appointments in family practice.
11:20 am	Dr. Erik Cassar	A Cohort Study Analyzing the Impact of the COVID-19 Pandemic on Colorectal Cancer Presentations in a Medium-Large Canadian Community Hospital
11:30 am	Dr. Himani Garg	Ensuring Timely MRP Assignment to Improve Continuity of Care in Hospital Admissions
11:40 am	Dr. Aaron Chan and Dr. Mustafa Hafidh	Facilitating the Use of PHQ-9 in Mental Health Visits
11:50 am	Dr. Dilani Cumarasivam, Dr. Nubia Mahecha Castro, and Dr. Azeez Saddeqi	Exploring Ways of Improving Foot Care Screening Rates Among Type II Diabetes Patients at Central Lambton Family Health Team

Room 1150: Session B

Time	Presenter	Presentation
10:00 am	Dr. Khawar Asma, Dr. Herta Kankpeyeng, Dr. Nahid Sasani, Dr. Nahid Sultana, and Dr. Fatima Usman	Increasing Awareness of Advance Care Planning Among Older Adults (70 years+) in the primary care setting
10:10 am	Dr. Sarah Eshkour, Dr. Victoria Gisondi, Dr. Ela Kadish, Dr. Fahad Khan. And Dr. Andrea Petrella	Enhancing Prevnar Vaccination Rates in COPD Patients: A Resident-Led Quality Improvement Initiative at SJFMC
10:20 am	Dr. Matthew Gryfe. Dr. Daniella Mlinarevic, Dr. Niveditha Pattathil, and Dr. Paul Penkul	Improving Appropriateness of After-Hours Clinic Visits Through Patient Education
10:30 am	Dr. Tina Chen and Dr. Sara Calvert	Increasing MMRV Vaccination Rates in children 4-7 years old
10:40 am	Dr. Mini Chacko, Dr. Suffia Malik, Dr. Kristin Pooloe, and Dr. Sharon Sandhu	Click to Quit: Improving documentation of smoking status in Strathroy Middlesex Family Health Team
10:50 am	Dr. Lucas Koechlin and Dr. Haris Smailovic	Evaluating the Impact of a Community Paramedicine Pilot Program on Emergency Department Transfers from Long-Term Care Homes
11:00 am	Dr. Abaa Al-Mohammedi, Dr. Amreen Qasim, Dr. Smrithi Kallapalli, and Dr. Seema Sharma	Improve Pneumococcal Immunization in Diabetic Patients aged 18-64 years old
11:10 am	Dr. Jashan Brar, Dr. Chris Bonneau, Dr. Dakshitha Ranatunga, Dr. Jordan Robinson, and Dr. Aliaksandr Shalai	Early GoC Discussions and Documentation
11:20 am	Dr. Mona Azzam, Dr. Aimeriel Buzia, Dr. Naushin Chowdhury, and Dr. Zarmeen Qamar	Impact of Frequency of Mock Code Practice on Basic Cardiopulmonary Resuscitation Skills in Low-acuity Settings: a Randomized Control Trial.
11:30 am	Dr. Ira Brown, Dr. Matthew DiNunzio, Dr. Mitchell Locke, and Dr. Lauren Wohlgemut	Increasing Use of FITT Exercise Prescriptions During Diabetes Visits in a Family Medicine Residency Clinic: A Quality Improvement Study
11:40 am	Dr. Melika Farshidianfar, Dr. Nida Fatima, and Dr. Zarmeen Qamar	Evaluating the Impact of Structured Dermoscopy Education on Knowledge, Confidence, and Clinical Application in Family Medicine: A Pilot Quality Improvement Study
11:50 am	Dr. Spencer Ashby, Dr. Fereshteh Nourbakhsh, Dr. Kayla Richard, and Dr. Janet Zanin	Hearing Screening for Dementia Prevention in Patients Aged 55+
12:00 pm	Dr. Braden Boley, Dr. Leona Bruijns, Dr. Albert Luu, and Dr. Lindsey Wong	Optimizing Virtual Afterhours Care: Decreasing the Amount of Inappropriate Calls to the MCFMC After Hours Phone Line

Room 4006: Session C

Time	Presenter	Presentation
10:00 am	Dr. Peter Denezis	Optimizing throughput for patients with unplanned emergency department visits following a recent inpatient discharge
10:10 am	Dr. Fatima Kharal	Emergency Department Utilization Among Persons Experiencing Homelessness: A City-Wide Retrospective Study
10:20 am	Dr. Ryan Sanford	Bicycle injuries in children: a single centre retrospective chart review of helmet use
10:30 am	Dr. Ashley Wang	Generative AI as a Simulation Platform
10:40 am	Dr. Justin Roy	Optimizing emergency department management of upper extremity infections among patients with housing insecurity and substance use at LHSC: A quality improvement initiative
10:50 am	Dr. Boyan Woychyshyn	Systematic review of N-acetylcysteine treatment following traumatic brain injury in adults.
11:00 am	Dr. Joanna Walters	Supporting the Role of Family Physicians in Cancer Care: An Oncology Guide
11:10 am	Dr. Jasmin Aggarwal	Unilateral leg pain and weakness in a diabetic patient
11:20 am	Dr. Austin Kemp and Dr. Matthew Ryckman	Enhancing procedural competency in primary care: Development of an educational video series for musculoskeletal injections
11:30 am	Dr. Jessica Sadri-Gerrior	Case Report: Winged Eagle Syndrome presenting as shoulder pain and scapular dysfunction caused by compression of the spinal accessory nerve

Session A

Dr. Donia Al-Zwaylif, Dr. Md Rezaul Ekram, Dr. Maha Alkurd, and Dr, Randa Yosef – BFMC

Improving the rate of abdominal aortic aneurysm (AAA) Screening in Males Aged 65 – 80 at Byron Family Medicine Clinic

Faculty Lead: Dr. Sonny Cejic

Project Type: Quality Improvement

Abdominal aortic aneurysm (AAA) is a potentially life-threatening condition that can be effectively detected with a one-time abdominal ultrasound in eligible men aged 65–80, especially those with a history of smoking. Despite clear national guidelines, screening rates in primary care remain suboptimal due to knowledge gaps and inconsistent system-level prompts. This quality improvement (QI) project aims to increase the rate of AAA screening in eligible male patients at Byron Family Medicine Clinic. Through a multifaceted intervention including provider education, Byron resident teaching, and implementation of electronic medical record (EMR) reminders, we seek to promote evidence-based preventive care. The goal is to raise the documented AAA screening rate from baseline (to be established through chart audit) to at least 65% within six months. Measures will include the percentage of eligible patients with screening documented, the number of educational sessions conducted, and provider feedback on system changes. Planned interventions include targeted resident teaching, integration of EMR pop-up alerts and preventive templates. By embedding these changes into routine clinical workflows, we aim to sustainably improve screening rates, align with Canadian Task Force recommendations, and enhance patient safety through timely detection of AAA.

Dr. Griffins Misati and Dr. Tammy Ng – BFMC

Strengthening Smoking Cessation Care: A Quality Improvement Initiative at Byron Family Medical Centre

Faculty Lead: Dr. Sonny Cejic and Dr. Tania Rubaiyyat

Project Type: Quality Improvement

Smoking remains a leading cause of preventable morbidity and mortality, placing a substantial burden on both individual health and healthcare systems. Despite the availability of evidence-based cessation therapies, gaps in clinical practice continue to result in missed opportunities to support patients in quitting. At the Byron Family Medical Centre, resident physicians identified that many patients lacked awareness of available smoking cessation resources and faced barriers such as limited counselling and inconsistent follow-up. In response, this Quality Improvement (QI) project aimed to strengthen the delivery of smoking cessation care through structured, team-based interventions. The objective was to enhance provider knowledge, improve referral processes, and promote more consistent, proactive cessation conversations during routine patient encounters. During PDSA Cycle 1, a provider education session led to a 329% increase in referrals, from a baseline of 1.4 to 6 per month, as well as 19 documented smoking cessation discussions with patients identified as smokers. In contrast, Cycle 2 employed passive educational materials (posters) to prompt patient interest, resulting in a decline to just 1 referral and 4 discussions. Informal feedback indicated that posters rarely prompted patient-initiated conversations, though some non-smokers expressed intent to share the information with family members who smoked. These findings suggest that passive awareness strategies alone are insufficient to sustain meaningful engagement. Future cycles should prioritize ongoing provider education, integration of cessation prompts into routine care processes, and exploration of hybrid approaches that combine patient-facing materials with provider-led interventions to optimize impact and maintain momentum.

Dr. Audrey Gruneberg – BFMC

Advancing Connected Care: Increasing Patient Email Documentation at BFMC

Faculty Lead: Dr. Andrew Hemphill

Project Type: Quality Improvement

Email is gaining popularity in patient care for appointment scheduling and reminders, information sharing, and even virtual care. Many specialists are now requiring patient email information to consider a referral complete. At BFMC, in March 2025, only 19.9% of active patient charts had an email listed, leading to incomplete referrals and a limited ability to utilize email appointment reminders or emailed documents. This project aimed to increase the percentage of patients at BFMC with a listed email address from 19.9% to 35% by February 2026. Initial PDSA cycles prioritized low-effort but high-yield opportunities, including automated EMR reminders to identify patients without an email listed, and patient-facing signage to promote email usage. EMR reminders were found to be more effective than signage, increasing the percentage of patients with email on file by about 1% per month. However, the most impactful change came at a system level, through an LHSC mandate for reception to obtain consent for email use, with early results demonstrating an increase by 1.5% in two weeks. With these interventions, email documentation increased to 27.7% during this period; however, there was no meaningful improvement to the BFMC no-show frequency, and issues surrounding privacy and navigating email consent for minors were highlighted. This project affirmed that while systems-level changes can be more resource-intensive, they often do have a larger impact. Long-term benefits of email address collection may take time to become apparent, and caution must be taken to protect patient privacy, particularly for minors.

Dr. Seyedeh Taravat Sadrosadat – BFMC

Improving Accuracy of Allergy Documentation in Primary Care: A Quality Improvement Initiative Using PDSA Cycles

Faculty Lead: Dr. Tania Rubaiyyat

Project Type: Quality Improvement

Accurate allergy documentation in electronic medical records (EMRs) is essential for safe prescribing and effective clinical decision-making. However, drug intolerances and predictable side effects are frequently misclassified as allergies, contributing to inappropriate alerts and suboptimal treatment choices. This quality improvement (QI) project aimed to increase the revision and completion of allergy documentation in a primary care clinic. A baseline chart review of 40 patient encounters revealed that 65% of documented allergy entries were incorrect or misclassified, and some charts lacked any allergy documentation. Using Plan–Do–Study–Act (PDSA) cycles, targeted interventions were implemented, including provider education, EMR-based reminders, and visible point-of-care prompts. Outcome and process measures focused on the accuracy and completeness of allergy documentation, while balancing measures assessed the impact on clinician workflow. Following the interventions, there was a progressive improvement in documentation quality. In PDSA Cycle 2, 24 patient charts were reviewed and corrected, increasing to 51 charts in Cycle 3. Improvements included reduction of misclassified allergies, better documentation of reaction details, and increased use of “No Known Drug Allergies” where appropriate. Although clinician time per encounter increased slightly, no significant workflow disruption was observed. This project demonstrates that simple, low-cost interventions can significantly improve allergy documentation and support safer prescribing practices in primary care.

Dr. Jasmine Yip – BFMC

Evolving First-Choice Specialty: The Influence of Curricular Activities on Students' Interest in Family Medicine

Faculty Lead: Dr. George Kim

Project Type: Research

OBJECTIVE: To determine how students' first-choice specialty (FM vs. non-FM) has changed during medical school; and to identify the influence of FM and non-FM curricular activities on students' interest in pursuing FM as a career. DESIGN: Cross-sectional survey study PARTICIPANTS: Final year medical students enrolled in an English-speaking Canadian medical school's MD program; sample size required after a priori power analysis is 334. RESULTS: Amongst the 78 respondents from 8 different targeted medical schools, the proportion of students chosen FM as their first-choice specialty has increased from 31.2% upon admission to medical school to 39% upon CaRMS application. 36.4% of total participants reported a different preferred specialty at the time of admission compared with their ultimate choice upon CaRMS submission – 60.7% of which became fond of FM as a future career, and 39.3% swayed away from FM. Comparing students who have ultimately chosen FM with those who have not, there were no statistically significant differences in their age ($p=0.248$), gender ($p=0.174$), race ($p=0.163$), and urban/rural background ($p=0.210$). 61.5% of total respondents were positively influenced towards FM after a rural FM clerkship. Those who ultimately swayed away from FM had more negative influence towards FM after non-FM clerkship ($p<0.001$), non-FM electives ($p<0.001$), interaction with non-FM staff ($p<0.001$), and non-FM residents ($p=0.006$). CONCLUSION: Proportion of students interested in FM grew during medical school. Rural FM clerkship was able to positively influence the majority of students, no matter what their preferred specialties are. Yet, potential hidden curriculum from non-FM was unfortunately observed. Future qualitative analyses should be done to discern positive & negative components from these curricular activities for further enhancement.

Dr. Alexandra Ferrara and Dr. Jared Tschirhart – Chatham

Optimizing Asthma Management: Reducing SABA Overuse and Enhancing ICS Adherence in Young Adults

Faculty Lead: Dr. Lindsey Sutherland

Project Type: Quality Improvement

The management of mild asthma has evolved significantly, shifting away from reliance on short-acting beta-agonists (SABA) toward inhaled corticosteroid (ICS)-based regimens. Despite the long-standing use of as-needed SABA therapy, emerging evidence links frequent SABA use to increased exacerbations, poor asthma control, and higher mortality risk. The 2021 Canadian Thoracic Society (CTS) guidelines now recommend either daily ICS with as-needed SABA or Single Maintenance and Reliever Therapy (SMART) using budesonide/formoterol for both maintenance and symptom relief. While SMART therapy has demonstrated superiority in reducing exacerbations, accessibility and cost barriers necessitate alternative ICS options such as Alvesco (ciclesonide) and Flovent (fluticasone).This quality improvement (QI) project aims to optimize ICS adherence by identifying young adult patients (18-24 years) who overuse SABA while underutilizing ICS. Challenges include extracting a precise patient cohort from electronic medical records (EMRs) and differentiating true SABA overuse from occasional Ventolin (salbutamol) prescriptions for non-asthma conditions. To refine perception of asthma control, an online tool called the 'Asthma Control Test' (ACT) is being used to screen for poor asthma control. Additionally, ciclosenide samples are being trialed to enhance patient adherence due to its once-daily dosing. By using EMR search strategies, identifying poor asthma control, and offering SMART therapy alongside traditional ICS options, this project seeks to reduce SABA overuse, improve ICS adherence, and enhance asthma control. These efforts align with guideline-based recommendations to mitigate exacerbation risks and improve long-term respiratory health outcomes in primary care settings.

Dr. Gloria Chandi, Dr. Hira Chaudhry, Dr. Farheen Mustaq, Dr. Anmol Nisar, and Dr. Michael Qaqish – Windsor

Enhancing Preventive Eye Care for Diabetic Patients in Primary Care Settings

Faculty Lead: Dr. Omar Zghal

Project Type: Quality Improvement

Diabetic retinopathy remains a leading cause of preventable vision loss, yet adherence to recommended annual eye examinations among patients with diabetes is often suboptimal in primary care settings. At Windsor Family Medicine clinics, baseline data demonstrated that a significant proportion of diabetic patients lacked documentation of a completed yearly eye exam. This quality improvement (QI) project aims to increase the percentage of diabetic patients with a documented annual eye examination to 85% by March 2026. Using a structured QI framework, we will implement a series of Plan-Do-Study-Act (PDSA) cycles targeting patient, provider, and system-level barriers. Interventions include patient reminders (via email, and patient portal), provider prompts within the electronic medical record to review and document eye exam status during diabetes visits, and patient education through visual posters and informational pamphlets. Monthly performance summaries, including clinic and provider-level completion rates, will be shared with clinicians to highlight care gaps, reinforce accountability, and guide iterative improvements. The primary outcome measure is the percentage of diabetic patients with a documented annual eye exam. Process measures include the proportion of patients receiving reminders, the proportion of visits with documented review of eye exam status, and provider use of EMR prompts. Balancing measures include staff workload, patient satisfaction, appointment access, and equity across demographic groups. This initiative aims to strengthen preventive care delivery, reduce vision-related complications, and support sustainable, equitable improvements in chronic disease management.

Dr. Noor Faisal, Dr. Gowri Jayaram, and Dr. Bazgha Saad – Windsor

Quality improvement measures to enhance COPD smoking cessation appointments in family practice.

Faculty Lead: Dr. Vaso Globarevic

Project Type: Quality Improvement

BACKGROUND: Smoking cessation remains the single most effective intervention to reduce disease progression, exacerbations, and mortality in chronic obstructive pulmonary disease (COPD). Despite strong guideline recommendations, primary care delivery frequently relies on opportunistic counselling without systematic patient identification, standardized documentation, or structured follow-up. This variability contributes to gaps between evidence-based recommendations and real-world practice. OBJECTIVE: To evaluate whether implementation of an electronic medical record (EMR)-integrated workflow could improve structured smoking cessation engagement and guideline-concordant care processes among COPD patients who smoke. METHODS: A quality improvement initiative using sequential Plan–Do–Study–Act cycles was conducted in a primary care clinic. An EMR reminder was introduced to reliably identify COPD patients who smoke during routine encounters. Interventions included standardized documentation, pharmacotherapy optimization and retrials, referral to formal cessation programs, and scheduling of dedicated follow-up appointments. Process, outcome, and balance measures were assessed among 11 eligible patients over a defined short-term follow-up period. RESULTS: Implementation of the EMR-supported workflow substantially improved care reliability. Pharmacotherapy exposure increased from 45% (5/11) at baseline to 91% (10/11) following intervention. Five new referrals to structured cessation programs were initiated, and four additional dedicated follow-up appointments were booked. COPD action plan documentation improved from 55% to 91%. Despite significant improvements in care processes and adherence to guideline-recommended interventions, no measurable short-term reduction in smoking rates or COPD exacerbations was observed. CONCLUSION: System-level redesign using EMR-integrated prompts improved consistency, documentation, and pharmacologic engagement in smoking cessation care for COPD patients. The absence of immediate clinical outcome change underscores the chronic, relapsing nature of tobacco dependence and the temporal lag between process optimization and measurable health outcomes. Sustained longitudinal reinforcement and extended follow-up are likely required to translate process gains into durable clinical benefit.

Dr. Erik Cassar – Windsor

A Cohort Study Analysing the Impact of the COVID-19 Pandemic on Colorectal Cancer Presentations in a Medium-Large Canadian Community Hospital

Faculty Lead: Dr. Fawad Ahmed and Dr. Caroline Hamm

Project Type: Research

INTRODUCTION: Colorectal Cancer (CrC) is a common cause of cancer-related death worldwide, but screening programs are highly effective at diagnosing early-stage disease, allowing effective treatment. During COVID-19, a decrease in screening participation was hypothesized due to limited access, leading to an increase in symptomatic presentations and stage at diagnosis. METHODS: All patients who met inclusion criteria were divided into two cohorts based on time of diagnosis (n = 373). The pre-COVID era was designated as December 2018 to February of 2020, with the COVID era running from then until March 2021. All patients were from the Windsor Regional Hospital Cancer Centre, located in Windsor, Canada. RESULTS: Across time periods, 218 patients were diagnosed prior to, and only 144 during COVID. The number of Fecal Immunochemical Test (FIT) positive patients remained stable, while the number of procedural diagnoses decreased from 34.1% to 10.7%, with only 21.2% of patients overall being diagnosed with screening. When combining time periods, females presented symptomatically (85.0%) more often than males (74.4%). Patients with a positive family history were more likely to be diagnosed via procedural screening (42.9%) than those without (20.4%). CONCLUSION: There was no change to the proportion of symptomatic presentations across time groups, in contrast to our predicted outcome. There was a decrease in procedural screening during the COVID timeframe, with FIT testing rates remaining stable, likely representing patients being transferred to available methods. Female patients and patients with a family history demonstrated a particular need for increased screening participation based on our findings.

Dr. Himani Garg – Listowel

Ensuring Timely MRP Assignment to Improve Continuity of Care in Hospital Admissions

Faculty Lead: Dr. Rob Annis

Project Type: Quality Improvement

Timely designation of a Most Responsible Physician (MRP) is vital after hospital admission as it can guarantee continuity in practice and patient safety. At a rural community hospital, variation in MRP assignment processes was detected; around 4% of admitted patients did not have a well-defined assigned MRP in the first 24 hours. This may have led to a time lag in the primary physician's evaluation and potential adverse effects on patient care. The goal of this quality improvement project was to achieve a more timely and consistent MRP assignment by solving the root cause of process or communication problems. Preliminary analysis found that the major problem was not ignorance but rather lack of consistency in decision-making related to unclear responsibility in complex situations (such as "orphan patients", weekend coverage, and PCP availability). A defined decision-support flowchart was created to assist health-care practitioners in the identification/evaluation of the appropriate MRP for admission. This method was developed using a PDSA cycle from beginning to end, with feedback loop from the attending physicians on how the intervention was working and through real-life practice refinement. While no formal quantitative data were collected in the first phase, qualitative feedback was the source of better clarity and consistency to MRP assignment. The intervention was highly accepted and considered viable for increased implementation. This project demonstrates the value of low-resource, process-oriented intervention to enhance clinical workflows. Followed by formal implementation and metrics assessing impact on MRP assignment timelines and patient outcomes.

Dr. Aaron Chan and Dr. Mustafa Hafidh – Hanover

Facilitating the Use of PHQ-9 in Mental Health Visits

Faculty Lead: Dr. Timothy Heerema

Project Type: Quality Improvement

Depression is one of the most common primary care encounters, yet use of standardized screening tools remains inconsistent. This QI project aimed to increase the utilization of the PHQ-9 screening tool in mental health visits in Hanover Family Medicine Clinic by 50% over a period of 3 months. Baseline data showed negligible documented PHQ-9 use prior to project implementation. Two PDSA cycles were completed. In the first cycle, PHQ-9 questionnaires were distributed electronically through Ocean prior to appointments and staff education session were conducted. This increased the documented PHQ-9 completion to 48%. In the second cycle, registration staff distributed paper PHQ-9 forms to patients when they were checking in for mental health appointments, resulting in a further increase to 65%. Overall, the project reached its target and demonstrated that integrating PHQ-9 screening into clinical workflow through pre-visit questionnaires is feasible and sustainable in improving depression screening during mental health visits in a rural family medicine setting.

Dr. Dilani Cumarasivam, Dr. Nubia Mahecha Castro, and Dr. Azeez Saddeqi – Petrolia

Exploring Ways of Improving Foot Care Screening Rates Among Type II Diabetes Patients at Central Lambton Family Health Team

Faculty Lead: Dr. Ahmed Hijazi

Project Type: Quality Improvement

BACKGROUND: Diabetic foot complications are a leading cause of morbidity and lower limb amputations. Regular foot examinations are essential for early detection and prevention of complications, yet compliance with screening guidelines remains suboptimal. OBJECTIVE: This quality improvement (QI) project aimed to increase the rate and quality of diabetic foot examinations performed in a primary care outpatient setting through a structured intervention. METHODS: A multidisciplinary team implemented a multi-faceted intervention, including provider education, electronic medical record (EMR) prompts, standardized foot exam checklists, and patient engagement strategies. Baseline data on foot examination rates were collected over three months. Interventions were then introduced, and post-intervention data were analyzed for improvement.

Session B

Dr. Khawar Asma, Dr. Herta Kankpeyeng, Dr. Nahid Sasani, Dr. Nahid Sultana, and Dr. Fatima Usman – SJFMC

Increasing Awareness of Advance Care Planning Among Older Adults (70 years+) in the primary care setting

Faculty Lead: Dr. Saadia Jan

Project Type: Quality Improvement

Many of the patients we see in acute care have not discussed or documented their preferences for future medical care, despite the importance of advance care planning (ACP) in ensuring patient-centered decision-making. ACP promotes care that aligns with patients' values and reduces unnecessary interventions, yet conversations around it are often delayed or avoided. Physicians play a critical role in initiating these discussions; however, many patients do not bring up ACP during visits, and providers often hesitate to address it unless prompted by a medical event or patient inquiry. This quality improvement (QI) project aimed to increase the proportion of patients aged 70 years and older at our clinic (St. Joseph's Family Medical Centre) who have documented ACP conversations in their electronic medical record (EMR) from a baseline of 3.6% to at least 20% between July and October 2025. Strategies implemented included distributing awareness brochures, sending educational emails, and making direct phone calls to patients to encourage ACP discussions. Our results showed that while brochures and email reminders modestly improved awareness, direct phone outreach produced the greatest impact. This approach required additional time beyond routine clinical hours but led to substantial improvement, exceeding our target goal. Documentation of ACP discussions increased to 41% overall. These findings suggest that proactive, personalized communication, such as phone calls is one of the most effective strategies to increase ACP awareness and documented discussions among older adults. Despite added time demands, this intervention proved both impactful and feasible within the primary care setting.

Dr. Sarah Eshkour, Dr. Victoria Gisondi, Dr. Ela Kadish, Dr. Fahad Khan. And Dr. Andrea Petrella – SJFMC

Enhancing Prevnar Vaccination Rates in COPD Patients: A Resident-Led Quality Improvement Initiative at SJFMC

Faculty Lead: Dr. Saadia Jan

Project Type: Quality Improvement

Chronic obstructive pulmonary disease (COPD) patients are at increased risk of morbidity and hospitalization from influenza and pneumococcal infections, yet vaccination discussions and uptake remain suboptimal in primary care. At St. Joseph's Family Medical Centre (SJFMC), a baseline review identified 109 COPD patients, of whom only 45 had any documented discussion regarding Prevnar vaccination, with inconsistent recording of vaccination status, decisions, and related outcomes. This quality improvement project aimed to increase Prevnar vaccination rates among COPD patients by 10% over four months through targeted education, enhanced screening, and streamlined vaccination processes. Interventions included aligning practice with Public Health Ontario guidelines recommending Pneu-C-20 for adults aged 50 years and older with chronic lung disease, integrating vaccination prompts into routine COPD visits, and scheduling dedicated pre–flu season COPD appointments. Early PDSA cycles focused on extracting eligible patients from the EMR, proactively booking COPD visits to address vaccination, and standardizing use of Prevnar 20. Preliminary data from resident panels suggested variable but improving vaccination uptake and confirmed the feasibility of embedding structured vaccination discussions into COPD care, while exposing barriers related to workflow, patient hesitancy, and documentation. This resident-led, guideline-concordant initiative illustrates how primary care teams can begin to close pneumococcal vaccination gaps in a high-risk COPD population and may contribute to reduced respiratory infections, exacerbations, and hospitalizations.

Dr. Matthew Gryfe. Dr. Daniella Mlinarevic, Dr. Niveditha Pattathil, and Dr. Paul Penkul – SJFMC

Improving Appropriateness of After-Hours Clinic Visits Through Patient Education

Faculty Lead: Dr. Nelson Chan

Project Type: Quality Improvement

After-hours clinics in family medicine are designed to address acute, time-sensitive concerns; however, patients may also present with non-urgent issues better suited to longitudinal care with their primary providers. This mismatch can lead to fragmented care, provider frustration, and inefficient use of limited after-hours resources. At St. Joseph's FMC, we identified a need to improve alignment between patient concerns and appropriate care settings. Baseline data collected over four weeks demonstrated that an average of 30% of after-hours visits were deemed "inappropriate," defined as non-urgent concerns requiring continuity of care, such as chronic disease management, disability paperwork, or mental health follow-up. Our quality improvement initiative aims to reduce inappropriate after-hours visits by 10% over a 4-week period. We will implement a series of patient education interventions, including prominently displayed clinic posters and a mass email to patients outlining the purpose of after-hours services. These interventions were selected for their feasibility, scalability, and minimal burden on clinic staff. We will prospectively collect and analyze data on after-hours visits, categorizing appropriateness using predefined criteria, and compare post-intervention rates to baseline. We anticipate that improved patient understanding of after-hours clinic use will lead to a measurable reduction in inappropriate visits, thereby enhancing care continuity, optimizing resource utilization, and improving both patient and provider experience.

Dr. Tina Chen and Dr. Sara Calvert – Strathroy

Increasing MMRV Vaccination Rates in children 4-7 years old

Faculty Lead: Dr. Nuala Marshall

Project Type: Quality Improvement

The MMRV (measles, mumps, rubella, and varicella) vaccine is recommended in Ontario to children ages 4-6 years old. In the 2023-2024 year the MMRV vaccination rate in children up to age of 7 for the patients of our preceptors was 57.3%, which is 13.1% below the provincial average. The goal of this quality improvement project was to increase the MMRV vaccination rate in children up to age of 7 who are patients of our preceptors to 67.3%. Our first PDSA cycle involved informing and educating the healthcare workers at our clinic about our QI project. This was accomplished using global Accuro messages and a teaching presentation. Our second PDSA cycle involved placing posters about the MMRV vaccine around our clinic. At the end of both PDSA cycles we were able to raise the MMRV vaccination rate by 8.3% to 65.6%. We did not meet the goal of increasing the MMRV vaccination rate at our clinic to 67.3%. There were no adverse vaccine related events or increased visit times reported. For future projects we could consider if a more active strategy such as directly contacting patients would be more effective in increasing the vaccination rate as both PDSA cycles – especially the second cycle – were limited by the number of patient visits. In addition, bias may have impacted the results of our project as during our first cycle one of the nursing staff contacted some of the unvaccinated patients to remind them to get their MMRV vaccine.

Dr. Mini Chacko, Dr. Suffia Malik, Dr. Kristin Pooloe, and Dr. Sharon Sandhu – Strathroy

Click to Quit: Improving documentation of smoking status in Strathroy Middlesex Family Health Team

Faculty Lead: Dr. Philip Vandewalle

Project Type: Quality Improvement

Tobacco kills nearly 6,000,000 people every year. More than 5 million of those deaths are the result of direct tobacco use while more than 600,000 are the result of second hand smoke. Unless urgent action is taken, the annual death toll could rise to more than 8,000,000 by 2030. To reverse the tobacco epidemic, concerted eff orts are needed from a wide range of sectors with the national health systems well-placed to taking the leading role for implementing measures to prevent and treat tobacco dependence. If all primary care providers routinely ask about tobacco use and advise tobacco users to stop, they have the potential to reach more than 80% of all tobacco users per year, trigger 40% of cases to make a quick attempt; and help 2 to 3% of those receiving brief advice to quit successfully. From June 1st to Aug 22nd 2025, only 17% of patients >18yo that were seen at the West Middlesex Family Health Team had a smoking status that was documented or updated during their appointment. The aim of this quality improvement project was to increase this proportion to 75%. Two PDSA cycles were completed; a Lunch and Learn on the Ontario Model of Smoking Cessation and the importance of smoking status documentation, and the addition of smoking status to the clinic SOAP note template. There was minimal improvement to documentation from the Lunch and Learn. The addition of the smoking status prompt to the SOAP note resulted in an improvement to smoking cessation documentation at each visit to 30.5%.

Dr. Lucas Koechlin and Dr. Haris Smailovic – Strathroy

Evaluating the Impact of a Community Paramedicine Pilot Program on Emergency Department Transfers from Long-Term Care Homes

Faculty Lead: Dr. Philip Vandewalle

Project Type: Research

BACKGROUND: Emergency department (ED) transfers from long-term care (LTC) homes frequently expose frail residents to significant risks, including delirium, hospital-acquired infections, and functional decline. Community Paramedicine (CP) programs offer a proactive alternative by delivering acute medical care directly on-site. OBJECTIVE: To evaluate the impact of a CP pilot program as a diversion intervention, examine it's effect on ED transfers, assess the clinical scope of in-house care, and identify barriers to program activation. METHODS: This study utilized an interrupted time series design with a health records review across two Ontario LTC homes. The primary outcome was the trend in ED transfers pre- and post-CP implementation. Secondary outcomes included CP resolution rates, the scope of clinical interventions, and the proportion of non-admitted ED transfers deemed CP-eligible. RESULTS: Among 213 acute events, there were 27 events prompting CP activation following implementation. CP successfully resolved 70.4% (19/27) of cases in-house utilizing point-of-care CHEM 8 panels (82.6%), ECGs (30.4%), IV access and fluids (31.6%) and in place disease management (73.7%). Following implementation, the proportion of non-admitted ED events meeting CP-eligibility criteria fell from 40.0% to 26.8%, indicating successful diversion. CONCLUSION: The CP pilot safely and effectively reduced non-admissible ED transfers by managing acute events directly in the LTC setting.

Dr. Abaa Al-Mohammedi, Dr. Amreen Qasim, Dr. Smrithi Kallapalli, and Dr. Seema Sharma – VFMC

Improve Pneumococcal Immunization in Diabetic Patients aged 18-64 years old

Faculty Lead: Dr. Christina Cookson

Project Type: Quality Improvement

Diabetes mellitus is a chronic condition that can impact various organs within the body, including the immune system. Those with diabetes are at an increased risk of complications from common infections, such as pneumococcal pneumonia. Current Canadian guidelines support the vaccination of diabetic individuals between the ages of 18-64 with the pneumococcal vaccine, as evidence suggests that immunization can prevent severe complications of pneumonia within this group. Despite the current guidelines, there is a lack of vaccine uptake within this population due to many reasons, including the lack of provider awareness of current guidelines and the lack of reminders. This quality improvement project aims to increase pneumococcal immunization among diabetic patients aged 18–64 by introducing strategies designed to prompt providers to address vaccination during regular appointments. The strategies employed in our project included provider education on current vaccination guidelines and placing electronic health record reminders. The results show that after the two PDSA cycles, vaccine uptake increased by 20%. The first PDSA cycle, which targeted provider awareness of vaccination guidelines, had the greatest impact on improving the vaccinations compared to EMR reminders. The balance and process measures were not substantially affected during the cycles. The overall increase in vaccination rates was significant; the interventions utilized were straightforward to implement and contributed to more consistent preventative care discussions during regular diabetic visits. Periodic reinforcement of provider education and continued use of EMR reminders may help sustain predictable vaccination practices in the primary care setting for our diabetic population.

Dr. Jashan Brar, Dr. Chris Bonneau, Dr. Dakshitha Ranatunga, Dr. Jordan Robinson, and Dr. Aliaksandr Shalai – VFMC

Early GoC Discussions and Documentation

Faculty Lead: Dr. Jamie Wickett

Project Type: Quality Improvement

Goals of care (GOC) discussions are vital in ensuring that patients receive care aligned with their values, particularly as they approach serious illness or potential end-of-life scenarios. Yet in clinical practice, these conversations often occur late—frequently during hospital admissions or emergencies—when time and emotional readiness may be limited. Primary care offers an ideal setting to introduce GOC discussions early, allowing patients the time and space to reflect, identify a substitute decision-maker (SDM), or formally designate a Power of Attorney (POA). Studies show that patients want to engage in advance care planning (ACP), but barriers such as limited time during visits and discomfort around the topic persist for both clinicians and patients (Roberts et al., 2023; Stevens et al., 2024). From our clinical experience, few patients have documented GOC in their medical records. Moreover, initiating these conversations in family medicine can help avoid scenarios where critically ill patients face interventions—like cardiopulmonary resuscitation—without prior discussion, often leading to poor long-term outcomes and reduced quality of life (Kobewka et al., 2022; Pound et al., 2022). Early, iterative GOC discussions in primary care normalize advance planning, empower patients, and strengthen continuity of care. Integrating them into routine practice is not just a clinical best practice—it is a patient-centered imperative.

Dr. Mona Azzam, Dr. Aimeriel Buzia, Dr. Naushin Chowdhury, and Dr. Zarmeen Qamar – VFMC

Impact of Frequency of Mock Code Practice on Basic Cardiopulmonary Resuscitation Skills in Low-acuity Settings: a Randomized Control Trial.

Faculty Lead: Dr. Jamie Wickett

Project Type: Research

INTRODUCTION: It has been established that both the knowledge and skills of health care professionals erode after completing a formal training course in cardiopulmonary resuscitation (CPR). This has led to the suggestion of more frequent practice through mock codes. However, the optimal frequency required to maintain skills and knowledge has not been determined. RESEARCH QUESTION: The question that this study will try to answer is the optimal frequency of mock code training to maintain CPR skills in health care professionals. RATIONALE: The quality of CPR is one of the primary determinants of the outcome after cardiac arrest, and is, fortunately, also a factor that can be improved with frequent practice. Our aim is to identify how frequency affects quality of CPR and provide objective quantifiable data. METHODS: All participants were asked to attend a standardized CPR course at the beginning of the trial and after one year. This was conducted by one of the authors who is a certified CPR instructor. We randomized the total number of participants into 4 groups, which had practice sessions at different frequencies. The first group attended a 20-minute practice session every 2 months (at 2,4,6,8 and 10 months). The second group attended a 20-minute practice session every 4 months (at 4 and 8 months). The third group will attend a 30-minute session at 6 months and the fourth group will have no practice sessions (which is the current standard time between courses). At the 1-year mark, knowledge and skills of participants will be compared between the 4 groups. IMPACT: The correlation between frequency of practice and quality of CPR can then be used in different policies for cost-benefit analyses to balance the anticipated effect of additional practice with the time and resources that will be invested in it.

Dr. Ira Brown, Dr. Matthew DiNunzio, Dr. Mitchell Locke, and Dr. Lauren Wohlgemut – Mount Brydges

Increasing Use of FITT Exercise Prescriptions During Diabetes Visits in a Family Medicine Residency Clinic: A Quality Improvement Study

Faculty Lead: Dr. Theodosios Karaouzas

Project Type: Quality Improvement

Exercise counselling is a vital component of type 2 diabetes care, yet residents in primary care receive limited training in how to prescribe physical activity in an actionable way. In busy diabetes visits, exercise is often only briefly discussed because of competing clinical priorities. Our goal was to increase the use of FITT exercise prescriptions given during diabetic visits in a family medicine clinic. Baseline data were collected through chart review of diabetic visits over a 2-week period. PDSA cycle 1 consisted of an educational session while PDSA cycle 2 introduced a pre-made FITT prescription template into the electronic medical record. The primary outcome was the proportion of diabetic visits where a FITT prescription was provided to the patient. At baseline, 1 of 42 diabetic visits (2.4%) included a FITT prescription. After PDSA cycle 1, FITT prescription use increased to 5 of 31 visits (16.1%). After PDSA cycle 2, FITT prescription use was 4 of 39 visits (10.3%). Counselling that involved an exercise related management plan increased from 7 of 42 visits (16.7%) at baseline to 13 of 31 visits (41.9%) after education and 18 of 39 visits (46.1%) after EMR integration. Residents reported greater confidence after education, but template uptake remained low. A brief educational intervention with EMR templates improved resident use of FITT exercise prescriptions during diabetic visits, but gains were not sustained. Durable change likely requires more visible workflow support, in addition to ongoing provider education.

Dr. Melika Farshidianfar, Dr. Nida Fatima, and Dr. Zarmeen Qamar – Mount Brydges

Evaluating the Impact of Structured Dermoscopy Education on Knowledge, Confidence, and Clinical Application in Family Medicine: A Pilot Quality Improvement Study

Faculty Lead: Dr. Jay Taylor

Project Type: Quality Improvement

INTRODUCTION: Dermoscopy is a non-invasive diagnostic tool that significantly improves accuracy in skin lesion assessment more specifically in pigmented lesions. Despite strong evidence, its uptake in primary care remains limited due to lack of structured training and low clinician confidence, representing a critical gap in family medicine education. METHODS: This quality improvement project was conducted at Southwest Middlesex Health Centre (SWMHC) and Victoria Family Medical Centre (VFMC) using iterative Plan-Do-Study-Act (PDSA) cycles. An initial dermoscopy workshop (August 17, 2025) on melanocytic skin lesions was followed by reinforcement sessions (November 19 and December 17, 2025). Participants completed pre- and post-intervention assessments using an 11-item structured questionnaire incorporating knowledge-based and image-based evaluation. RESULTS: Baseline data demonstrated that approximately 75% of participants had no prior dermoscopy experience and 80% reported low confidence. Knowledge scores improved from 42% at baseline to 65% post-workshop, 74% after the first reinforcement, and 82% following the final cycle. Confidence increased from approximately 20% to 70%, with improved recognition of key dermoscopic features and consistent application of the 3-point checklist. DISCUSSION: Structured dermoscopy education resulted in substantial gains in knowledge and confidence, reflecting meaningful improvement in clinical readiness. This impact is likely driven by interactive teaching, image-based learning, and repeated reinforcement, enabling progressive skill consolidation. These findings align with existing literature and highlight the relevance of dermoscopy training in primary care, where improved diagnostic confidence can support earlier recognition of suspicious lesions and more informed clinical decision-making. CONCLUSION: This scalable, low-resource intervention effectively addresses a key training gap and supports integration of dermoscopy into formal primary care curricula.

Dr. Spencer Ashby, Dr. Fereshteh Nourbakhsh, Dr. Kayla Richard, and Dr. Janet Zanin – Ilderton

Hearing Screening for Dementia Prevention in Patients Aged 55+

Faculty Lead: Dr. Daniel Leger

Project Type: Quality Improvement

BACKGROUND: Midlife hearing loss is identified as the single most important modifiable risk factor for dementia, yet it remains significantly under-screened in primary care settings. A baseline retrospective chart review at the Ilderton Family Medicine Clinic revealed that 0% of periodic health reviews (PHRs) for patients aged 55 and older included documented hearing screening. AIM: To increase the proportion of patients aged 55 and older receiving hearing screening during PHRs from 0% to 80% over a six-month period to support early intervention and dementia prevention. METHODS: Two Plan-Do-Study-Act (PDSA) cycles were conducted. The primary intervention involved embedding a validated, single-question hearing screen ("Do you have difficulty with your hearing?") directly into the standardized EMR template for PHRs. PDSA 1 focused on a small-scale pilot with project residents, while PDSA 2 expanded the intervention clinic-wide through educational outreach and notification to all staff and resident physicians. RESULTS: In PDSA 1, the pilot group achieved 100% adherence (15/15 encounters). Following the clinic-wide rollout in PDSA 2, the screening rate remained high at 93%, with 39 out of 42 eligible patients screened. Clinician feedback indicated that the intervention was seamless, creating no significant time burden or workflow disruption. CONCLUSION: By implementing a systemic EMR modification, the project successfully surpassed its 80% goal. This high-yield, low-effort intervention demonstrates that technical prompts are highly effective at standardizing preventive care for modifiable dementia risk factors. The permanent template change ensures the project's long-term sustainability.

Dr. Braden Boley, Dr. Leona Bruijns, Dr. Albert Luu, and Dr. Lindsey Wong – Ilderton

Optimizing Virtual Afterhours Care: Decreasing the Amount of Inappropriate Calls to the MCFMC After Hours Phone Line

Faculty Lead: Dr. Daniel Leger

Project Type: Quality Improvement

The phone line at MCFMC is available for patients to call afterhours for advice, triage, or to schedule a same-day afterhours appointment. However, data collected in fall 2024 showed that 30% of calls were inappropriate for this use. Clinically unnecessary is defined as "patients attending services with problems that are classified as suitable for treatment by a lower urgency service or self-care" (O'Cathain et. al, 2020), or calling for emergent situations. Several factors contributed to clinically unnecessary use, including uncertainty about seriousness of symptoms, reduced coping capacity and responsibility for another person's health (ie parents), and lack of access to timely appointments. Our aim was to decrease inappropriate calls from 30% to 20%. Our first change was eliminating the 6-9am phone availability, after which we saw a reduction in inappropriate calls to 16.67%. A second cycle implementing a more detailed answering machine message helped patients understand the role of the phone line and further reduced inappropriate calls to 7.35%. Both this data and anecdotal evidence from other residents at our site has shown these changes to be beneficial to resource management at MCFMC while maintaining patient access and safety.

Session C

Dr. Peter Denezis – PGY3 Emergency Medicine

Optimizing throughput for patients with unplanned emergency department visits following a recent inpatient discharge

Faculty Lead: Dr. Kevinjeet,Mahngar

Project Type: Research

INTRODUCTION: At London Health Sciences Centre, recently discharged inpatients presenting with an unplanned emergency department (ED) visit are variably assessed by the discharging service after triage. Standardizing this process could represent a significant source of increased ED throughput. METHOD: We conducted a retrospective chart review of patients presenting with an unplanned ED visit within 7 days of an inpatient discharge. Using only information available at triage, we classified whether patients were appropriate for direct assessment by the discharging service, whether the discharging service was contacted, the outcome of that discussion, and the final disposition. RESULTS: From May 1, 2024 – April 30, 2025, we identified 3405 unplanned ED visits within 7 days of an inpatient discharge. Of these, 712 (20.9%) were appropriate for direct assessment by the discharging service, and in 529 (74.3%) instances the discharging service was contacted by the triage nurse. When contacted, the discharging service agreed to see the patient in 512 (96.8%) instances. Of the 200 patients that were not directly consulted to or declined by the discharging service, only 1 (0.5%) was worked up and consulted to a different service. CONCLUSION: Patients presenting with unplanned ED visits following a recent inpatient discharge can safely be directly consulted back to the discharging service at triage. When contact with the discharging service is initiated, they overwhelmingly accept the patient, suggesting the major bottleneck is initiating this contact. We hope to use these data to provide policy recommendations and implement change ideas to optimize ED throughput.

Dr. Fatima Kharal – PGY3 Emergency Medicine

Emergency Department Utilization Among Persons Experiencing Homelessness: A City-Wide Retrospective Study

Faculty Lead: Dr. Kevinjeet,Mahngar

Project Type: Research

BACKGROUND: Persons experiencing homelessness (PEH) frequently rely on emergency departments (EDs) due to barriers accessing primary and preventive healthcare. Understanding ED utilization patterns in this population may help identify opportunities to improve care delivery and reduce avoidable visits. METHODS: A retrospective study examined ED visits among PEH between July 1, 2024 and June 30, 2025 across the city's two adult emergency departments. Patients were identified using documentation of No Fixed Address, ICD-10 code Z59.0, or known shelter addresses. Demographics, visit characteristics, outcomes, and primary diagnoses were extracted from the electronic health record. Descriptive statistics and logistic regression characterized utilization patterns. RESULTS: During the study period, 255,680 ED visits occurred across both hospitals. Persons experiencing homelessness (n=1,767) accounted for 7,727 ED visits (3.0%). In this cohort, the median age was 38 years (IQR 31–51), and most visits occurred in male patients (69.6%) at Victoria Hospital (79.0%). Frequent ED users (≥4 visits) accounted for 23.2% of patients but generated 74.9% of visits, while super-utilizers (≥10 visits) represented 8.3% of patients and accounted for 56.1% of visits. Five patients exceeded 100 ED visits. High-acuity visits (CTAS 1–2) were associated with lower odds of frequent ED use (≥4 visits) (OR 0.38, $p<0.001$). Having a family physician, age, and sex were not significant predictors. ED visits were most commonly related to medical chief complaints (53.7%), followed by substance use (10.6%), trauma or injury (9.3%), mental health presentations (7.6%), and social concerns (7.6%). 55.6% of encounters resulted in discharge home, while 13.2% required hospital admission. Encounters ending before completion of ED care (e.g., leaving without being seen or against medical advice) occurred in 30.5% of visits among PEH, compared with 6.2% of all ED visits. CONCLUSION: ED use among PEH is concentrated among a small subset of frequent users. The high rate of visits ending before completion of ED care suggests barriers and limitations in how current ED care models meet the needs of this population. Targeted interventions, including dedicated mobile clinics, enhanced social work support, and improved linkage to community services, may reduce avoidable ED use and improve care coordination.

Dr. Ryan Sanford – PGY3 Emergency Medicine

Bicycle injuries in children: a single centre retrospective chart review of helmet use

Faculty Lead: Dr. Kevinjeet,Mahngar

Project Type: Research

INTRODUCTION: Bicycle helmet legislation in Canada varies by province and territory, with no national mandate for helmet use. In Ontario, helmet use has been legally required for individuals under 18 since 1995; however, compliance remains inconsistent. Statistics Canada survey reports low rates of helmet use both provincially and nationally. Locally, data from Middlesex County report only 22% of youth age 12-17 regularly wear helmets cycling. Bicycle injuries are a common reason for pediatric emergency department (ED) visits and represent an important target for preventive interventions. This study aims to characterize helmet use among pediatric patients presenting with bicycle-related injuries in London. METHODS: A retrospective observational study was conducted using injury surveillance data Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) data from the Children's Hospital of Western Ontario at London Health Sciences Centre between 2019 and 2024. Cases were extracted to include pediatric ED presentations involving bicycle-related injuries. Extracted variables include patient age, gender, and helmet use at the time of injury, as recorded in standardized CHIRPP injury reporting forms. Descriptive analyses were used to estimate the percentage of patients wearing helmets at the time of presentation and to examine differences by age group and gender. RESULTS: A total of 1926 potential cases were identified from the data set during the specified period. Of those, 1510 were injuries from bicycle riding. 601 patients were aged 0-9, and 909 were aged 10-19. Of the 1510 cases, helmet use was confirmed in 34.4% of presentations. In subgroup analysis, 32.5% of male patients age 0-9 and 35.2% of male patients age 10-19 were confirmed wearing helmets. In females, helmet use was reported in 29.9% patients aged 0-9 and 37.3% of patients ages 10-19. CONCLUSION: Despite Ontario legislation requiring bicycle helmets for youth under 18, helmet use remains low. Among 1,510 cases identified between 2019 and 2024, only 34.4% reported helmet use, with modest variation by age and gender. These findings highlight persistent gaps in helmet compliance and opportunities for targeted injury prevention strategies from first point of contact in the emergency department.

Dr. Ashley Wang – PGY3 Emergency Medicine

Generative AI as a Simulation Platform

Faculty Lead: Dr. Kevinjeet,Mahngar

Project Type: Case Study

INTRODUCTION: Simulation is a highly effective educational tool in emergency medicine, but logistical barriers limit session frequency. Generative artificial intelligence (AI) may be able to address this by lowering resource requirements needed for interactive sessions, however the quality of its performance has not yet been established. METHODS: A total of six scenarios were developed: two existing EM simulation cases of differing complexity, multiplied by three learner personas (appropriate management / lacking knowledge / disorganized approach). ChatGPT was prompted to act as a simulation facilitator. Individual cases were played out interactively, with the prompt iteratively revised to address errors identified. The final prompt was then applied to all six scenarios, and the chat transcripts were then evaluated by an expert reviewer for medical accuracy, adherence to key case elements, adherence to prompt instructions, and facilitation quality. RESULTS: After 10 total prompt iterations, performance was stronger in scenarios with well-defined management pathways and learners who demonstrated appropriate clinical reasoning, with facilitation quality, medical accuracy, and adherence to key case elements rated 4/5. Performance declined in scenarios with complexity and learner error, reaching a minimum of 2/5 in the complex + disorganized learner scenario. Adherence to prompt instructions followed a similar trend. Across various scenarios and iterations, most common types of errors included disclosure of information that a simulation facilitator should withhold, and an inability to utilize timestamps. CONCLUSION: This proof of concept suggests that generative AI has the potential to provide a scalable platform that decreases the barriers to interactive medical simulation, particularly for reinforcing knowledge and application in learners who already have a foundation in the concepts targeted by the simulation case. However, our work also demonstrates limitations that present barriers for use with complex cases and for users unable to independently verify their performance. Further refinement is needed before implementation in live settings with the full scope of content in simulation case banks.

Dr. Justin Roy – PGY3 Emergency Medicine

Optimizing emergency department management of upper extremity infections among patients with housing insecurity and substance use at LHSC: A quality improvement initiative

Faculty Lead: Dr. Kevinjeet,Mahngar

Project Type: Research

BACKGROUND: Upper extremity infections carry significant risk of morbidity and loss of function. Patients with housing insecurity and substance use have poorer outcomes. AIM STATEMENT: The aim of this project was to understand the current variations in emergency department (ED) management of upper extremity infections in patients with housing insecurity and substance use, and their associated outcomes, to develop recommendations that may be used in the ED to more effectively manage this population. MEASURES & DESIGN: A retrospective chart review of adult patients (³18 years) with visit(s) to London Health Sciences Centre (LHSC) ED between November 1, 2024-2025, with upper extremity infections identified by ICD.10 codes was completed. Data including documented substance use and/or housing instability, wound cultures, referrals, follow-up attendance, and acute management was recorded. Descriptive statistics and odds ratios were calculated. RESULTS: Half (48%) of all infections were among patients with housing insecurity or substance use. One in 10 patients left without being seen. One-third of wound cultures were polymicrobial and 51% contained MRSA. Most (83%) antibiotics covered causative organisms. Over 60% of prescriptions were filled. Patients followed up with Cellulitis Clinic (69%) more than Plastics Clinic (47%) and Hand & Upper Limb Clinic (36%). One in four patients returned to the ED. Social Work and Addictions consultation was limited. Patients with substance use and housing insecurity were more likely to leave against medical advice (LAMA) or return to the ED and less likely to attend follow-up. DISCUSSION: Upper extremity infections disproportionately affect patients with housing instability and substance use. Improvements that can be implemented include prescribing antibiotics that cover MRSA, encouraging consultation in the ED, and expanding social work and addictions support.

Dr. Boyan Woychyshyn – PGY3 Emergency Medicine

Systematic review of N-acetylcysteine treatment following traumatic brain injury in adults.

Faculty Lead: Dr. Kevinjeet,Mahngar

Project Type: Systematic Literature Review

Traumatic brain injury (TBI) represents a major public health challenge with limited pharmacological treatment options following injury. N-acetylcysteine (NAC) has demonstrated neuroprotective properties in preclinical murine and in vitro models via mechanisms of neuroinflammatory modulation, antioxidant activity, and glutamate regulation, suggesting a potential therapeutic role in the treatment of TBI. This study was registered in PROSPERO 2026 CRD420251180381 and followed PRISMA guidelines. To evaluate the existing clinical literature on this candidate treatment, a systematic search of PubMed and Embase was conducted using relevant keywords for studies using NAC to treat TBI in adult human populations, identifying 529 studies. Two reviewers screened for inclusion and discrepancies were discussed. Primary outcomes were to determine if there is evidence of therapeutic benefit in NAC treatment post TBI. We identified 6 publications meeting inclusion criteria. These studies consisted of 2 randomised controlled trials (RCTs), one pilot observational prospective study, 2 case series, and 1 retrospective case series. Review of these publications suggests that NAC may reduce post traumatic brain injury symptoms and improve cognitive function when administered following TBI, with good tolerability consistently reported across all the reviewed studies in both oral and IV formulations of NAC. While these findings support NAC as a promising therapeutic candidate, the current evidence base is significantly limited by small sample sizes and heterogeneous study designs. Larger RCTs with standardised outcome measures are warranted before definitive clinical recommendations can be made.

Dr. Joanna Walters – PGY3 Oncology

Supporting the Role of Family Physicians in Cancer Care: An Oncology Guide

Faculty Lead: Dr. John Lenehan

Project Type: Research

The prevalence of cancer among Canadians is expected to double by 2034; approximately 45% of Canadians will have cancer during their lifetime. Therefore managing patients with a cancer history during your career is inevitable. Many studies show that family physicians or general practitioners are comfortable with prevention/ screening patients for cancer and are usually the first point of contact for patients to the healthcare system, navigating the initial diagnosis and referral to specialists. However, many are not comfortable with care during active cancer treatment, surveillance and survivorship. The two biggest barriers were related to not being aware of the resources available and not having access and inadequate communication from specialists. Family physicians play an important role across the continuum of cancer care, not just in prevention and initial diagnosis. With newer cancer treatments in areas such as lung cancer, for example, median overall survival with stage IV disease can be up to 7.5 years with targeted treatments. With these excellent advances in treatment also come side effects and the need for specific monitoring and management. To address one of the main issues of access to educational resources, this project was completed to provide a management overview guide for General Practitioners in Oncology and Family physicians working in Primary Care, Emergency Medicine and Hospital Medicine. This aims to cover management along the cancer care continuum, including management of acute, medium and long term side effects of treatment, surveillance and survivorship care.

Dr. Jasmin Aggarwal – PGY3 Sports Medicine

Unilateral leg pain and weakness in a diabetic patient

Faculty Lead: Dr. Tarek El-Chabib

Project Type: Case Report

A 65-year-old man with longstanding type 2 diabetes presented with progressive unilateral leg weakness following a fall. Initial assessment suggested a mechanical knee injury, but the clinical course revealed a more complex neurologic syndrome. Several weeks after the fall, he developed profound left leg weakness affecting hip flexion and knee extension, with significant thigh atrophy and burning pain. Examination revealed loss of strength in the quadriceps and hip flexors, absent lower extremity reflexes, and sensory loss over the anterior and lateral thigh. Electrodiagnostic studies demonstrated widespread denervation in proximal leg muscles in a pattern not conforming to a single nerve or root distribution. Notably, shortly after the fall, his hemoglobin A1c was rapidly corrected from 10.3% to 6.3% over 5 months. This case highlights diabetic lumbosacral radiculoplexus neuropathy (diabetic plexopathy), a rare complication of diabetes that can be triggered by rapid glycemic correction. Clinicians should be aware of this association when implementing aggressive glycemic control strategies in patients with type 2 diabetes.

Dr. Austin Kemp and Dr. Matthew Ryckman – PGY3 Sports Medicine

Enhancing procedural competency in primary care: Development of an educational video series for musculoskeletal injections

Faculty Lead: Dr. Graham Briscoe

Project Type: Educational Study

BACKGROUND: Landmark-guided musculoskeletal (MSK) injections, including intra-articular or bursal injections, are commonly performed by family physicians. Despite their frequency, many family medicine residents and practicing physicians report insufficient training and low confidence in performing these procedures. Evidence suggests that educational video resources can significantly improve procedural knowledge, technical performance, and learner confidence, particularly when combined with self-directed learning and hands-on practice. OBJECTIVE: To develop a high-quality, evidence-based instructional video series demonstrating landmark-guided MSK injections for common primary care procedures to enhance procedural competency among family medicine learners. METHODS: A series of instructional videos was created focusing on commonly performed injections, including intra-articular knee injections and subacromial/subdeltoid bursa injections. Patients were recruited from clinical settings with appropriate consent. Videos were designed for integration into the Family Medicine Study Guide App, an existing educational platform. RESULTS: The project produced a set of structured, accessible instructional videos aligned with current educational needs in family medicine training. These resources aim to supplement existing curricula, which currently rely on didactic teaching, simulation models, and variable preceptor-dependent instruction. CONCLUSION: This video-based educational initiative addresses gaps in MSK procedural training by providing standardized, evidence-informed instruction. Integration into formal curricula and digital learning platforms has the potential to improve learner confidence and procedural competency. Future directions include expanding the series to include ultrasound-guided techniques and MSK physical examination demonstrations.

Dr. Jessica Sadri-Gerrior – PGY3 Sports Medicine

Case Report: Winged Eagle Syndrome presenting as shoulder pain and scapular dysfunction caused by compression of the spinal accessory nerve

Faculty Lead: Dr. Tarek El-Chabib

Project Type: Case Report

BACKGROUND: Eagle syndrome is an uncommon cause of cervicofacial pain and local neurovascular compressive symptoms secondary to the elongation of the styloid process. Rarely, involvement of the spinal accessory nerve can cause shoulder pain and dysfunction. CASE PRESENTATION: A 78-year-old woman presented with a one-year history of atraumatic, progressive left shoulder pain, restricted range of motion, and ipsilateral neck tightness. These symptoms were exacerbated by overhead activity and neck rotation and lateral flexion. She later developed dysphagia, hoarseness, and intermittent jaw and ear pain radiating to the left temporal region. Examination revealed marked atrophy of the left trapezius and sternocleidomastoid muscles, scapular winging, and palpable cord-like tissue at the left neck. INVESTIGATIONS: CT Neck demonstrated bilateral styloid process hypertrophy with associated left internal jugular vein compression and left sternocleidomastoid and trapezius muscle atrophy. Electromyography and nerve conduction studies confirmed dense left spinal accessory nerve palsy with absent motor unit activity. An MRI Head excluded other explanatory lesions such as a mass at the jugular foramen, skull base, or brainstem. These findings supported a diagnosis of winged Eagle Syndrome causing chronic spinal accessory nerve compression. MANAGEMENT: Initial conservative management included physiotherapy and pharmacologic treatment with neuropathic pain agents. The patient was referred to Otolaryngology and Neurosurgery for consideration of styloidectomy. Surgical nerve transfer was not pursed due to chronic denervation. CONCLUSION: Clinicians should consider Winged Eagle Syndrome on the differential diagnosis for progressive, atraumatic shoulder pain and scapular dysfunction clinically in keeping with a spinal accessory neuropathy.