

Resident Project Day Abstract Collection

DEPARTMENT OF FAMILY MEDICINE

The Western
Centre for Public
Health and Family
Medicine

WEDNESDAY, JUNE 10, 2015

JOIN THE CONVERSATION
#FMRPD165



Schulich
MEDICINE & DENTISTRY

Western



Learning Objectives:

Learning objectives for Family Medicine Resident Project Day include:

- Encourage and foster research and scholarly work in family medicine
- Increase primary care knowledge through research
- Provide public recognition of the resident projects
- Provide feedback to the residents through evaluation
- Provide an opportunity for discussion about the resident projects

Accreditation Statement:

This program meets the accreditation criteria of The College of Family Physicians of Canada and has been accredited by Continuing Professional Development, Schulich School of Medicine & Dentistry, Western University, for up to 4.5 Mainpro-M1 credits. Each participant should claim only those hours of credit that he/she actually spent participating in the educational program.

This program has no commercial support.

Agenda

8:00 a.m.	Registration, coffee and light refreshments – Foyer, 1st Floor, WCPHFM
8:30 a.m.	Opening remarks: Dr. Stephen Wetmore, chair, Department of Family Medicine, Schulich School of Medicine & Dentistry Dr. Chris Watling, associate dean, Postgraduate Medical Education, Schulich School of Medicine & Dentistry Dr. Jamie Wickett, postgraduate director, Department of Family Medicine, Schulich School of Medicine & Dentistry
9:00 a.m. - 10:00 a.m.	Concurrent sessions – oral presentations.
10:00 a.m. - 11:00 a.m.	Poster presentations / poster judging
11:00 a.m. - 12:00 p.m.	Concurrent sessions – oral presentations
12:00 p.m. - 1:00 p.m.	BBQ Lunch / poster judging
1:00 p.m. - 2:00 p.m.	Concurrent sessions – oral presentations
2:00 p.m. - 2:30 p.m.	Closing remarks / evaluations / award presentations

Session A: Oral Presentations – Room 1150, WCPHFM

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, refreshments, light breakfast – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Stephen Wetmore Dr. Chris Watling Dr. Jamie Wickett	Opening remarks
9:00 a.m.	Dr. Briscoe	Sports-and-Recreation-Related Concussion Recovery Time in the Pediatric Population; A Retrospective Chart Review
9:15 a.m.	Dr. Cameron, Dr. Stack	Documenting Advanced Care Plans in Primary Care EMR
9:30 a.m.	Dr. Hommel, Dr. Jiang, Dr. Martins, Dr. Mohan	Instituting patient portals into patient care: Equal parts desire and road-blocks
9:45 a.m.	Dr. Nguyen	Determining and Improving Rates of Abdominal Aortic Aneurysm screening at Byron Family Medical Center
10:00 a.m.	Poster presentations / poster judging	
11:00 a.m.	Session C	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session E	
2:00 p.m.	Closing remarks / evaluations / award presentations	

Dr. Graham Briscoe – Byron Family Medical Center

Sports-and-Recreation-Related Concussion Recovery Time in the Pediatric Population; A Retrospective Chart Review

Faculty Project Lead: Dr. Tatiana Jevremovic

Project Type: Research

Objective: This manuscript aims at determining the average sports-and-recreation-related concussion recovery time in the pediatric population (age 6-17).

Design: A retrospective chart review.

Setting: A primary sport medicine clinic in an academic setting in London, Ontario, Canada.

Patients: Patients aged six to 17 years old presenting within three weeks after a diagnosed concussion. A total of 593 charts were initially reviewed and after the exclusion criteria, 342 remained for analysis.

Main Outcome Measures: Time until concussion recovery was defined as the number of days until patients are officially cleared to return to full contact sports. The group of patients was subdivided (ages: 6-12 and 13-17) and concussion recovery times were compared.

Results: The median time to concussion recovery was 27.5 days in the study population. Only 5.7% (n=15) of patients had a full concussion recovery in 14 days and 47.0% (n=124) were still symptomatic after 28 days. In the subgroup comparison, all of the measures of concussion recovery demonstrated that the older age group (13-17) had a longer concussion recovery (median 28.0 days versus 23.0 days).

Conclusions: This study challenges the optimistic view of concussion recovery reported from the most recent Zurich Consensus Statement that the majority of concussions (80-90%) resolves in seven to 10 days but can be longer in children and adolescents.¹ The number of previous concussions and the older age range (13-17 years old) were both found to be correlated to a longer time to recovery.

Drs. Fraser Cameron, Ed Stack – Byron Family Medical Centre

Documenting Advanced Care Plans in Primary Care EMR

Faculty Project Lead: Dr. Sonny Cejic

Project Type: Quality Improvement (QI)

Advanced care plan discussions are an important component of end-of-life care. These discussions are best initiated prior to an imminent end-of-life situation, when an individual can provide direction regarding their healthcare choices. The objective of advanced care planning is to establish the type of care that best reflects an individual's wishes. There has been a push in healthcare for these discussions to be initiated in the primary care setting. Currently at Byron Family Medical Centre (BFMC), there are variations in physician practices regarding advanced care planning and no standardized way to record the completion status and content of these discussions. BFMC serves approximately 6,500 patients, many of whom are greater than 65 years of age, as well as patients of all ages with life-limiting chronic illnesses. At BFMC, there is no standardized guideline for identifying patients appropriate for advanced care planning discussions, no template for documenting these discussions and no easy way to record if these discussions have taken place. The focus of this QI project was to develop a template for documenting end-of-life discussions and provide a method to track completed discussions.

Drs. Joel Hommel, Nianxin Jiang, Edward Martins, Michael Mohan – Byron Family Medical Center

Instituting patient portals into patient care: Equal parts desire and roadblocks.

Faculty Project Lead: Dr. Sonny Cejic

Project Type: Quality Improvement (QI)

Patient portals are considered by many to be the way of the future in medicine, allowing more optimal communication between patients and providers outside of the office setting. However, barriers at the technical and institutional level can prevent these programs from being instituted. A Continuous Quality Improvement project was undertaken by the senior residents at the Byron Family Medical Centre (BFMC) with the initial goal of testing the integrated Nightingale Electronic Medical Record (EMR) patient portal system at BFMC. This test was to focus on allowing nurse practitioner-to-patient communication for a select group of patients with Diabetes Mellitus. The first PDSA cycle of this project was unable to be instituted as the Nightingale patient portal was not implemented in time, and use of a third-party patient portal was not approved. A second PDSA cycle was then developed around a needs assessment for a Patient Portal at BFMC through two small focus groups of staff and residents at BFMC. These focus groups demonstrated interest in the idea of patient portals. Possible benefits discussed included time-saving, increased efficiency, and greater patient autonomy and empowerment. Concerns were voiced regarding confidentiality of the system, possible increased work load for providers, confusion among patients regarding results, and system accessibility. Once the Nightingale patient portal is released, a further CQI could again be attempted to test its use. Such a CQI could, for example, allow warfarin patients to view their INR's, and possibly allow patient-nurse communication regarding warfarin dose adjustments electronically rather than over the phone.

Dr. Scott Nguyen – Byron Family Medical Center

Determining and Improving Rates of Abdominal Aortic Aneurysm screening at Byron Family Medical Center

Faculty Project Lead: Drs. John M. Jordan and Michelle H. Levy

Project Type: Quality Improvement (QI)

Mortality rates associated with ruptured aortic aneurysms (AAA) are significantly higher compared to those associated with elective repair of AAAs. Evidence shows that screening programs reduce mortality, and are cost-effective in our current healthcare model. Since 2006, new research has led to the common recommendation by the United States Preventative Services Task Force, American College of Cardiology/Society for Vascular Surgery/American Heart Association, the Canadian Society for Vascular Surgery, and the Ontario Health Technology Series to screen men aged 65-75, although the specifics thereafter differ. The current EMR system does not routinely identify those with AAA screens in the patient profile, and physicians are not automatically reminded during period health visits to screen target patients. This project aims to improve the screening for abdominal aortic aneurysms using ultrasonography according to current guidelines can be improved at Byron Family Medical Center (BFMC). Additional, this project aims to identify whether those unscreened have any major risk factors for AAA.

Session B: Oral Presentations – Room 1120, WCPHFM

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, refreshments, light breakfast – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Stephen Wetmore Dr. Chris Watling Dr. Jamie Wickett	Opening remarks
9:00 a.m.	Dr. Marko	Antidepressant use in pregnancy and breastfeeding
9:15 a.m.	Dr. Rukavina	Advance Care Planning in Patients with Dementia: Ensuring that a patient's wishes are honoured
9:30 a.m.	Dr. Thomasson	Case of an undifferentiated mass in a male with Type 1 diabetes
9:45 a.m.	Dr. Thompson	Obesity in Pregnancy
10:00 a.m.	Poster presentations / poster judging	
11:00 a.m.	Session D	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session F	
2:00 p.m.	Closing remarks / evaluations / award presentations	

Dr. Crystal Marko – London-Kitchener Family Medicine Obstetrics PGY3

The Role of Comprehensive Care to Improve Obstetric Outcome

Faculty Project Lead: Dr. Daniel Grushka

Project Type: Patient Pamphlet

Evidence shows that pregnancy can increase a women's risk for depression, either during the pregnancy or in the post partum period. During this time up to 25% of pregnant women can suffer from depression. The decision to treat depression and/or anxiety with medication during this time can be difficult. This pamphlet aims to help women start the discussion with their physician by reviewing the current research available on antidepressant medication use in pregnancy and breastfeeding.

Dr. Stephen Rukavina – Palliative Medicine Fellowship

Advance Care Planning in Patients with Dementia: Ensuring that a patient's wishes are honoured

Faculty Project Lead: Drs. Sheri Bergeron and Ciaran Sheehan

Project Type: Patient/Staff Education Workshop

It goes without question that Ontario's population is ageing, and with increasing age, so too comes increasing incidence of dementia. It is estimated that anywhere from 50-67% of long-term care residents suffer from this illness, but what many patients and families do not realize is that dementia is a terminal illness much like cancer or heart disease. Many studies support that the primary goal of care in patients with advanced dementia is comfort and yet many such patients undergo invasive interventions in the final 3 months of life. The literature supports the fact that dementia is not only an illness of the mind that will cause memory impairment, but also a disease that will predispose the patient to medical complications such as pneumonia, infections, eating difficulties, and eventually lead to death. The abovementioned workshop is designed for health care proxies of long-term care residents as well as front-line staff to attend in order to better understand the disease trajectory, the importance of advance care planning and windows of opportunity therein, and to delineate goals of care and the associated benefits and potential adverse effects associated with the possible options. A pre and post-workshop survey will be conducted in order to determine the effect of this workshop in changing prior perceptions, goals, and knowledge with respect to the care plans already put in place.

Dr. Kathleen Thomasson – Chronic Disease Management Program – Primary Care Diabetes Support Program

Case of an undifferentiated mass in a male with Type 1 diabetes

Faculty Project Lead: Drs. Stewart Harris and Sonja Reichert

Project Type: Case Report

Background: A patient who develops a groin mass will often present to their family physician for initial assessment. The common differential diagnosis of a palpable groin mass in a young man may include hernia, lipoma, or adenopathy, to name a few. In a patient on subcutaneous insulin therapy for diabetes the differential may be extended to commonly recognized complications of local insulin injection, including lipohypertrophy and abscess. Although less common, another diagnosis to consider in such a patient is insulin-type amyloid deposition.

Case Description: A 29 year old male with Type 1 diabetes, managed on multiple daily injections of insulin, presented with a mass in his left groin. The early differential included lipoma and hernia. A biopsy was performed and pathology reported a soft tissue amyloid tumour. An extensive work-up to rule out systemic amyloidosis was negative. During this process the patient was upset and expressed confusion regarding his diagnosis and prognosis. The biopsy sample was then sent for external testing which found insulin-type amyloid deposition.

Discussion: Diabetes is a common condition seen in family practice and many patients with diabetes require regular insulin administration. Local insulin-type amyloidosis at the site of repeated insulin injection has been infrequently described in the literature and is not widely recognized as a potential cause of mass in a patient with diabetes. Insulin-type amyloidoma should be considered on the differential of a mass at an insulin injection site. Early recognition of this localized type of amyloidosis may avoid an extensive work-up and patient distress.

Dr. Caitlin Thompson – PGY3 Enhanced Skills in Obstetrics and Women's Health Chatham and London

Obesity in Pregnancy

Faculty Project Lead: Drs. Grushka and Nasello

Project type: Literature Review

Twenty-one percent of women aged 20-39 in Canada have a BMI greater than 30kg/m². Obese women who become pregnant are at an increased risk of first trimester miscarriage, gestational diabetes and hypertensive disorders of pregnancy. During labour it is harder to assess contractions and the fetal heart rate. Caesarean sections are more common in obese women, with more complications such as wound infection. Postpartum, there is a higher risk of VTE. Children of obese women are more likely to be macrosomic, have lower Apgars, need NICU admission and be obese themselves. Interventions (diet and/or exercise) during pregnancy for non diabetic, obese women compared with routine antenatal care have little benefit in reducing rates of these complications. Therefore, the ideal period to address weight and pregnancy implications is prior to conception. There is evidence to support pre-conception bariatric surgery, in women who meet criteria, for improved fertility rates, decreased risk of hypertensive disorders of pregnancy, gestational diabetes and macrosomia compared to obese women who did not undergo surgery, without evidence of harm to either the mother or baby. Unfortunately, other specific weight loss interventions before pregnancy and the effect on pregnancy outcomes is understudied. The SOGC recommends using periodic health examinations and other appointments to discuss weight loss prior to pregnancy with the goal of entering pregnancy with a BMI <30kg/m² and ideally <25kg/m². Women who do not meet this target should be counselled on nutrition and exercise and the risks of being obese in pregnancy.

Session C: Oral Presentations – Room 1150, WCPHFM

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, refreshments, light breakfast – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Stephen Wetmore Dr. Chris Watling Dr. Jamie Wickett	Opening remarks
9:00 a.m.	Session A	
10:00 a.m.	Poster presentations / poster judging	
11:00 a.m.	Dr. Ebert Dr. Kreuzer Dr. Lee	Combination Antihypertensive Medication to Decrease Pill Burden and Improve Compliance in the Treatment of Essential Hypertension
11:15 a.m.	Dr. Eeuwes, Dr. Poss	Exploring the Barriers to Screening – Focus on Osteoporosis
11:30 a.m.	Dr. Hakim, Dr. Minocher Homji	Improving Uptake of the Pneumococcal Vaccine in the Diabetic population of a Primary Care Academic Family Practice: A CQI project
11:45 a.m.	Dr. Sultan	Optimization of a closed-loop system for addressing radiological discrepancies between emergency physicians and radiologists
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session E	
2:00 p.m.	Closing remarks / evaluations / award presentations	

Drs. Ernest Ebert, Daniel Kreuzer, Shawn Lee – Southwest Middlesex Health Centre
Combination Antihypertensive Medication to Decrease Pill Burden and Improve Compliance in the Treatment of Essential Hypertension

Faculty Project Lead: Dr. Vikram Dalal

Project Type: Quality Improvement (QI)

Most patients with a diagnosis of essential hypertension are being treated with more than one antihypertensive medication. Evidence suggests that compliance to medication in essential hypertension improves with a decreased daily medication burden by using combination medications. We strived to identify patients across three different family medicine practices at the Southwest Middlesex Health Centre (SMWHC) in Mount Brydges, Ontario in June 2014 and February to March 2015 that were diagnosed with essential hypertension and being treated with two potentially combinable antihypertensive medications. Our goal was to convert fifty percent of patients identified to a combinable antihypertensive medication for the purpose of improved compliance and patient satisfaction. Due to a lower than expected number of patients identified in initial search audits, the search was expanded to patients that had recently been switched from two separate antihypertensive medications to a combined antihypertensive medication. A total of ten patients were identified. Of these ten patients, four were or had been brought into the clinic for counselling and converted to a combination medication. One of these patients was unfortunately lost to follow-up after having been converted. The three remaining patients were polled about their satisfaction in regards to daily medication burden. They were all largely ambivalent about the change given their relatively young age and low daily medication burden. However, the ease with which these patients accepted the conversion speaks to the inherent sense that “less is more” in regards to number of daily medications and therein an implicit improvement in compliance.

Drs. Clark Eeuwes, Chris Poss – Southwest Middlesex Health Centre

Exploring the Barriers to Screening – Focus on Osteoporosis

Faculty Project Lead: Drs. Vikram Dalal and Lauren Kopechanski

Project Type: Quality Improvement (QI)

We attempted to improve rates of osteoporosis (OP) screening for male and female patients over age 65 at Southwest Middlesex Health Center through a Continuous Quality Improvement (CQI) model. A baseline audit estimated the likelihood of having a documented recent bone mineral density (BMD) at 27.5% for men and 47.3% for women (34.2% on average). Interventions included placing informative guideline posters in clinic offices, and sending emailed questionnaires coupled with reminders encouraging screening, followed by chart audits of all visits from patients over age 65 within the intervention timeframe. A total of 496 encounters were audited over three separate intervals coinciding with our interventions. We observed an increase the number of times a discussion of osteoporosis screening was documented in the chart from 3.1% of scheduled visits (at a baseline) to 13.7% and 6.3%. The estimated “miss rate” (clinic visits where patients without current BMDs left without it being discussed) declined from 53.1% to 52.8% to 51.3%. Our primary outcome of BMD screening rate was estimated at 32.3%, 41.2% and 35.4% during each of the sample audits. The number of issues discussed per visit (our “balance measure”) did not change appreciably throughout the study.

Unfortunately given the constraints of our sampling method and the temporal delay of our intervention on the primary outcome, we do not feel confident to attribute the observed changes solely to our intervention.

Drs. Hakim, Minocher Homji – Byron Family Medical Center

Improving Uptake of the Pneumococcal Vaccine in the Diabetic population of a Primary Care Academic Family Practice: A CQI project

Faculty Project Lead: Dr Sonny Cejic

Project Type: Quality Improvement (QI)

In 2009, the estimated prevalence of diabetes in Canada was 6.8% (2.4 million) of the total population. By 2019 that number is expected to surpass 3.7 million. Diabetes and its complications are a large burden on the Canadian health care system. Recent (2013) CDA guidelines recommend that all diabetic patients should be offered the pneumococcal vaccination, this has been shown to reduce mortality and morbidity due to this disease in the diabetic population. At Byron Family Medical Centre (BFMC) it was noted that 50-85% (depending on the team) of the diabetics had been immunized by the pneumococcal vaccine. Therefore a QI project was undertaken to increase the uptake of the vaccine amongst diabetics. The ultimate goal was to increase the uptake by at least 10% over a period of three months. This project aims at identifying effective methods, which included physician education, as well as EMR alerts. We implemented two parallel PDSA cycles for the four teams at BFMC. Teams A and B were provided EMR alerts in patients charts that required the pneumococcal vaccine. While Teams C and D were educated through teaching handouts in order to increase physician

Overall Teams A and B had an improvement of 4-9.5% over the three months, while Teams C and D noticed an improvement of 1.4-5%. The centre as a whole had a 5.3% improvement. We conclude that both interventions are effective in increasing the uptake of the pneumococcal vaccine. We believe that integrating these two interventions would yield higher success rates.

Dr. Muhammad Sultan – Chatham-Kent

Optimization of a closed-loop system for addressing radiological discrepancies between emergency physicians and radiologists

Faculty Project Lead: Dr. David Huffman

Project Type: Quality Improvement (QI)

Radiologists occasionally identify clinically significant findings on diagnostic imaging that were not identified by ED Physicians (i.e. subtle fracture). The challenge is to know whether the ED Physician noticed this finding or not. Every morning, a list is generated of every imaging test ordered in the previous 24 hours. An ED Nurse goes through this list twice a week, comparing the radiologist's report with the scanned chart in the hospital computer system. The nurse ensures that there is a clinical match; if not, a discrepancy is flagged. This is a very long and redundant way of checking for discrepancies. ED nurses will spend approximately 1 hour for each 24 hour period reviewing this list. This current method is studied against a PACS discrepancy method, that relies on ED Physicians writing preliminary reads on all images. This allows radiologists to know what was seen, and if something additional is noted, the image is flagged. Although this method exists in various hospitals already, multiple barriers were found in implementing a PACS discrepancy method at our hospital. Within any given week, at least 43% of images are read off-site, where radiologists cannot access ED preliminary reads. ED Physicians are inconsistent in writing preliminary reads, and radiologists are also inconsistent in flagging discrepant reads. Furthermore, ambiguity exists about whether or not to flag images with questionable findings and/or incidental findings unrelated to the chief complaint. Further clarification of discrepancy procedures, as well as 24/7 in-house coverage is necessary before we can shift to a PACS-only discrepancy system.

Session D: Oral Presentations – Room 1120, WCPHFM

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, refreshments, light breakfast – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Stephen Wetmore Dr. Chris Watling Dr. Jamie Wickett	Opening remarks
9:00 a.m.	Session B	
10:00 a.m.	Poster presentations / poster judging	
11:00 a.m.	Dr. Mather Dr. Velker	The Mini-Cog: an easy and effective tool for MCI screening in family practice
11:15 a.m.	Dr. Patel	Implementation of an “Advanced Care Planning” discussion module in family practice
11:30 a.m.	Dr. Wagner	Identifying and improving Insomnia: Using the Insomnia Sleep Index (ISI) as a tool to both identify and track improvements in sleep disturbances in a community clinic
11:45 a.m.	Dr. Webster	What is new with hypertension in pregnancy?: A look at the updated SOGC guideline
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session F	
2:00 p.m.	Closing remarks / evaluations / award presentations	

Drs. James Mather, Brenna Velker – Middlesex Centre Regional Medical Clinic, Ilderton

The Mini-Cog: an easy and effective tool for MCI screening in family practice

Faculty Project Lead: Dr. Darren VanDam

Project Type: Quality Improvement (QI)

Identification of patients with MCI (mild cognitive impairment) is essential to ensure patients receive adequate support to promote independence, minimize risks and improve quality of life. Self-identification of memory concerns is unreliable, with only half of individuals with MCI endorsing any cognitive symptoms. We believe that MCI is being grossly under diagnosed however formal memory testing on all individuals is unrealistic with time constraints during primary care visits. We believe the Mini-Cog; a validated screening tool incorporated into the annual health exam, is an efficient and practical tool to improve the identification of patients with cognitive issues.

A prospective chart review of patients screened using the mini-cog, and compared this retrospectively to patients screened the conventional way in the 6 months prior to initiation of the QI study. Of 188 patients screened using the conventional subjective question, only one patient identified concerns with memory, and no diagnoses of MCI occurred. Of the 81 AHEs that occurred during the first PDA cycle, the mini-cog was performed in 70% of cases. Of the patients who were investigated, 7% screened positive for MCI and an additional 15% scored in the indeterminate range. When patients in the indeterminate range were brought back for formal neurocognitive testing MOCA scores ranged from 24-28 and additional diagnosis of MCI were made.

Overall, implementation of the addition of the Mini-Cog to the AHE of patient's age >65 was quick, easy, and resulted in a dramatic increase in the number of patients identified with a potential diagnosis of MCI.

Dr. Yatri Patel – Middlesex Centre Regional Medical Clinic, Ilderton

Implementation of an "Advanced Care Planning" discussion module in family practice

Faculty Project Lead: Dr. Daniel Leger

Project Type: Quality Improvement (QI)

Significant advances in medical technology have allowed us to treat disorders that would have been uniformly fatal fifty years ago. Our ability to keep patients alive despite very poor prognoses and quality of life raises many medical and legal uncertainties. To avoid disputes and lengthy legal battles, hospitals have instituted policy changes requiring "DNR status" forms to be filled out for all admissions. However, this forces patients to determine a pivotal aspect of their care in a vulnerable state without an opportunity to first discuss their wishes, values and beliefs with their family members. This research aims to address this gap by advocating for end-of-life discussions to be initiated by their general practitioner. The overall objective of this study was to implement an "end-of-life" discussion module as a preventative strategy in certain pre-defined high-risk populations in general practice. Three PDSA cycles were completed which included the development, education and implementation of the "advanced care module" in the EMR, followed by increasing patient awareness of the topic by putting up posters advocating for patient and physician discussion, and lastly providing physician incentive for completion of modules. Our aim was to reach 20 patients in a four month period. 19 "advanced care planning" modules were completed and documented during this period. 100% of patients identified a POA/SDM. The most common diagnosis for completion of the module was malignancy (despite our clear definition of targeting "high risk" patients) and a counseling code was billed 58% of the time suggesting at least 20 minutes for the visit. With an aging, ailing population, the significance of this project is inherent in its value for the patient, physician and ultimately the system.

Dr. Michael Wagner – Strathroy FHO

Identifying and improving Insomnia: Using the Insomnia Sleep Index (ISI) as a tool to both identify and track improvements in sleep disturbances in a community clinic

Faculty Project Lead: Dr. J. Neil Marshall

Project Type: Quality Improvement (QI)

Sleep disturbances can be a common problem in family medicine. Despite guidelines outlining their proper use, many patients become dependent on chronic hypnotic medications to maintain sleep patterns. Cognitive Behavioral Therapy (CBT) is a first-line intervention for chronic insomnia, but can be difficult to conduct and often has limited availability. Strategies for home-based therapies have been sought to make applying CBT principles easier for patients.

This study attempted to see if using a standard sleep hygiene handout could improve patient sleep, as represented by scores on the Insomnia Sleep Index (ISI). In addition this study set out to see if the ISI score could be used to better diagnose patients with insomnia and apply that diagnosis to their EMR. This was done through an additional four-six week cycle involving all practitioners at a family medicine clinic. Unfortunately only one patient identified in the first cycle completed follow up with no improvement to their ISI score. The ISI did help identify four of 10 patients who met the diagnosis of insomnia in cycle 2, and although 50% did receive a diagnosis in the EMR, none were applied by other physicians. Short cycle lengths and overestimation of frequency of patient's presenting with sleep disturbances contributed to the poor data collection. Extending a PDSA to several months, and focusing on other interventions for home based CBT including computer based models, would be steps to consider for future studies.

Dr. Lindsay Webster – Enhanced Skills Obstetrics PGY3

What is new with hypertension in pregnancy?: A look at the updated SOGC guideline

Faculty Project Lead: Dr. Daniel Grushka

Project Type: Guideline summary

This presentation summarizes the current SOGC clinical practice guideline updates of Hypertensive Disorders of Pregnancy released in 2014 and compares to the previous guideline from 2008. The presentation will aid in identification of changes to the guidelines to help viewers develop an approach to diagnosis and management of hypertension in pregnancy.

Session E: Oral Presentations – Room 1150, WCPHFM

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, refreshments, light breakfast – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Stephen Wetmore Dr. Chris Watling Dr. Jamie Wickett	Opening remarks
9:00 a.m.	Session A	
10:00 a.m.	Poster presentations / poster judging	
11:00 a.m.	Session C	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Dr. Battista Dr. Bykova Dr. Nguyen Dr. Zhao	End of Life Discussions in Primary Care
1:15 p.m.	Dr. Dai Dr. Moxley	Childhood obesity at VFMC
1:30 p.m.	Dr. Khan Dr. Le Dr. Sathi Dr. Singh Dr. Zaidi	Smoking status and smoking cessation: Are we doing enough?
1:45 p.m.	Dr. Su	Can Mismatch of Urban Population Density and Street Density affect Diabetes Prevalence? A Study Examining Ontario Urban Centres' Build Environment and Diabetes Rate
2:00 p.m.	Closing remarks / evaluations / award presentations	

Drs. Robert Battista, Elena Bykova, Elliott Nguyen, Janet Zhao – St. Joseph's Family Medical and Dental Centre

End of Life Discussions in Primary Care

Faculty Project Lead: Drs. Hameed and Wong

Project Type: Quality Improvement (QI)

There are many factors that contribute to the paucity of end-of-life discussions. There is a lack of consensus about what advanced care planning should entail and how it should be done in practice. In many cases, this discussion is held with patients in an emergency department setting in a highly stressful situation. Our goal was to increase the number of these discussions in a primary care setting, specifically at St. Joseph's Family Medical Centre. Initially we targeted a small patient population and created alerts for them in our EMR along with a template. We provided patients with the Speak Up: Advance Care Planning Quick Guide as a resource. For our second PDSA cycle, we opened up our target population to a significantly larger number, from 87 to 583. This was due to the minimal improvement we saw after our first PDSA cycle. Our goal was to increase the number of end-of-life discussions (of any kind) by 50%. Unfortunately, we did not meet our target; we were able to increase the number of discussions by 36.4%. Quality improvement is a multi-faceted and complex process. By implementing an intervention like this we all learned that change is slow and requires a significant amount of effort. There are many factors that we can attribute to the reason that we did not meet our goal. This lends to further discussion as to what we can do better in the future.

Drs. Dai, Moxley – Victoria Family Medicine Centre

Childhood obesity at VFMC

Faculty Project Lead: Dr. Jo-Anne Hammond

Project Type: Quality Improvement (QI)

Childhood obesity is a serious public health issue with prevalence of approximately a third of children aged five-17 years old. This issue is overlooked in primary care as children often present to clinic for unrelated complaints. In addition, a higher prevalence of childhood obesity is linked to lower socioeconomic status.

Our goal was to improve our surveillance of BMI in our pediatric population and educate our patients about healthy habits.

During three PDSA cycles we attempted to measure and record BMI in all children aged 5-17 presenting to the clinic for any reason. The percentile of the BMI adjusted for age was used to determine if the child was underweight, healthy weight, at risk of overweight, or overweight. A standardized questionnaire was used to score health behaviors related to diet and exercise, the Big 5 Questionnaire. The readiness to change was also assessed.

In cycle 1, which was carried out by one resident, 11 patients were included. The BMI was recorded and Big 5 administered in 9 (82%).

In cycle 2, carried out by two residents, 30 patients were included. BMI was recorded for 16 (53%) and the Big 5 Questionnaire was administered to 8 (26.6%).

In cycle 3, again carried out by two residents, the Big 5 Questionnaire was scanned into the patient's electronic record. Twenty-two patients were included. BMI was recorded in 13 (59%) and the Big 5 Questionnaire was recorded for 8 (36%).

Drs. Khan, Le, Sathi, Singh, Zaidi – Victoria Family Medicine Centre

Smoking status and smoking cessation: Are we doing enough?

Faculty Project Lead: Dr. Anna Pawelec

Project Type: Quality Improvement (QI)

Background: Tobacco kills approximately 37000 Canadians every year and is associated with major healthcare costs. Family Physicians are in a highly advantageous position to initiate a conversation about smoking cessation. However, various factors such as lack of time, training and poor success rates deter physicians from bringing up smoking cessation with their patients.

Method: Our objective was to improve the identification of smokers and screening for smoking cessation by Family Physicians. We found a baseline smoking status screening rate of 33% from an EMR audit of patient charts. We introduced two different strategies to remind the staff and residents at VFMC to ask their patients about smoking status and willingness to quit. The first PDSA cycle included visual reminder such as posters and stickers in the examining rooms and the second cycle added in an EMR alert in addition to posters and stickers. The charts were audited at the end of each cycle to assess screening rates.

Results: After the first PDSA cycle, the screening rate increased to 49.8% and after the second cycle to 59.8%. Our results support the fact that a visual reminder for physicians either through EMR or otherwise helps increase smoking screening rates which in turn in the long run improves quit rates in patients.

Dr. Kaiyan Su – St. Joseph's Family Medical and Dental Centre

Can Mismatch of Urban Population Density and Street Density affect Diabetes Prevalence? A Study Examining Ontario Urban Centres' Build Environment and Diabetes Rate

Faculty Project Lead: Drs. McNair and Rubaiyyat

Project Type: Research, secondary data analysis

Toronto has consistent higher diabetes prevalence than Ontario average in the past 20 years. Although the cause of diabetes is multifactorial, recent research from Ontario has showed that built environment and population density play important roles. At the neighborhood level, walkability index has been established as a reliable tool that correlates well with diabetes prevalence. But the research at the city level is still at its infancy and needs better tools to measure the overall built environment. This study proposes a novel factor: population density to street density ratio, which equals to population to number of street intersection ratio, as an independent variable that indirectly reflects urban dwellers' commuting behavior. This ratio was tested in 14 Ontario urban centers using ArcGIS. The result showed that it has a weak positive association to diabetes prevalence. Interestingly, in large urban center that has area greater than 200 square kilometers, above average diabetes prevalence is observed in urban center with above average population to intersection ratio. This result suggests that if population continue to grow in large cities with population density to street density mismatch, diabetes prevalence may continue to rise above provincial average.

Session F: Oral Presentations – Room 1120, WCPHFM

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, refreshments, light breakfast – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Stephen Wetmore Dr. Chris Watling Dr. Jamie Wickett	Opening remarks
9:00 a.m.	Session B	
10:00 a.m.	Poster presentations / poster judging	
11:00 a.m.	Session D	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Dr. Ahmed Dr. Craig	Self-Reported Questionnaire Study Analyzing Physicians' Own Personal Compliance with Preventive Guide- lines in Small-Medium Sized Canadian Communities
1:15 p.m.	Dr. Durcanska	Improving Meningococcal group B vaccination uptake
1:30 p.m.	Dr. Fung	Take home counseling and life style modification on hypertension
1:45 p.m.	Dr. Parikh	Osteoporosis Care Gap in Men in Southwestern Ontario
2:00 p.m.	Closing remarks / evaluations / award presentations	

Drs. Fawad Ahmed, Ryan Craig – Windsor

Self-Reported Questionnaire Study Analyzing Physicians' Own Personal Compliance with Preventive Guidelines in Small-Medium Sized Canadian Communities

Faculty Project Lead: Dr. Maher El-Masri

Project Type: Research: Self-reported questionnaire

Objective: To explore the self-reported health maintenance behaviour and the predictors of health practices among physicians in small-medium sized Canadian communities.

Design: Mailed self-report questionnaire

Setting: Windsor-Essex County (Ontario, Canada)

Participants: All physicians registered with Essex County Medical Society (649 physicians); 635 were found to be eligible and 190 responded (30% response rate).

Main Outcome Measures: Markers of health, such as smoking status, alcohol consumption, amount of exercise, vaccination status, presence of regular care physician and compliance with preventive health screening. Also, degree of correlation between personal health behaviours and patient counselling on related preventive issues.

Results: More than 94% respondents report being in good to excellent health. They averaged 40.4 hours per week on patient care and 8 hours on other professional activities. Physicians averaged 109 min of exercise per week; two percent smoked cigarettes, and only 1 percent consumed 5 drinks or more on at least one occasion per week.

Compliance with health screening guidelines were on par or better than the national statistics. However, 29% did not have a regular family doctor, and 57.9% reported being "too busy" as the most frequent cause that prevents them from better care of their own health.

Conclusion: Small-Medium sized community physicians compare well with their national counterparts. However, the findings suggest that there are still areas of improvement. Specific targeted health promotion interventions may further improve physician health, and this may have a positive impact of patient care as well.

Key words: Physicians, survey, health, screening, self report

Dr. Denisa Durcanska – Windsor

Improving Meningococcal group B vaccination uptake

Faculty Project Lead: Dr. Helena Hamdan

Project Type: Quality Improvement (QI)

The new vaccine against *Neisseria meningitidis* group B (Bexsero) had been issued less than 6 months prior to the start of this project. The vaccine uptake was zero in both high-risk and the general population. A multi-level information system was developed to advise a targeted patient population on the availability of the Bexsero vaccine.

Healthy infants up to age 1 and a high-risk population (i.e. hyposplenism, complement deficiencies, etc.) were the two groups originally involved in the iterations of this QI. The targeted group in the first iteration was expanded to include all healthy children that were informed. This was mainly due to parents asking for this vaccine for older siblings of the newborns to whom the vaccine was initially offered. Overall, 19.5% of children whose parents received information were vaccinated.

The patients with hypo- or asplenia were the only ones in this practice that fitted into the criteria published by NACI for high-risk patients for meningococcal disease. The eligible number of patients vaccinated was 100% in that category.

Side effects were analyzed and any visit within the next month was reviewed. There were no high fevers, hospitalizations or other serious adverse events recorded. Additional office visits were needed for 1 out of every 2 immunizations booked.

Dr. Joyce Fung – Windsor

Take home counseling and life style modification on hypertension

Faculty Project Lead: Dr. Susan Sweet

Project Type: Quality Improvement (QI)

Hypertension has multiple established modifiable risk factors and lifestyle modifications are considered a major aspect of antihypertensive therapy. In order to overcome barriers to lifestyle changes, patient education was the target for this QI project. A one-page leaflet was created to structure counselling during an office visit and was taken home by the patient so the information would be available for them. The leaflet and counselling was provided to 5 patients in Feb 2015, and was received well by patients and staff. Patients were instructed to return in 1 months time to discuss the number lifestyle modifications taken on by them in this time frame, however, only 1 out of 5 patients returned within this time frame. While the patient who returned showed positive results (had gone from 1 lifestyle change to 2), the project could not be completed appropriately due to incomplete follow-up a run chart cannot show any trends. The project could be continued, allowing for a longer follow-up time more appropriate to regular hypertension checks and medication renewals. Given an even longer time frame, other endpoints such as systolic blood pressure reduction may be measured.

Dr. Rushi Parikh – Windsor

Osteoporosis Care Gap in Men in Southwestern Ontario

Faculty Project Lead: Dr. Arthur Kidd

Project Type: Research

Objective To determine if male patients (followed by primary care physicians in Southwestern Ontario), aged 60 years or older, who are at high risk of osteoporosis-related fractures are getting the recommended diagnostic tests

Design Retrospective chart audit

Setting 14 different family physician practices, located at 2462 Howard Avenue Windsor Ontario, which share a common electronic medical record (EMR). Three sister sites located in Windsor: 2425 Tecumseh road east suit#208 N8W 1E6; 5565 Wyandotte St East N8S 4T9; 2475 McDougall Street Suite 145 N8X 4N9 who share the same EMR will also be included in study.

Participants Male patient aged 60 years or older who have had a documented fracture noted in their medical record
Main outcome measures The proportion of low (FRAX score less than 10), moderate (FRAX score 10-20), and high (FRAX score over 20) risk patients who have undergone BMD testing and who are on osteoporosis treatments will be calculated. Regression modeling will be performed to identify factors associated with increased use of BMD testing
Results Unfortunately the study did not show a good correlation between FRAX related risk factors and increased screening in osteoporosis in the men. Many of the R squared values including the alcohol, smoking and secondary causes failed to show a correlation. Analysis of other risk factors could not be completed.

Conclusion Risk factors for osteoporosis in men in Southwestern Ontario are similar to rest of Canada which include age >65, prolonged use of glucocorticoids, parental hip fracture, smoking, high alcohol intake, Rheumatoid Arthritis and other secondary causes. These risk factors have been factored into FRAX risk scores. Family physicians should consider screening patients with these risk factors in their patient population.

Poster Presentations – Room 1150, WCPHFM

Poster	Presenter	Presentation
1	Dr. Alves Dr. Dhaliwal	Increasing colorectal cancer screening in type 2 diabetics in a rural family medicine clinic using didactic physician education and visual cueing.
2	Dr. Marshall Dr. Wang	Monitoring TSH in hypothyroidism
3	Dr. Foster Dr. Lemmex	Increasing the Frequency of Smoking Cessation Encounters in Day-to-Day Primary Care: A Quality Improvement Protocol
4	Dr. Ciszkowski	Quality Improvement: increasing Narcotic Treatment Agreement uptake in a rural teaching clinic
5	Dr. Sidhu	The Referral Practices of Family Physicians for the Evaluation of Penicillin Allergies
6	Dr. Al-Ali Dr. Behrouz Dr. Bhatia Dr. Marbeen Dr. Mohammadi	Improving narcotic prescribing
7	Dr. Bellamy Dr. Der Dr. McLean Dr. Patel	Improving Joint Injection in the Primary Care Facility
8	Dr. Syed	Identifying elderly patients currently prescribed potentially inappropriate medications : A Quality Improvement Project
9	Dr. Li	Abdominal Aortic Aneurysm Screening in Rural Family Practice
10	Dr. Cassidy Dr. Gabrielli Dr. Huszarik Dr. Rust	Increasing the use of waist circumference measurements in diabetic patients at VFMC
11	Dr. Nguyen Dr. Starczewski	Immunization: How can we keep our adult patients up to date without increased burden?
12	Dr. Bastien Dr. Burgess Dr. Cormier	Identifying Patients with Non-Valvular Atrial Fibrillation on Warfarin and Discussing NOAC use
13	Dr. Glass	Implementing guidelines for pain reduction during childhood vaccination in a family medicine clinic in Southwestern Ontario
14	Dr. Platzker	Complementary and Alternative Medicine for Smoking Cessation: What is the Current Evidence? A Systematic Literature Review
15	Dr. Stocco Dr. Winrob Dr. Ying	Improving Chart Flow in a Rural Emergency Department

Poster	Presenter	Presentation
16	Dr. Ahmad Dr. Hynes	The Importance of Vaccines: Why Do We Need Them?
17	Dr. Moazzam Dr. McCabe	Screening for COPD in highrisk populations within a Family Health Team
18	Dr. D'Souza	Improving Compliance (uptake) of Pneumococcal Vaccine in Diabetic patients in a primary care Family practice
19	Dr. Cannon	Bell's Palsy in the Emergency Department: Are We Adhering to Practice Guidelines?
20	Dr. Gray	The impact of computerized provider order entry on emergency department flow
21	Dr. Karnik	Applicability of the ADJUST-PE Age-Adjusted D-Dimer Criteria to Windsor Regional Hospital
22	Dr. Lee	Assessing Significant Cardiac Outcomes of Patients with Initial Undetectable High Sensitivity Troponin in the Emergency Department
23	Dr. Miller	Practice Patterns of Emergency Physicians Treating Simple Corneal Injuries
24	Dr. Moss	Evaluation of recent onset atrial fibrillation in the emergency department
25	Dr. Murray	Quality assurance analysis of archived POCUS studies in an academic tertiary care emergency department
26	Dr. Myslik	The Utility of Point-of-care Ultrasound in Detecting Distal Forearm Buckle Fractures in Pediatric Patients
27	Dr. Sikand	The use of smartphone applications in Emergency Medicine
28	Dr. Tancio	The London Home Palliative Care Team Database
29	Dr. Tenbergen	Pelvic inflammatory disease: diagnosis and treatment in a tertiary emergency department

Drs. Philip Alves, Bharbhoor Dhaliwal – Southwest Middlesex Health Centre
Increasing colorectal cancer screening in type 2 diabetics in a rural family medicine clinic using didactic physician education and visual cueing

Faculty Project Lead: Dr. Ted Osmun

Project Type: Quality Improvement (QI)

The Southwest Middlesex Health Centre family medicine clinic services a large diabetic patient population. Current adherence to colorectal cancer (CRC) screening has not been characterized at our clinic in this group. Regular CRC screening is critically important in early detection and optimal diagnosis and treatment. We aimed to improve the incidence of CRC screening through dedicated physician and allied health care teaching sessions and a visual cueing system.

The baseline proportion of CRC screening at the Southwest Middlesex Health Centre (60.3%) was greater than expected based on CancerCareOntario base rates. After instituting a CRC educational session and a visual cueing system at our clinic, rate of up to date colon cancer screening was further increased to 62.1%. The proportion of type 2 diabetic patients screened for CRC was increased by 1.8%.

Several potential confounders of our CQI limit the generalizability of the information gathered. For one, we studied the colon cancer screening rates in a type 2 diabetic population in rural Southwestern Ontario. There is no data compiled to measure our rates with those of a similar population across the province. It may be that diabetics do in fact have greater uptake for colon cancer screening. Additionally, our interventions were limited to one clinic over two 3 week periods of study. This amounts to a very short time period to analyze quantitative changes. Finally, the interventions themselves consisted of one educational session and several small reminder cues. These are modest interventions and they would be expected to have modest effect

Drs. Nuala Marshall, Zixi Wang – Southwest Middlesex Health Centre
A descriptive study of paediatric patients presenting to a community hospital with a chief complaint of nausea and vomiting

Faculty Project Lead: Dr. Julie Copeland

Project Type: Quality Improvement (QI)

Hypothyroidism is common and easily treatable with appropriate dosing of medication. Appropriate dosing of medication requires titration of the medication and monitoring serum TSH. Consensus guidelines recommend an annual TSH for patients' on stable dose of medication and a TSH to be rechecked 6-12 weeks following a dose change. This CQI project aimed to address the adherence to these consensus guidelines at SWMHC during a two month period. PDSA cycles were aimed to improve routine monitoring of TSH levels in patients on hypothyroid medications. Results showed initial improvement in the number of encounters adhering to guidelines after PDSA cycle one, followed by worsening of adherence following the second PDSA cycle. Conclusions were limited and the continuation of the PDSA changes are not recommended.

Drs. Tamara Foster and Alexis Lemmex – Southwest Middlesex Health Centre

Increasing the Frequency of Smoking Cessation Encounters in Day-to-Day Primary Care: A Quality Improvement Protocol

Faculty Project Lead: Dr. Julie Copeland and Dr. Ted Osmun

Project Type: Quality Improvement (QI)

Context: Smoking is the single most important preventable risk to health in developed countries. For this reason, discussions around tobacco use in primary care needs to be at the forefront in order to give patients who smoke the best chances at successful cessation.

Objectives: The key goals are to increase smoking cessation discussion between patients and their primary care providers with documentation of the 5 A's (Ask, Advise, Assess, Assist and Arrange) of smoking cessation in the charts of patients who smoke. Improvement Goal: By the end of four months, the aim was to double the amount of smoking cessation related discussion with those patients actively smoking.

Target Population: Health care staff (Physicians, Residents, Pharmacists) of the Southwest Middlesex Health Centre and their patients who smoke. Instrument: Three Plan-Do-Study-Act (PDSA) cycles were implemented sequentially in a period of 4 months. They included: educational presentation on the 5 A's for all staff, implementation of smoking cessation flowsheet on the electronic medical record, and information poster of the 5 A's in all encounter rooms.

Outcome Measures: The main outcome measures were obtained from monthly chart reviews and plotted on a run chart over a total four-month period. The main outcome measures were: 1) the percentage of time smoking cessation discussions were documented in the chart for all smokers seen during that time period, and 2) the percentage of time the initial smoking cessation billing code E079 was billed during eligible visits.

Conclusion: Smoking cessation discussion and documentation of the 5A's more than doubled during our period of quality improvement, increasing from 22% to 47% ($p=0.02$, 95% CI). Although there was an increase in the E079 billing code, this was not significant. Overall, it was found that simple interventions can have a positive impact on the frequency of smoking cessation discussions.

Dr. Catherine Ciszkowski – Southwest Middlesex Health Centre

Quality Improvement: increasing Narcotic Treatment Agreement uptake in a rural teaching clinic.

Faculty Project Lead: Dr. J Parr

Project Type: Quality Improvement (QI)

Opioid medications are frequently required in the comprehensive, graduated treatment of persistent moderate-to-severe chronic non-cancer pain; however, opioid utility must be balanced with the potential for considerable opioid-associated morbidity. Recognizing this challenge, the College of Family Physicians and The College of Physicians and Surgeons of Ontario, both strongly recommend that clinicians engaging patients in opioid therapies consistently use Narcotic Treatment Agreements (NTAs) as means of informed patient consent and to clearly outline physician and patient responsibilities in the safe use of these medications. Compliant with these recommendations, our clinic recently updated our NTA template and this quality improvement project sought to increase uptake and maintenance of uptodate NTAs.

From July-October 2014, during the initiation of a new cycle of residents in the Southwest Middlesex Health Centre (SWMHC), an educational presentation, handout, and demonstration were provided on the utility of NTAs; two months later an automated pop-up prompt intervention was trialed. Subsequent chart audits were conducted to study the associated increase in uptodate NTAs on patient charts in the time following each study intervention.

Prior to the study start date, the baseline rate of uptodate NTAs was 10.2 %. After the initial educational change this number rose to 17.9 %, and culminated in a final uptodate NTA rate of 32.8% after the prompt change.

Although both changes correlated with improved uptake and maintenance of NTAs, greater change specificity (e.g., targeted prompts only in outstanding charts rather than global reminders) could result in further improvement, and provides an avenue for further study.

Dr. Mondeesh Sidhu – St. Joseph's Family Medical and Dental Centre

The Referral Practices of Family Physicians for the Evaluation of Penicillin Allergies

Faculty Project Lead: Dr. Nelson Chan

Project Type: Research

"Allergy" to Penicillin is one of the most commonly reported drug allergies; reported by ~ 5-10% of patients. However, less than 10% of these patients are found to have a true IgE mediated allergy on skin testing. Despite the strong negative predictive value (>99%) of skin testing to rule out an allergy, physicians often forgo further investigations in favor of alternative antibiotics. Numerous studies have demonstrated that the usage of alternative antibiotics is associated with higher rates of VRE and MRSA resistance. Furthermore, alternative antibiotics carry an increased health care cost that outweighs the cost associated with evaluation of the patient by an Allergist.

A recent study done by Jain, Sidhu et al demonstrated that approximately a majority of Anesthesiology Staff felt it was the responsibility of the Family Physician to obtain an allergist's evaluation in patients with a history of penicillin allergy. Our study evaluates the practices of Family Physicians and hopes to assess what barriers may exist to the evaluation of patients with HOPA by Allergists.

This is a cross sectional descriptive study using an anonymous online survey of 6 questions designed based on the semi-structured interview used by Jain, Sidhu et al. Staff Physicians and Residents will be invited to participate in this study. Responses obtained will be analyzed using the technique of recursive abstraction.

With better understanding of potential barriers we hope in the future upon completion of the study to suggest solutions to improve referrals and prevent morbidity, mortality and to decrease the economic burden of penicillin allergy.

Drs. Hassan Al-Ali, Sarah Behrouz, Rajni Bhatia, Melad Marbeen, Mitra Mohammadi –

St. Joseph's Family Medical and Dental Centre

Improving narcotic prescribing

Faculty Project Lead: Dr Eric Wong

Project Type: Quality Improvement (QI)

The incidence of chronic pain is increasing and that has led to an increase in narcotic prescribing. This has had a considerable impact on the health care system ranging from the prescriber's comfort in prescribing narcotics to dealing with side effects of narcotics and prescription diversion. We sought to improve narcotic prescribing by encouraging our staff physicians and residents at SJFMC, to use standardized tools to secure better assessment. We introduced PADT template to be used by prescribers before each narcotic prescription. Our goal was to increase the number of template use three times the baseline of 14% to 42%. The project ran in two separate cycles in summer 2014 with a 4 weeks interval to recognize the barriers, improve the template and reinforce the template use in second cycle. We were able to increase the frequency of template use prior to renewal up to 62% in first cycle and 52% in second cycle which both were more than three times of baseline. We were able to meet our goal by raising the awareness of using standard template before narcotic renewal and encouraging our team to participate in discussion to recognize the barriers to template use to improve future narcotic prescription.

Drs. Elizabeth Bellamy, Anna Der, Craig Maclean, Janak Patel – Middlesex Centre Regional Medical Clinic, Ilderton - St. Joseph's Family Medical and Dental Centre

Improving Joint Injection in the Primary Care Facility

Faculty Project Lead: Dr. Eric Wong

Project Type: Quality Improvement (QI)

Background: Literature review revealed substantial value in primary care joint injections, however there is a lack in structured training in joint injections techniques during residency. Without proper training, primary care physicians were reluctant to offer such services.

Objectives: To develop a joint injection teaching program to improve knowledge and confidence of PGY1 and PGY2 family residents and increase injections offered to patients.

Methods: Before Phase 1, each resident was given a questionnaire measuring their confidence and knowledge in regards to common joint injections. This was followed by a Phase 1 didactic powerpoint teaching session describing an approach to joint injections. All residents then completed the same questionnaire after. A month later, Phase 2 involved a practical session where residents were able to practice their joint injection skills on live models. A final questionnaire was given to measure knowledge, confidence and number of joints injections offered and given by residents.

Results: There was a statistically significant increase ($p < 0.05$) in knowledge and confidence as determined by the 3 questionnaires. There was an increase in the number of joint injections offered ($p > 0.05$) and an increase in the number of joint injections given ($p < 0.05$).

Conclusion: Outcome measures for increasing confidence, knowledge and number of injections given were increased with each PDSA cycle. This was consistent with other similarly designed studies. Outcome measures for injections offered were not met, which may be due to limited relevant patient encounters. This study can be generalized to other family medicine residency centers.

Dr. Sameer Syed – Byron Family Medical Center

Identifying elderly patients currently prescribed potentially inappropriate medications : A Quality Improvement Project

Faculty Project Lead: Dr. G. Kim

Project Type: Quality Improvement (QI)

Background: The "Beer's Criteria" is an evidence-based resource for clinicians to identify potentially inappropriate medications in their elderly patients. Despite their potential hazards, many of these medications continue to be prescribed to elderly patients in primary care and other settings. Currently, no process exists to easily identify patients that are already prescribed these medications. This project aims to develop a process that physicians and other healthcare providers can use to easily identify patients in their practice who have been prescribed these medications.

Methods: Beer's criteria was used to identify several commonly prescribed anticholinergic medications that could be targeted in this small scale project. Through the use of the standardized QI project model, a process for identifying patients currently prescribed these medications was developed within the Nightingale EMR system. This was used to search for and record the number and names of patients currently prescribed one of the "Target Medications" (Ranitidine, Ditropan, Detrol, Vesicare, and Amitriptyline).

Results: 5 medications were targeted, and 7 elderly patients with active prescriptions for these medications were identified on a single at BFMC.

Conclusions: The process to identify patients currently prescribed potentially inappropriate medications was effective in identifying patients on a single team at BFMC for the targeted medications. Future considerations include targeting more medications, identifying patients on other teams and centre-wide, and conducting targeted patient assessments and medication reviews based on these data.

Dr. Christine Li – Victoria Family Medical Centre

Abdominal Aortic Aneurysm Screening in Rural Family Practice

Faculty Project Lead: Drs. Ken Milne, Sean Ryan

Project Type: Research

Research Purpose/Objectives: Many guidelines now support a one-time ultrasound to screen for abdominal aortic aneurysms (AAA) in males with a smoking history. It is not known how these guidelines are reflected in rural family practice. The purpose of this study was to determine the screening rate for AAAs in men 65 years of age and older with a smoking history in three rural family medicine practices.

Methodology: The electronic medical records (EMR) from three family practices were searched. These practices included 11 primary care providers serving a population of approximately 12,158 patients. A search for male patients older than 65 years of age with a smoking history was performed. These identified charts were reviewed for the presence of an ultrasound report. If no reports were found, we also checked the local community hospital system. Demographic data and ultrasound report information was extracted and entered into an MS-Excel worksheet for analysis.

Summary of Research Results: The search identified 1031 male patients 65 years of age or older and 532 (51.6%) of them were identified as current or past smokers. The average age was 74. Only 40 (7.5%) of these patients had a screening ultrasound.

Conclusions: Our results indicate that screening for AAAs is low in rural family practice. Accessibility to facilities with ultrasounds may be a reason for the lack of screening. Therefore, there may be benefit to train family physicians in rural settings to use point-of-care ultrasounds to screen for AAAs in the office setting.

Drs. Cassidy, Gabrielli, Huszarik, Rust – Victoria Family Medical Centre

Increasing the use of waist circumference measurements in diabetic patients at VFMC

Faculty Project Lead: Dr. Anna Pawelec

Project Type: Quality Improvement (QI)

Despite evidence-based guidelines for use of both BMI and Waist Circumference (WC) measurements in at risk populations, many practitioners use only BMI (1, 2). This was found to be consistent with current practice at the Victoria Family Medical Clinic (VFMC), where, at the onset of this project, practitioners only measured waist circumference 7.55% of the time in at-risk individuals (defined as diabetic patients aged 40-69). Factors contributing to lack of waist circumference measurements were thought to include lack of education regarding the reason for using WC and how to perform the measurement (1, 3). Given these findings, a quality improvement project was designed to increase education around the importance of measuring waist circumferences in appropriate patients as well as the proper technique for doing so. Attempts to educate staff were therefore pursued throughout the year at VFMC, resulting in a 338% increase in the number of measured waist circumferences in the sample studied.

Given that WC has been shown to be an independent predictor of all cause mortality in at-risk populations (4,5) and given that some studies have shown that elevated waist circumference is a stronger predictor of diabetes and cardiovascular disease than BMI (6-10), we felt it necessary to increase the use of waist circumference measurements in routine practice at VFMC. We have shown that through the use of education sessions, handouts and reminder emails, we have been able to increase the percentage of waist circumferences measured and hope that this will lead to better preventative care as a result.

Drs. Linda Nguyen, Joanna Starczewski – Windsor

Immunization: How can we keep our adult patients up to date without increased burden?

Faculty Project Lead: Dr. Elia Hudovici

Project Type: (Research or QI): Quality Improvement (QI)

AA pillar of preventative medicine is vaccination. We have active reminders and routines set in place for our younger patients (birth - 17 years of age), however these reminders are not as clear in our adult population. Family Physicians are already overwhelmed with the care they need to provide. At times it is difficult to maintain up-to-date (UTD) immunization rates. Our aim was to improve the percentage of patients with UTD immunization by 20% relative to a control sample in 2 separate Family Medicine (FM) Clinics. We involved physicians, nurses and receptionists over a 2 month period. We first implemented a simple reminder sign in patient rooms. We observed a 13% and 14% improvement of patients with UTD immunizations in Joanna's and Linda's clinic respectively; compared to the control group while minimally increasing total time in clinic (TTC). This did not reach our goal therefore in our second cycle we implemented a change in behaviour by routinely discussing immunization status with our patients. We observed an improvement of 36% in Joanna's clinic and 25% improvement in Linda's clinic and reached our goal. As a result to this change we had an increase in TTC by 45 and 30mins respectively. With our final cycle we tried a different approach to minimize TTC by implementing an e-mail reminder in Linda's clinic. We unexpectedly observed a decline of 26% of patients with UTD immunizations with minimal increase in TTC. We concluded that having a routine discussion with patients is most important to maintain UTD immunization status but can expect some increase in TTC.

Drs. Jean-Marc Bastien, Thomas Burgess, Andrew Cormier – Windsor

Identifying Patients with Non-Valvular Atrial Fibrillation on Warfarin and Discussing NOAC use

Faculty Project Lead: Drs. J Dennison, P Loebach, P Ziter

Project Type: (Research or QI): Quality Improvement (QI)

Our quality improvement project was designed to identify patients in our practice with non-valvular atrial fibrillation on warfarin that would benefit from switch to NOAC and offering this change. Our goal was to change 5% of identified patients to NOAC. Each PDSA cycle began with search of an EMR. PDSA #1 used non-valvular atrial fibrillation and warfarin prescription as search criteria. PDSA #2 narrowed search criteria by excluding patients with GFR<30. PDSA #3 narrowed search criteria by excluding patients with therapeutic INRs>65% of the time. PDSA#1 switched 39% of identified patients. PDSA #2 switched 10.5% of identified patients. PDSA #3 switched 0% of identified patients. If we had the opportunity to run PDSA #4 our search criteria would include patients with non-valvular atrial fibrillation, currently on warfarin, GFR>30 and with INRs in therapeutic range less than 65% of the time. We would also reconsider our primary outcome measure. We felt that patient education of NOAC as an option to replace warfarin was more important than the switch in medication itself. Our new goal would be to educate at least 5% of identified patients about NOAC as a therapeutic option.

Dr. Erin Glass – Strathroy FHO

Implementing guidelines for pain reduction during childhood vaccination in a family medicine clinic in Southwestern Ontario.

Faculty Project Lead: Dr. John Marcou

Project Type: Quality Improvement (QI)

Background: Pain associated with immunizations in childhood is often a source of distress in children and their parents, which may lead to fear of needles and non-adherence to immunization schedules. Despite a clinical guideline outline many simple pain-relieving strategies, few are being implemented in practice.

Objective: To determine the current rate of discussion and use of pain-reduction strategies during routine childhood vaccination encounters in our clinic, and to increase this usage.

Methods: Parents of children receiving routine vaccinations were surveyed after their child's vaccination encounter (PDSA 1). The same survey was distributed to parents after healthcare provider educational session (PDSA 2) and after a parent handout was distributed (PDSA 3).

Results: At baseline, only 40% of healthcare provider discussed pain reduction during their visit, and only 50% of visits included a technique aimed to reduce pain, other than sitting the child upright. After PDSA 1 the rate of discussion of pain reduction strategies doubled to 80% of visits, and there was an increase in the use of all of the interventions shown to be effective pain reducers. Discussing pain-reduction strategies alone was a predictor of increased patient satisfaction. After educating parents in PDSA 2, 47.7% of parents who had read the handout reported that it would change the way they approach their child's vaccinations in the future.

Conclusion: With the current popularity of the anti-vaccine movement, it is worthwhile to educate healthcare providers of the strategies known to be effective in reducing pain during childhood vaccinations, to both increase parent satisfaction and to possibly prevent fear of needles and non-adherence to vaccination schedules.

Dr. Tal Platzker – Goderich

Complementary and Alternative Medicine for Smoking Cessation: What is the Current Evidence? A Systematic Literature Review

Faculty Project Lead: Dr. Donald Neal

Project Type: Research

Background: Current recommended treatment for smoking cessation includes counseling and pharmacotherapy.

Patients are often interested in using Complementary and Alternative Medicine (CAM), such as acupuncture and herbal remedies. However the effectiveness of these interventions is not clear.

Objective: To evaluate the efficacy of several CAM interventions for smoking cessation through a systematic literature review.

Methods: A systematic literature review was conducted to determine the effectiveness of several CAM interventions for smoking cessation. PubMed, Medline, and the Cochrane Library databases were searched for randomized control trials published in the past five years investigating one of the following interventions for smoking cessation: acupuncture, hypnotherapy, yoga and herbal remedies. Outcome measure of interest was smoking abstinence rate at 3 months or longer.

Results: Four studies were identified, including one study investigating each of the following interventions: acupuncture, hypnotherapy, yoga, and herbal remedies.

Conclusions: CAM interventions that include acupuncture, hypnotherapy, yoga, or herbal remedies are not associated with higher smoking cessation rates than placebo. Family physicians should recommend interventions with proven efficacy for smoking cessation, including pharmacotherapy and behavioural interventions, rather than CAM, to their patients.

Dr. Stephanie Stocco, Ilana Winrob, Melissa Yingbull – Hanover

Improving Chart Flow in a Rural Emergency Department

Faculty Project Lead: Dr. Tim Heerema

Project Type: Quality Improvement (QI)

Wait times and prolonged lengths of stay in the Emergency departments are issues affecting Hospitals across the country. The LEAN principles are a well validated methodology of identifying inefficiency and improving productivity in the industry sector. More recently these principles have been applied to health settings/processes. In the Hanover emergency department (ED), we used the LEAN principles to identify chart flow as an aspect of care where efficiency could be improved. We applied the LEAN principles to come up with a chart flow solutions which involved implementing CTAS colour coded charts and order flags. We hypothesized that improvements in chart flow would help physicians better manage their time. Our primary outcome measure was overall length of stay in the emergency department and predicted a 10% decrease.

Overall staff found colour coded charts and order flags consistently helpful to manage time and patient load. This change seems to have translated into a measureable outcome improvement, as our total length of stay decreased by 12%. There were however, many confounding factors and a longer observation period for cycle 2 could have made our findings more robust.

Drs. Sardar Ahmad, Laura Hynes – Petrolia

The Importance of Vaccines: Why Do We Need Them?

Faculty Project Lead: Dr. J. Butler

Project type: Quality Improvement (QI)

The rates of preventable diseases are on the rise in North America due to missed childhood vaccinations. Many parents are opting out of having their children vaccinated at a medical clinic for fear of adverse reactions, substances in the injections, or that immunizations will not work.

The goal of this QI project is to audit patient's opinions about vaccines for themselves and their children. They will be provided with a simple educational intervention and then assess whether that intervention improved attitudes towards vaccination.

This project was completed during a 4-month period in a Rural Family Medicine Clinic, Pediatric Clinic, and OBGYN Clinic. The project concluded that the majority of pre-intervention participants were in favour of routine childhood vaccines and therefore there was not a significant attitude improvement. However, we detected a significant positive attitude change regarding the annual influenza vaccine.

Drs. Colin McCabe , Ambreen Moazzam – Chatham - Kent

Screening for COPD in highrisk populations within a Family Health Team

Faculty Project Lead: Dr. James Wheeler

Project Type: Quality Improvement (QI)

There is a paucity of diagnostic spirometry done for high-risk patients in our FHT who may have undiagnosed COPD. We aim to improve the management of subclinical COPD. Our FHT EMR generated a list of >900 patients who meet the criteria of being high-risk for COPD. Previous spirometry is not clearly denoted in patient charts, referral for spirometry is not universal within this group and not even included within the standardized Smoking Cessation Clinic (SCC) referral. This leaves the potential for many sub-clinical cases of patients with COPD.

Dr. Maria D'Souza – Southdale Medical Center

Improving Compliance (uptake) of Pneumococcal Vaccine in Diabetic patients in a primary care Family practice

Faculty Project Lead: Dr. Tania Rubaiyyat

Project Type: Quality Improvement (QI)

Diabetes is a metabolic disorder, resulting in abnormalities in immune function. This increases the risk of infections, leading to an increase in morbidity and mortality. These patients are at risk for complications, hospitalization and death from pneumococcal disease. However, there is also evidence that this group of patients have an appropriate response to the pneumococcal vaccination. Hence targeting this population for vaccination is vital.

The Canadian Diabetic Association (CDA) guidelines 1 recommend Pneumococcal vaccination for all diabetic patients. At Southdale Medical Centre (SMC), out of a total of 147 diabetic patients, 16 (10.8%) had been immunized. This four week project aimed to increase the vaccination rate by 10% in this population.

The project was divided into two, two week cycles. By educating staff, as well as having alerts on paper lists of the non-immunized diabetic patients, 13 of the 131 non-immunized patients were vaccinated in the first cycle. In the 2nd cycle, we attempted to improve the vaccination rate by calling those patients who had missed their diabetic appointments. This resulted in an additional 12 patients being immunized. On completion of the project, an additional 25 patients (a 17% increase) had received the vaccine. The project demonstrated that educational sessions for medical staff promoting immunisation resulted in an increase in the vaccination rate. Additionally patients were open and willing to receiving the vaccine, when they were educated on its benefits.

Dr. Lesley Cannon – PGY3 CCFP - EM

Bell's Palsy in the Emergency Department: Are We Adhering to Practice Guidelines?

Faculty Project Lead: Dr. Victor Ng

Project Type: Research

Bell's Palsy is a mono-neuropathy of the facial nerve, resulting in acute facial weakness or paralysis. There are several treatment options, including corticosteroids, antivirals or both. There has been controversy over the optimal treatment of Bell's Palsy for many years, resulting in variation of patient care. Recently released guidelines have attempted to streamline the diagnosis and management of patients with Bell's Palsy. Current recommendations are for corticosteroids for all patients, plus antivirals for severe cases. Eye protection strategies are also encouraged for patients who have incomplete eye closure. Current treatment practices in LHSC emergency departments are not known. The objective of this study was to determine if patients presenting to LHSC emergency departments are receiving treatment in line with the current guideline recommendations.

Dr. Andrew Gray – Department of Emergency Medicine

The impact of computerized provider order entry on emergency department flow

Faculty Project Lead: Chris Fernandes

Project Type: Research

Objectives: Computerized provider order entry (CPOE) has been established as a method to improve patient safety by avoiding medication errors, though its affect on emergency department (ED) flow has had little study. We examined the impact of CPEO implementation on three primary variables of ED throughput: wait time (WT), length of stay (LOS), and the proportion of patients that left without being seen (LWBS).

Methods: We conducted a retrospective cohort study of all Canadian Triage Acuity Scale (CTAS) level patients 18 years and older presenting to London Health Science Centre during July and August 2013 and 2014, before and after implementation of a CPOE. The 3 primary variables were compared between time periods. Subgroup analyses were also conducted within each CTAS level (1-5) individually, as well as for only admitted patients.

Results: There was a significant increase in WT of 5 minutes ($p=0.036$) and LOS of 10 minutes ($p=0.001$) after CPOE implementation, while LWBS increased from 7.2% to 8.1% ($p=0.002$). Admitted patients' LOS increased by 63 minutes ($p<0.001$), CTAS 3 and 5 patients increased their WT by 6 minutes ($p=0.001$) and 39 minutes ($p=0.005$), and LWBS proportion increased significantly for CTAS 3-5 patients, worsening from 24.3% to 42.0% ($p<0.001$) for CTAS 5 patients specifically.

Conclusions: CPOE implementation detrimentally impacted patient flow, with all throughput variables involved. The most striking clinically relevant result was the increase in LOS of 63 minutes for admitted patients. One has to ask if the potential patient safety risks outweigh the benefits when considering CPOE implementation.

Dr. Aditya Karnik – CCFP-EM - Windsor

Motor Vehicle Accident Assessment In the Family Physician's Office

Faculty Project Lead: Dr. Tony Meriano

Project Type: Retrospective Chart Review

D-dimer measurement is an important step in the diagnostic strategy of clinically suspected acute pulmonary embolism (PE). However in the elderly its clinical usefulness is limited by its low specificity. Using the tool results in many false positives that must be further investigated with diagnostic imaging. The ADJUST-PE study suggested that an age dependent D-Dimer cut-off could safely be used in patients older than 50, using the new cutoff of age multiplied by 10 (mcg/L). This change improved the diagnostic yield of the test without a significant decreasing its sensitivity. This age-adjustment would allow for PE to be safely ruled out with the D-Dimer and not require additional imaging. This study was designed to review whether the age-adjusted criteria could be safely applied to the population seen at the Windsor Regional Hospital Ouellette Campus. A chart review was conducted for patients older than 50 who had a D-Dimer performed in the year 2014. In this sample a total of 41 PEs were found using the conventional cut-off of <500mcg/L. Retrospectively applying the age adjusted criteria would have missed 8 of the 41 PEs by prematurely stopping the decision-making algorithm. Assuming that there were no false negatives, the sensitivity of the conventional criteria was 100%, while the age adjusted criteria sensitivity was only 80.5 %. This absolute reduction in sensitivity of 19.5% signifies that the age-adjusted criteria set out by the Adjust-PE trial is not sufficient to use this as a screening tool in this patient population.

Dr. Ashley Lee – FM - EM

Assessing Significant Cardiac Outcomes of Patients with Initial Undetectable High Sensitivity Troponin in the Emergency Department

Faculty Project Lead: Drs. Eugene Seong, Karl Theakston

Project Type: Research

Introduction: Currently, high-sensitivity Troponin T (hs-TnT) >14 ng/L may be used to rule out myocardial infarction (MI) at three hours post onset of chest pain. However, it may be safe to discharge patients with initial undetectable hs-TnT regardless of time drawn. This chart review seeks to assess for significant cardiac events (SCE) of patients presenting to the ED with initially undetectable hs-TnT.

Methods: A review of visits to two tertiary care EDs (annual census 125,000) from March 2012 to August 2014 was conducted. All visits with initially undetectable hs-TnT with subsequent hs-TnT rise ≥ 10 ng/L or cardiology consults were assessed for SCE. For those with undetectable hs-TnT, return to ED, SCE or admissions within thirty days was evaluated.

Results: There were 52840 visits where hs-TnT was ordered in the ED. Of these, 5522 visits (10.4%) had initial undetectable hs-TnT. Eleven (0.20%) had subsequent rise ≥ 10 ng/L. In total, there were 26 SCE (0.47% - CABG x 2, PCI x 12, ACS x 12) at time of visit for all patients with initial undetectable hs-TnT. There was one SCE (PCI x 1) (0.018%) in the thirty days post initial undetectable hs-TnT.

Conclusions: This study suggests that most patients with initially undetectable hs-TnT may be discharged from the ED without serial hs-TnT and have very low risk of SCE immediately and within 30 days. Urgent risk stratification should be considered for those with cardiac risk factors or suspicious history and EKG.

Dr. Lance Miller – CCFP - EM

Practice Patterns of Emergency Physicians Treating Simple Corneal Injuries

Faculty Project Lead: Dr. Nadder Sharif

Project Type: Research (Survey)

Introduction: Corneal injuries are a common issue in the Emergency Department, however recent surveys have shown wide variability in practice patterns for this issue. Recent studies have suggested that topical anesthetics (ie. lidocaine, tetracaine) may be a safe and effective option for corneal injuries, however their use has not been included in surveys to date. The objective of this project was to evaluate the practice patterns of emergency physicians in this area with respect to topical anesthetics as well as other common treatment options.

Methods: Anonymous online survey of Emergency Medicine staff physicians and residents in London recruited through email. Practice patterns evaluated included use of oral analgesics, lubricating eye drops, cycloplegics, eye patching, topical NSAIDs and topical anesthetics. Follow up procedures and perceived barriers were also surveyed.

Results: Response rate was 33% (30/92), staff and residents were equally represented. 43% of respondents would consider giving topical anesthetics in some situations. Oral analgesics and lubricating eye drops were most commonly recommended options. Antibiotics are recommended most commonly for organic foreign bodies, contact lens users and immunocompromised patients. Vast majority (83%) of respondents recommended no routine follow-up. Most common barriers were a lack of evidence and support from ophthalmologists.

Conclusions: Variability still exists, and while some physicians give topical anesthetics for home use, most still do not. Further evidence demonstrating safety and effectiveness as well as support from ophthalmology colleagues would be required before becoming routine practice.

Dr. Matthew Moss – CCFP - EM

Evaluation of recent onset atrial fibrillation in the emergency department

Faculty Project Lead: Dr. Laura Price

Project Type: Research

Introduction: Atrial fibrillation (A Fib) is the most common arrhythmia managed by emergency physicians. However, there is a lack of direction within the guidelines regarding which treatment modality should be chosen for patients with recent (<48 hours) onset A Fib. The goal of this study is to evaluate the practice patterns of emergency physicians at London Health Sciences Centre when treating recent onset A Fib.

Methods: A retrospective chart review was performed on adult (>17 years) patients with an ED discharge diagnosis of A Fib from April 2013 to March 2014. Patients were grouped into rate controlled, rhythm controlled, or both rate and rhythm (R+R) controlled groups based on the treatment(s) they received. Length of stay in the emergency department was also analyzed.

Results: Ninety-five ED encounters met inclusion criteria.

The majority of patients were treated with rhythm control only (50.5%), followed by rate control only (29.5%) and R+R control (20%).

The rate control, rhythm control and R+R control groups differed significantly in age of patients (mean age= 68.4, 57.4 and 63.3 years respectively) ($p=0.003$).

There was a significant difference in the length of stay between groups (rate group= 299 min, rhythm group= 229 min and R+R group= 331 min; $p=0.011$).

Conclusions: Rhythm control was the most commonly used modality to treat recent onset A Fib. This modality had the shortest length of stay. These patients were younger than those treated with the other modalities.

Dr. Gerrit Murray – CCFP(EM)

Quality assurance analysis of archived POCUS studies in an academic tertiary care emergency department

Faculty Project Lead: Dr. Behzad Hassani

Project Type: Quantitative Research

Point of Care Ultrasound (POCUS) has become routine practice in emergency medicine (EM) and is a requirement in Canadian EM training programs. As part of informal quality assurance, our academic, tertiary care institution endorses wireless archiving of POCUS clips on a hospital-based server, which are accessed through POCUS management software (Qpath, Telexy Healthcare, Maple Ridge, BC, Canada). Although there are provincial criteria for select POCUS study remuneration, there are no provincial or nationally recognized standards as to what constitutes an acceptable archived study. Our institution has locally-defined archiving standards for the four main POCUS indications adopted nationally. The objective of this study was to evaluate physician POCUS archiving compliance with provincial billing and local program standards. **METHODS:** We performed a random audit of 279 archived POCUS studies for which provincial remuneration was billed (code H100) by ED physicians in 2013. These studies were examined for compliance with both provincial billing standards and local program archiving criteria. **RESULTS:** Overall, obstetrical studies were the most frequently billed scans by our physicians. Seventy-two percent of total billed POCUS scans fulfilled provincial remuneration criteria for both image generation and documentation, with 59% of eligible scans fulfilling the same criteria for our locally-defined standards. Of the POCUS scans that did not fulfill criteria for provincial remuneration, 78% were due to inadequate image generation compared to 89% for our locally-defined standards. Eighteen percent of billed scans had no images saved to Q-path. The auditors disagreed with 18% of images interpreted by ER physicians, mostly due to premature conclusion of a negative scan without proper image generation. Scans for assessment of free fluid in trauma were the most commonly disagreed upon study, with 50% disagreement rate amongst our auditors. **CONCLUSIONS:** An informal quality assurance program is inadequate to maintain satisfactory compliance with locally established image archiving standards. Lapses in image archiving and documentation of thorough study appear to be the most common problems.

Dr. Frank Myslik – CCFP(EM) - LHSC

The Utility of Point-of-care Ultrasound in Detecting Distal Forearm Buckle Fractures in Pediatric Patients

Faculty Project Lead: Dr. Naveen Poonai

Project Type: Prospective Research

Background: Distal forearm buckle fractures are one of the most common pediatric injuries encountered in the ED. Point-of-care ultrasound (POCUS) is being used with increased frequency for clinical assessments in pediatric patients, however its utility in buckle fractures has yet to be examined. Being able to use ultrasound at the bedside could lead to quicker assessment, less radiation exposure, and less pain perceived by patients.

Objectives: To determine the diagnostic accuracy, and pain scores of POCUS in pediatric buckle fractures.

Methods: We conducted a prospective single arm cohort study of children aged 4-17 years who presented to the ED following injury, with distal forearm pain and no physical deformity. A clinician with performed a bedside ultrasound with interpretation of a buckle or no buckle fracture. Primary outcome was diagnostic accuracy. Secondary outcomes were time to complete the exam and self-reported pain score.

Results: Ninety-three participants were enrolled, including 48 (52%) males. Ultrasound had a sensitivity of 97% and specificity of 96% for detecting buckle fractures. The mean (+ SD) time to complete the ultrasound was 94.8 + 85.3 seconds. The mean (+ SD) pain score was significantly lower for ultrasound than radiography (2.3 + 2.52 versus 3.6 + 3.0, respectively, $p=0.002$).

Conclusions: Bedside ultrasound demonstrates good sensitivity and specificity for detecting distal forearm buckle fractures in children and may be less painful than conventional radiography. Our findings suggest that POCUS may be an effective diagnostic modality in the assessment of children with suspected distal forearm injuries.

Dr. Aman Sikand – Rural CCFP - EM

The use of smartphone applications in Emergency Medicine

Faculty Project Lead: Dr. Munsif Bhimani

Project Type: Poster

Electronic resources such as smartphone applications are becoming increasingly more prevalent in healthcare environments. Emergency Physicians have the option of utilizing a wide variety of smartphone medical applications for various aspects of patient care. The use of such applications in Emergency Medicine is not well studied in the literature. The objective of this study is to determine the prevalence, frequency and the rationale for the use of smartphone applications among Emergency Medicine Physicians. The information will allow for medical institutions, providers and educators to improve efficacy, reliability and safety of integrating these devices into daily medical practice.

This study is a survey to Emergency Physicians and Emergency Medicine residents at London Health Sciences Centre. There are approximately 100 physicians who will be eligible to participate. Using an internal staff directory all the physicians will be emailed a link to an online survey.

The online survey questions respondents on their age, sex, level of training, and smartphone applications used. In addition respondents are asked on frequency and dependence on smartphone applications during patient care. Data will be entered directly into a study-specific Microsoft Excel database. Standard descriptive statistics will be summarized using means and standard deviations. Differences in proportions will be assessed by the Pearson chi-squared statistic where appropriate.

The results will be presented on Resident Research day.

Dr. Michael Tancio – PGY-3 - Palliative Medicine

The London Home Palliative Care Team Database

Faculty Project Lead: Dr. Schreier

Project Type: Research / Clinical Database

The primary purpose of this study is to create an ongoing research and clinical database from patients referred to the London Home Palliative Care (LHPC) Team. The information collected into the database will allow for assessment of the LHPC service from a quality improvement standpoint and to provide a resource upon which future local research can be generated.

Objectives: 1) To collect operational and clinical data in order to create a research and clinical database from the patients referred to the London Home Palliative Care Team. 2) To longitudinally assess the management of these patients and their families. 3) To compare the outcomes of these patients against normative samples of patients being cared for by specialist palliative care physicians in the home. 4) To determine the factors that are most predictive for deaths at home or in the patient's place of preference.

Hypotheses: 1) The development of the database will provide a base for future local research and provide the opportunity to assess for areas of potential improvements for patient care. 2) Specific subsets of palliative care patients who benefit from dedicated home visits from specialized palliative care physicians will be identified. 3) Improved physical and psychological symptom control allowing for increased number of deaths in the location of patient preference in contrast to comparative norms. 4) The provision of this type of specialized care within the home results in cost savings and other benefits for the health care system.

Dr. Melissa Tenbergen – EM - Regional

Pelvic inflammatory disease: diagnosis and treatment in a tertiary emergency department

Faculty Project Lead: Dr. Jonathan Dreyer

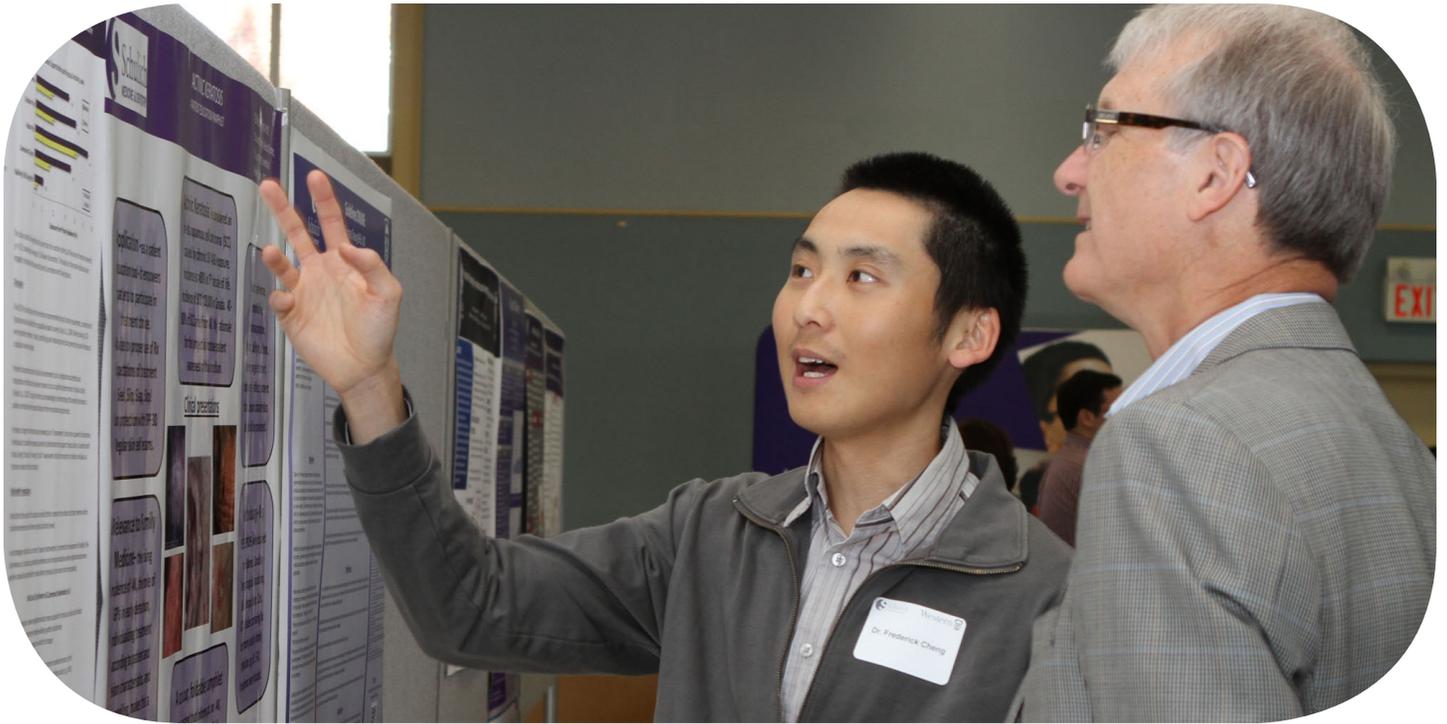
Project Type: Chart Review

Introduction: Studies have shown that a diagnosis of Pelvic inflammatory disease (PID) can differ between clinicians and treatment guidelines are not followed consistently. The objective of this study was to determine variables present in clinical diagnosis of PID and presence of these in patients with a positive culture for gonorrhea or chlamydia. Adherence of our local centre to current guidelines for treatment of PID was also assessed.

Methods: A retrospective chart review of all females patients from Feb 2012 - Feb 2014 with an Emergency Department (ED) discharge diagnosis of PID. Charts were reviewed for patient demographics, presentation to the ED and treatment in ED.

Results: One Hundred ten patients were found to have a diagnosis of PID with minimum diagnostic criteria in 75 patients (67.2%). Ten patients (9.1%) were found to have a positive culture with the presence of abdominal pain in 100%, cervical motion tenderness (CMT) in 60% and adnexal tenderness in 50%. For patients with a negative culture, abdominal pain was present in 80.9%, CMT in 45.5% and adnexal tenderness in 27%. Treatment of PID varied among clinicians with 36 patients (37.8%) receiving treatment according to the guidelines.

Conclusions: Better awareness of PID diagnostic criteria is required to prevent both over diagnosis and over treatment. Treatment of PID also varies widely among clinicians. Better awareness of clinical treatment guidelines is required for prevention of long-term sequelae from PID.



Thank you for attending the 2015
Resident Project Day

We look forward to seeing you next year

SAVE THE DATE
Wednesday, June 8, 2016
#FMRPD16

Department of Family Medicine
Schulich School of Medicine & Dentistry
Western University
1st Floor, The Western Centre for Public
Health and Family Medicine
1151 Richmond St.,
London, Ontario N6A 5C1
519.661.2037
www.schulich.uwo.ca/familymedicine