

# Resident Project Day Abstract Collection

DEPARTMENT OF  
FAMILY MEDICINE

June 7, 2017

The Western Centre for  
Public Health  
and Family Medicine



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 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.**

## Resident Project Day

Western Centre for Public Health and Family Medicine

Wednesday, June 7, 2017

8:00 a.m.	Registration, coffee and light refreshments – Foyer, 1st Floor, Western Centre for Public Health and Family Medicine
8:30 a.m.	Opening remarks:  Dr. Jamie Wickett, postgraduate director, Department of Family Medicine, Schulich School of Medicine & Dentistry  Dr. Scott McKay, associate chair, Department of Family Medicine, Schulich School of Medicine & Dentistry
9:00 a.m. - 10:00 a.m.	Concurrent sessions A&B – oral presentations
10:00 a.m. - 10:30 a.m.	Poster presentations 1-14 / poster judging
10:30 a.m. - 11:30 a.m.	Session C – oral presentations
11:30 a.m. - 12:00 p.m.	Poster presentations 15-27 / poster judging
12:00 - 1:00 p.m.	BBQ Lunch / poster judging
1:00 - 2:00 p.m.	Session D – oral presentations
2:00 - 2:05 p.m.	Award presentations
2:05 - 2:35 p.m.	Closing remarks / evaluations

**25% of this program is dedicated to participant interaction.**

## Session A: Oral Presentations – Room 1150

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, light refreshments – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Jamie Wickett Dr. Scott McKay	Opening remarks
9:00 a.m.	Dr. Nathaniel Ibey	FAI Syndrome: A current review of EBM articles for FAI Treatment
9:15 a.m.	Dr. Bridgette Gerson	Obstetric and child health learning modules for family practice
9:30 a.m.	Dr. Steven Joseph	Physical Activity Teaching in Sport and Exercise Medicine Fellowship Curricula: An environmental scan
9:45 a.m.	Drs. Sofia Nastis, Daniel Pepe, Tupur Rahman, and Jane Sham	Standardizing Advanced Directives in a Family Physician Practice
10:00 a.m.	Poster presentations 1-14 / poster judging	
10:30 a.m.	Session C	
11:30 a.m.	Poster presentations 15-27 / poster judging	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session D	
2:00 p.m.	Award presentations	
2:05 p.m.	Closing remarks / evaluations	

**Dr. Nathaniel Ibey** – Sport and Exercise Medicine – Fowler Kennedy Sport Medicine Clinic

**FAI Syndrome: A current review of EBM articles for FAI Treatment**

Faculty Project Lead: Dr. Steven Macaluso

Project Type: Narrative/Literature Review

Objective: Provide a summary and critical appraisal of up-to-date, evidence-based medicine (EBM) articles for femoroacetabular impingement (FAI) treatment.

Project Summary: This project is a review of relevant guidelines and review of current literature (systemic/Meta-analysis/RCT) around FAI treatment. It provides article summaries using the PICO format, summaries of relevant clinical information and critical appraisal of current EBM for treatment. A literature search was performed focusing on the following treatment arms: Surgical, Intra-articular hip injections, Oral Medications, Physiotherapy, Alternative/Complementary Medicine. The review of EBM articles will be prepared for mskmedicine.com

**Dr. Bridgette Gerson** – Obstetrics, Women's and Child Health

**Obstetric and child health learning modules for family practice**

Faculty Project Lead: Dr. Kirk Hamilton, Dr. Loretta Seevaratnam, Dr. Daniel Grushka

Project Type: Learning modules

Family medicine residency is complex in its need to provide exposure and training in a vast number of specialties. Despite the requirements for training, these exposures are highly variable depending on training site therefore reducing standardization of education. While this has been the accepted status quo, it reflects a gaping aspect in our education we hope to fill with the occasional lecture or review article. Family practice with an obstetrics focus is one area where a basic level of training is lacking from center to center. The following project reflects this need to rectify and improve upon standard learning requirements. Modules were created after reviewing the CFPC objectives for family medicine residents for the care of obstetric patients and their young families. SOGC guidelines and other high-yield resources were reviewed to compile interactive cases to teach basic concepts in the field. The modules are meant to act as an additional concise resource for residents and medical students in their training. Modules include handouts for notes, links to online videos and training websites in addition to summary quizzes. Future research would include refining these modules and verifying their educational utility. For now, they can act as a foundation for the practical experiences we encounter from center to center during training.

**Dr. Steven Joseph** – Sport and Exercise Medicine – Fowler Kennedy

**Physical Activity Teaching in Sport and Exercise Medicine Fellowship Curricula:  
An environmental scan**

Faculty Project Lead: Dr. Lisa Fischer

Project Type: Research

Physical inactivity is a leading risk factor for death worldwide. Recently there has been much focus on the importance (and lack) of teaching around physical activity counselling in medical school and primary care residencies (including primary care sport and exercise medicine fellowship programs). This environmental scan of the 10 sport and exercise medicine fellowship curricula in Canada concerning teaching of physical activity counselling will help identify current training deficiencies and guide future direction and development of appropriate training resources.

**Drs. Sofia Nastis, Daniel Pepe, Tupur Rahman, and Jane Sham** – Victoria Family Medical Centre  
**Standardizing Advanced Directives in a Family Physician Practice**

Faculty Project Lead: Dr. Pawelec-Brzychczy

Project Type: Quality Improvement

Advanced Care Planning is defined by Pallium Canada as the values and directives that guide decisions for a patients' future health and personal care in an attempt to prevent suffering. Family physicians play a major role in facilitating this process, as effective communication over multiple visits is key in identifying these wishes. However, Nightingale, our electronic medical record, is ineffective in documenting end of life (EOL) discussions. Without a standardized format for documentation, health care providers are outdated in their patients' wishes regarding their health status changes. To fix this deficiency, our goal was to develop and implement an EOL discussion template for patients aged over the age of 65. This format allowed us to both normalize and standardize EOL discussions at our site. Over several PDSA cycles, we found even a simple standardized template provided successful EOL discussion documentation of eligible patients at VFMC. 45% of patients above the age of 65 had documented EOL discussions (a 100% improvement from baseline). However, we still encountered several barriers, the most common being time constraints. Despite this, it is evident that a standardized EOL template certainly improves both in the introduction and documentation of EOL goals. Future studies could include expanding the use of the template throughout our site and implementing alternative routes to initiating discussions, such as at any health deterioration or at physical exam visits. Most importantly, establishing standardized follow-up visits after initial EOL discussions could be explored, especially to facilitate continuity of care for advanced care planning.

## Session B: Oral Presentations – Room 1120

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, light refreshments – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Jamie Wickett Dr. Scott McKay	Opening remarks
9:00 a.m.	Drs. Marina Spudic and Stephanie Stocco	Increasing Appropriate Chest X-rays Ordered for Tuberculosis Screening in Long-term Care
9:15 a.m.	Drs. Nisha Arora and Samantha Reaume	Facilitating Advance Care Planning Discussions in a Primary Care Setting
9:30 a.m.	Drs. Kevin Biswas and Sean Cruise	Reducing inappropriate medications in patients over 70
9:45 a.m.	Drs. Evan Lilly and Kathleen Milne	Perceptions of palliative care and medical aid in dying among family physicians within Southwestern Ontario: a questionnaire-based study
10:00 a.m.	Poster presentations 1-14 / poster judging	
10:30 a.m.	Session C	
11:30 a.m.	Poster presentations 15-27 / poster judging	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session D	
2:00 p.m.	Award presentations	
2:05 p.m.	Closing remarks / evaluations	

**Drs. Marina Spudic and Stephanie Stocco** – Care of the Elderly

**Increasing Appropriate Chest X-rays Ordered for Tuberculosis Screening in Long-term Care**

Faculty Project Lead: Dr. Scott McKay

Project Type: Quality Improvement

In Ontario, the law requires all nursing home and retirement home facilities to screen incoming patients for tuberculosis. If they have not had chest imaging within 90 days prior to their admission to long-term care, imaging must be obtained once admitted to the facility. When a patient is admitted to a long-term care facility, it is often unknown whether they have had a chest x-ray in the previous 90 days due to the lack of documentation on the part of the referring practitioners. This leads to repeat ordering of chest x-rays to screen for tuberculosis. If further investigated, however, a recent chest x-ray may be discovered in hospital and/or community healthcare records.

Redundant imaging increases the burden of cost on the healthcare system as well as puts an already fragile elderly population through unnecessary testing.

This project aims to improve appropriate tuberculosis screening chest x-rays at Dearness Home Long-term Care facility. We implemented a system by which new admissions who did not have a documented chest x-ray within 90 days prior to presentation were further explored via hospital records to ensure that they did not previously have imaging obtained. If no historical chest x-ray was found within 90 days prior, one was ordered. Over the course of the project, we were able to increase the amount of appropriate Tuberculosis screening chest x-rays ordered at Dearness Home from a baseline of 60% to 80%.

**Drs. Nisha Arora and Samantha Reaume** – Avon Family Medicine Centre – Stratford

**Facilitating Advance Care Planning Discussions in a Primary Care Setting**

Faculty Project Lead: Dr. Stacey Snider

Project Type: Quality Improvement

Fewer than 9% of Canadian patients have discussed their end-of-life wishes with their family physician. Despite the paucity of advance care planning (ACP) discussions, we know that they are significantly beneficial. Patients who have end-of-life discussions are more satisfied with their care, have fewer life-sustaining treatments at the end-of-life, and are more likely to use hospice services. Family members of patients who experience intensification of treatment at the end-of-life tend to have poorer psychological outcomes. Our project aimed to increase the number of patients over the age of 80 (n=308) with a documented ACP discussion at our family health team's clinic from 10.4% to 30% over a four-month period. We implemented reminders in PSSuite, provided patient education materials, and developed a standardized approach using an ACP Toolbar in PSSuite to document ACP discussions in a manner reflective of the Level of Care sheets at the local hospital. Over the four-month period, we were able to increase the number of 80-year-old patients with an ACP discussion to 22.4%, of whom 62% had a completed ACP. Over the course of four PDSA cycles, the toolbar was modified for ease of use, and the educational materials were limited to a booklet based on patient feedback. Our results may be underestimated as the initial sample size of 308 patients was not reassessed as some patients deceased, turned 80, or were in nursing home. The primary challenge was having sufficient appointment time to initiate planning discussions. Future directions to overcome these challenges are proposed.

**Drs. Kevin Biswas and Sean Cruise** – Windsor

### **Reducing inappropriate medications in patients over 70**

Faculty Project Lead: Dr. Paul Ziter

Project Type: Quality Improvement

Background: Polypharmacy in the elderly poses a number of health and financial issues, both to individuals and the health care system. It has been associated with adverse events including falls, prescribing cascades, and morbidity such as dementia.

Aim: To devise and test the success of a strategy to make changes to inappropriate medications in patients over 70, targeting a success rate of at least 50%.

Methods: We interviewed 21 patients over the age of 70. Study subjects were interviewed sequentially during regularly scheduled appointments across two distinct clinic populations. Inappropriate medications were identified based on the STOP/START criteria and a dialogue was established. Medications were either changed, stopped, or left as they were and results were recorded. During the first PDSA cycle, a distinction was made between distinctly inappropriate medications and probably inappropriate medications, of which only the distinctly inappropriate medications were targeted for change. During the second PDSA cycle, a successful method was elucidated involving 1) educating around the dangers of a medication and 2) providing an adequate substitute for the medication (if required).

Results: Of the 21 study subjects, 24 distinctly inappropriate medications were identified. Of those 24 medications, 20 were stopped or changed, producing an 80% success rate (the initial target was 30%, raised to 50% during the second PDSA cycle).

Conclusions: Intervening with inappropriate medications can be done very successfully. The “educate and substitute” technique is an effective method of motivational interviewing in producing medication changes.

**Drs. Evan Lilly and Kathleen Milne** – CLFHT, Petrolia

### **Perceptions of palliative care and medical aid in dying among family physicians within Southwestern Ontario: a questionnaire-based study**

Faculty Project Lead: Dr. John Butler

Project Type: Research

Palliative care is a vital specialty within family medicine and medicine in general. Furthermore, many different attitudes towards palliative care exist and influence patient management. The purpose of this project was to obtain information on family physician perceptions of palliative care and medical aid in dying (MAID). The authors created a questionnaire using published guidelines for questionnaire construction, recommendations from local palliative care physicians, and a literature review. A test-retest pilot study was completed, producing a test-retest reliability coefficient of 0.85. The questionnaire was then sent to family physicians affiliated with the Schulich School of Medicine, Family Medicine Department. Out of the 525 physicians sent the online survey link, 44 completed it. Male respondents composed 54.5%, while 43.2% were female. There were a variety of religious affiliations identified, though the majority identified as Christian (68.2%). There was a wide range of years practiced, as well as the size of community in which respondents practiced. 70.5% of respondents had palliative care training in medical school and/or residency, and 61.4% wished to “definitely” or “probably” pursue further palliative care training. There was a good comfort level with managing a number of palliative care issues. There was a variable response to questions regarding MAID, highlighting the discourse that still exists between different parties. Overall, despite the low response rate, this study provides information that can help guide future efforts to understand how physicians perceive palliative care and MAID, as well as what factors affect those perceptions.

## Session C: Oral Presentations – Room 1150

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, light refreshments – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Jamie Wickett Dr. Scott McKay	Opening remarks
9:00 a.m.	Session A & B	
10:00 a.m.	Poster presentations 1-14 / poster judging	
10:30 a.m.	Dr. Darryl Putzer	A Randomized, Double-Blind, Placebo-Controlled, Phase 1 Trial Evaluating the PK, Safety and Preliminary Efficacy of EP-104IAR (Long-Acting Fluticasone Propionate) in Patients with Osteoarthritis of the Knee
10:45 a.m.	Dr. Wendy Kennette	Secondary Analysis of a Study Investigating the Attitudes toward Advance Care Planning in an Adult Population
11:00 a.m.	Drs. Nick Paquette and Aaron Sacheli	Establishing a Primary Care based Medical-Legal Partnership in Windsor, Ontario
11:15 a.m.	Drs. Kangrui Lin, Vasiliki Papadopoulos, Nisarg Patel, Adrian Stacy, and Dilini Wijayanayaka	End of Life (EOL)/Advance Care Planning (ACP) Discussions in Primary Care – Part 3
11:30 a.m.	Poster presentations 15-27 / poster judging	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Session D	
2:00 p.m.	Award presentations	
2:05 p.m.	Closing remarks / evaluations	

**Dr. Darryl Putzer** – Sport and Exercise Medicine, Fowler Kennedy Sports Medicine Clinic  
**A Randomized, Double-Blind, Placebo-Controlled, Phase 1 Trial Evaluating the PK, Safety and Preliminary Efficacy of EP-1041AR (Long-Acting Fluticasone Propionate) in Patients with Osteoarthritis of the Knee**

Faculty Project Lead: Dr. Lisa Fischer and Dr. Alan Getgood

Project Type: Research

Osteoarthritis (OA) of the knee is a common joint disorder and a leading cause of disability in the developing world. Osteoarthritis can lead to progressive joint pain, decreased range of motion, decreased function and impairment in daily life. Current treatments include OTC analgesics, physiotherapy and exercise programs, bracing, intra-articular corticosteroid and hyaluronic acid injections and surgical interventions. This study is a randomized, double-blind, placebo controlled, phase 1 trial evaluating the pharmacokinetics, safety and preliminary effect of EP-1041AR (long-acting fluticasone propionate) in patients with knee OA.

Thirty-two patients were recruited and after a two-week medication washout period were randomized (3:1) to the investigation drug or placebo injection groups. Patients were followed in clinic at 3d, 1, 3, 6, 12 (18, 24, 30) and 42 weeks and with weekly phone calls. Patients received a synovial fluid aspiration at the time of injection, and at the time of unblinding (12, 18, 24, 30 weeks). The primary outcome was to evaluate the pharmacokinetics, safety and tolerability of EP-1041AR in patients with knee OA for up to 42 weeks. Secondary outcomes included efficacy endpoints based on questionnaires including the patient's assessment of the disease, patient global assessment of arthritis, WOMAC and the physician's global assessment of arthritis. Patients were then scheduled for an exit visit if their pain scores returned to baseline for two consecutive weeks. Currently 32 patients have been injected, with one completing the protocol. Nineteen are still enrolled and there have been 12 early exits.

**Dr. Wendy Kennette** – Palliative Care – Windsor/London/Sarnia

**Secondary Analysis of a Study Investigating the Attitudes toward Advance Care Planning in an Adult Population**

Faculty Project Lead: Dr. Sheri Bergeron

Project Type: Research

Objective: The purpose of this study was to investigate whether gender, age, education, ethnicity or religious beliefs influenced patients' attitudes towards advanced care planning.

Results: Of the 400 questionnaires distributed, 388 were completed and included in the analysis. Secondary analysis was performed on four specific domains covered by the questionnaire. First domain looked at individuals' willingness to discuss ACP. Younger patients and those with higher levels of education were more likely to feel comfortable raising the topic of ACP on their own. When assessing feelings about the necessity of ACP, female patients, those with higher levels of education and those without religious associations were more likely to find that ACP was necessary. Whereas, those with increasing age tended to feel that ACP was not as important. Overall, 56% of respondents were interested in discussing ACP at any time with their family physician. Factors such as age, gender, education, ethnicity or religion did not influence this domain. Lastly, when determining preferences as to who should initiate these conversations, those with a higher level of education were more likely to want to initiate the conversation on their own whereas individuals 70 years or older would feel more comfortable with having a family member approach the subject compared to their younger counterparts.

Conclusion: This study has demonstrated that certain factors such as age, gender, education and religious beliefs can influence respondents' attitudes towards advanced care planning.

**Drs. Nick Paquette and Aaron Sacheli** – Windsor

**Establishing a Primary Care based Medical-Legal Partnership in Windsor, Ontario**

Faculty Project Lead: Dr. Ryan Carlini

Project Type: Quality Improvement

Medical legal partnerships (MLP) require physicians to recognize medical issues stemming from social determinants of health and refer such cases to free legal services for further management. Currently, the presenters are piloting a primary care based MLP in Windsor, Ontario, as a solution to provide patients with improved management for medical issues compounded by social circumstances. Potential patients are first identified through initial screening on consultation with their family physician using the I-HELP screening model (income, housing, education and employment, legal status, or personal and family stability). Candidate clients are subsequently referred to a centralized triage lawyer, at Pro Bono Law Ontario, for legal advice, and further connected to legal services if appropriate. This talk will present preliminary data from this project, in addition to a completed community-based needs assessment, which has revealed that the most frequently encountered medical-legal issues experienced by our patient population involve social assistance, employment, education and healthcare access.

**Drs. Kangrui Lin, Vasiliki Papadopoulos, Nisarg Patel, Adrian Stacy, and Dilini Wijayanayaka**

– St. Joseph's Family Medical Centre, London

**End of Life (EOL)/Advance Care Planning (ACP) Discussions in Primary Care – Part 3**

Faculty Project Lead: Dr. Saadia Hameed

Project Type: Quality Improvement

Introduction: With an aging population, it is integral that physicians engage in advance care planning (ACP) discussions with patients. This provides patients with an opportunity to make informed decisions regarding their future care that reflects their personal values. There has been a growing body of literature on ACP, which has demonstrated that these conversations are best initiated in the primary care setting, but are rarely performed due to numerous factors. One of these factors is a lack of physician-knowledge in initiating such conversations. A second factor is that asking patients to assert their future care directives is often out-of-context and situation-dependent. The goal of this project was to increase the rate of ACP discussions in the primary care setting in an informed and practical manner.

Methods: Patients over the age of 75 or with an estimated life expectancy of less than one year were identified as potential subjects to participate in an ACP discussion. A template based on current literature was created to assist in facilitating this discussion. A total of two PDSA cycles were completed.

Results: We increased the rate of ACP discussions from 0% to approximately 20% at our centre.

Conclusion: ACP discussions in primary care are an important part of comprehensive care.

Initiating these conversations can be challenging for many physicians and are often out-of-context from a patient perspective; therefore, a standardized template to help guide the discussion in an unintimidating manner and increasing physician education may be an effective way to improve quality of care.

## Session D: Oral Presentations – Room 1150

Time	Presenter	Presentation
8:00 a.m.	Registration, coffee, light refreshments – Foyer, 1st Floor, WCPHFM	
8:30 a.m.	Dr. Jamie Wickett Dr. Scott McKay	Opening remarks
9:00 a.m.	Session A & B	
10:00 a.m.	Poster presentations 1-14 / poster judging	
10:30 a.m.	Session C	
11:30 a.m.	Poster presentations 15-27 / poster judging	
12:00 p.m.	BBQ lunch / poster judging	
1:00 p.m.	Dr. Ashley Kellam	Assessing the Longer Term Impact of a Palliative Education Course
1:15 p.m.	Drs. Stephen Cornish, Sara Fairweather, and Monisha Harricharan	De-Prescribing Extended PPI Therapy in Primary Care [D-PEPTIC]: A quality improvement study
1:30 p.m.	Dr. Nadia Warsi	Fostering Advance Care Planning Discussions in the Family Medicine Setting
1:45 p.m.	Dr. Jagpreet Bali	Diabetes Distress
2:00 p.m.	Award presentations	
2:05 p.m.	Closing remarks / evaluations	

**Dr. Ashley Kellam** – Palliative Medicine – Windsor/London

### **Assessing the Longer Term Impact of a Palliative Education Course**

Faculty Project Lead: Dr. Darren Cargill

Project Type: Research

It is well known that early palliative care significantly improves quality of life, lowers system costs and improves survival for patients with advanced illness. Yet only 16-30% of Canadians have access to palliative services. Family physicians provide the majority of palliative care, but most feel unprepared and only “somewhat comfortable” in doing so. Over 80% of family physicians want education in more challenging palliative skills such as managing complex pain and emotional needs. To address these gaps, palliative education is offered through courses such as LEAP. Since 2009, 123 family medicine residents and physicians have attended LEAP in the Essex St. Clair LHIN. Online and paper surveys were distributed to these physicians to assess how well they felt this course met their needs. Overall there was a 39% response rate. Almost all (98%) participants felt more comfortable providing palliative care because of LEAP. The two topics participants felt were not covered thoroughly enough were billing (42%) and referral services (33%). After LEAP, most felt more comfortable using the Surprise Question to identify patients who may benefit from a palliative approach (62%) although few felt more comfortable completing a DNR or HPP (39% and 29% respectively). The most common barrier physicians reportedly still face in providing palliative care is limited on-call support (23%). Hopefully these results will help guide future palliative education courses to improve family physician’s comfort in providing palliative care to patients in the Essex St. Clair region.

**Drs. Stephen Cornish, Sara Fairweather, and Monisha Harricharan** – Byron Family Medical Centre, London

### **De-Prescribing Extended PPI Therapy in Primary Care [D-PEPTIC]:**

#### **A quality improvement study**

Faculty Project Lead: Dr. Scott McKay

Project Type: Quality Improvement

Proton pump inhibitors (PPIs) are one of the most commonly prescribed medications in primary care. Evidence supports their use for treatment of a variety of gastroenterological conditions. They are known to be effective medications and generally well-tolerated with few short-term adverse effects. However, these medications are often over-prescribed, and often renewed as ongoing therapy without a clear long-term indication. This practice increases individual medication burden, incurs unnecessary costs to patients and the healthcare system, and may put patients at risk of long-term adverse events such as enteric infections, fractures, pneumonia and electrolyte imbalances. Our research group was interested in addressing this problem using quality improvement methodology to reduce unnecessary PPI prescriptions.

At the Byron Family Medicine Clinic, baseline data collected in November 2016 showed that only 5.7% of patients on long-term PPI therapy were agreeable to a trial of discontinuation. The aim of this project was to increase this percentage to 80% over a 4-month period. Interventions were conducted to help increase patient awareness of PPI over-prescription, and a de-prescribing framework was distributed to the providers to help mitigate symptoms of rebound acid secretion. Overall, the number of patients who agreed to participate in a trial of discontinuation increased from 5.7% to 25% over four months. The number of documented discussions regarding discontinuation of PPIs increased from 17% at baseline to 43% by our third PDSA cycle. Barriers to achieving our goal included PPI renewals that were directly faxed to the pharmacy and the time constraints of our study overall.

**Dr. Nadia Warsi** – Windsor

### **Fostering Advance Care Planning Discussions in the Family Medicine Setting**

Faculty Project Lead: Dr. Elvira Yakoub

Project Type: Quality Improvement

This project aimed to increase the rates of Advance Care Planning discussions performed in the family medicine clinic. A baseline chart audit revealed that of all the patients aged 50 or older seen in a one-week period, none had Advance Care Planning discussions documented in their chart. It was decided that the first intervention would target patients. Posters were displayed in the clinic's waiting room to encourage patients to ask their physicians about end-of-life care. Following the initiation of the posters, Advance Care Planning was performed with only one patient over a one-week period. The target of the next intervention was the physicians. A patient handout was created to discuss the importance of end-of-life care. Handouts were placed in all exam rooms and physicians working at the clinic were informed of the availability of these handouts. It was hoped that having these handouts easily accessible would make discussions easier for physicians. Following the initiation of the handouts, Advance Care Planning was performed with 6 patients over a one-week period. This increase in the number of end-of-life discussions may have been affected by confounding factors. Physicians at the clinic were informed that this Quality Improvement project was taking place when the handouts were distributed and that may have served to increase in the number of discussions. Regardless, the handouts will continue to be made available in the clinic as they are an excellent patient resource.

**Dr. Jagpreet Bali** – Chronic Disease Management Program: Primary Care Diabetes Support Program

### **Diabetes Distress**

Faculty Project Lead: Dr. Sonja Reichert

Project Type: Case Study

Context: Individuals diagnosed with chronic disease often experience deleterious psychological side effects related to these diagnoses. A new diagnosis of diabetes can result in "Diabetes Distress", which is a psychological response to the idea that an individual may have to live with, and self-manage diabetes for the rest of their life. Unlike depression, it is important to understand the root of this condition, as approaches to treatment may differ substantially. Although health care practitioners (family physicians, specialists and allied health practitioners) are commonly used to helping patients manage their diabetes, they are often less aware of the psychosocial burdens. Objective: A case report will be used to describe how the family physician can screen for and assess diabetes distress using a validated questionnaire tool.

Case Description: A 61-year-old male feels his Type 2 diabetes is impacting all aspects of his life and as a result controlling his life in a negative way. He spends a lot of time worrying about the daily demands of diabetes, resulting in feelings of guilt, anger and embarrassment if he does not meet his glucose targets.

Discussion: Often misdiagnosed, or under diagnosed, it is important to be aware of diabetes distress. Undiagnosed, it may have deleterious effects on diabetes management, patient stress and family distress. As a result, family physicians need to be aware of this condition, be able to openly discuss it, and identify burdens associated with diabetes distress resolution.

## Poster Presentations – Room 1150

Poster	Presenter	Presentation
1	Dr. Katarina Lakovic	Improving Workup of Memory Concerns at the Victoria Family Medical Centre
2	Dr. Laura Clademenos	The impact of Computerized Physician Order Entry (CPOE) on patient flow in a medium volume, community emergency department (ED)
3	Drs. Victoria Lin, Zack Longarini, and Pratik Kalani	Improving the accuracy and consistency of smoking cessation documentation in an academic family medicine centre
4	Drs. Druvtej Ambati, Alethea Anderson, and Samantha Chittick	How do we help patients understand? Information retention with progressively more active patient involvement in COPD education: A Quality Improvement Project
5	Drs. Hau Huu Doan, Muhammad Dulymamode, Fatima Hashmi, and Michelle Welch	Increasing Waist Circumference Measurements During Periodic Health Examinations at Byron Family Medical Centre
6	Drs. Humaira Nasir, Steve Sato, and Aneesh Vaghadia	Feasibility of Implementing a Diabetic Foot Screening Tool in Diabetic Assessments
7	Dr. Jean-Marc Beausoleil	Improving Rates of HPV Vaccination Discussions with Young Males
8	Dr. Kun Huh	Reducing clinician screen time through clinical improved work-flow
9	Dr. Rick Krukowski	Does the provision of standardized exercise prescription pads improve the frequency of written prescriptions provided for the management of hypertension?
10	Dr. Wei-Zhen Lee	Missed DVT in Pregnancy: A Case Report
11	Dr. Mark Duckworth	Improvement in Concussion Evaluation and Management in a Family Practice Clinic With the Regular Use of the Sport Concussion Assessment Tool 3 (SCAT3)
12	Dr. Ramona Sommerdyk	Incorporating Cardiac Risk Scores into Cumulative Patient Profiles
13	Dr. Tommy Choy	Improving Penicillin Allergy Identification via Skin Test Referral
14	Dr. Matthew Wong	Quality Improvement: Decreasing benzodiazepine use in patients over the age of 65

Poster	Presenter	Presentation
15	Drs. Lucy Chung and Stephanie Solcz	Implementation of cognitive behavioural therapy (CBT) for treatment of insomnia in Clinics at Southwest Middlesex Health Centre in Mt. Brydges.
16	Drs. Narisa Duboff, Cara McMahon, and Sarah Sikkema	Improving Implementation of the Simplified Lipid Guidelines
17	Drs. Baraa Achta, Mansur Rahal, and Sandeep Thind	Nephropathy Screening for Diabetic Population at Victoria Family Medical Centre (VFMC)
18	Dr. Cael O'Reilly	Screening Smokers aged 40-65 for COPD with the Canadian Lung Health Test (CLHT) Tool
19	Drs. Afiza Elahi, Jaclyn Klein, and Phillip Tran	Diabetic foot assessment: Provider satisfaction with implementation of a new standardized tool
20	Drs. Narges Ghodsi and Jinoos Jianfar	Increasing the Shingles vaccination rate among the VFMC patients age 65-70 years old eligible for funded vaccine
21	Drs. Michelle Edwards, Abhishek Jariwala, and Christopher MacCarthy	Reducing the Number of Urine Cultures Ordered in Women Presenting with Acute Uncomplicated Cystitis
22	Drs. Kristin Chow, Jonathon Griffin, Nathan Lansdell, Mark Mousseau, and Rushika Perera	Introducing Diabetic Sick Day Plans into Routine Diabetic Visits at the Southwest Middlesex Health Centre
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**Dr. Katarina Lakovic** – Victoria Family Medical Centre, London

### **Improving Workup of Memory Concerns at the Victoria Family Medical Centre**

Faculty Project Lead: Dr. Scott McKay

Project Type: Quality Improvement

Family physicians are expected to manage common presentations such as dementia which affects many elderly people, reaching a prevalence of 17% of those over 80 years old. Yet, working up memory concerns in the office can be time consuming and complicated. Furthermore, residents often don't feel comfortable with their knowledge of dementia workup and diagnosis. This is reflected in the low number of patients receiving thorough workups at VFMC (17% of those seen for cognitive deficits). This QI project implemented an educational intervention that resulted in an increase in the residents' comfort level in working up (from 5.27 to 7.08) and diagnosing dementia (5.45 to 7.33) on a 10-point scale (process measure). A dementia workup package was developed and distributed to the residents in order to facilitate the ease with which dementia can be worked up in the office. The residents found the package useful and there was an increase in reported ease of dementia workup from 6.83 to 8.0 (process measure). The overall outcome measure goal was achieved as the percentage of patients receiving a thorough workup increased from 17% to 67%. Furthermore, on average, residents did not find this process increased the time they spent in each appointment, nor did it increase the number of the appointments they required (balance measures).

**Dr. Laura Clademenos** – Southwest Middlesex Health Centre, Mt. Brydges

### **The impact of Computerized Physician Order Entry (CPOE) on patient flow in a medium volume, community emergency department (ED)**

Faculty Project Lead: Dr. Julie Copeland

Project Type: Research

Objectives: Computerized physician order entry (CPOE) has been promoted to increase patient safety. The majority of research examining the effect of CPOE on patient flow has occurred in urban, academic emergency departments. We studied the impact of CPOE on three outcome measures: wait times (WT), length of stay (LOS) and left without being seen rate (LWBS) in a medium volume, rural centre.

Methods: We performed a retrospective cohort study of all patients presenting to Strathroy Middlesex General Hospital Emergency Department for one-year periods before, during and after implementation of CPOE in the hospital. Outcome measures were compared across these time periods. Subgroup analysis was performed among Canadian Triage and Acuity Scale (CTAS) levels and admitted patients.

Results: WT increased 14 minutes during the implementation and 7 minutes after. The median LOS increased 26 minutes during the implementation and 12 minutes after. The LWBS rate increased 2.1% during the implementation and 0.8% after. No effect was seen for CTAS 1 and 5 patients. WT and LOS increased after the intervention for CTAS 2, 3 and 4 and median LOS increased for admitted patients.

Conclusions: The implementation of CPOE in a medium volume, community hospital with single physician coverage increased median wait time, median length of stay and left without being seen rate. In subgroup analysis, this effect was not seen in CTAS 1 and 5 patients. The median LOS was increased for admitted patients. In the time period one year after implementation, there was a trend back towards pre-intervention data.

**Drs. Victoria Lin, Zack Longarini, and Pratik Kalani – Victoria Family Medical Centre, London**  
**Improving the accuracy and consistency of smoking cessation documentation in an academic family medicine centre**

Faculty Project Lead: Dr. Jamie Wickett

Project Type: Quality Improvement

Smokers are 30–40% more likely to develop type 2 diabetes than nonsmokers. The literature shows that diabetics who discontinue smoking will improve control of their blood glucose levels. Current guidelines emphasize the importance of regular assessment of smoking status during periodic diabetes appointments, however there are many challenges to this in real-life practice. We specifically identified inconsistent documentation of a patient's current smoking status in various areas of the EMR, namely the CPP and Diabetes flowsheets at our academic center. At baseline, 31% of all diabetic patients did not have their current smoking status in the last diabetic visit correspond with their CPP smoking status. Our aim was to improve the accuracy of all diabetic patient's current smoking status documented across their Electronic Medical Record (particularly CPP, Diabetes Mellitus flowsheets) at VFMC through resident education and frequent reminders prior to diabetic encounters. Our objective was to achieve 100% accuracy in smoking status documentation post-intervention by November 2016. We also assessed the effectiveness of addressing smoking cessation during patients' diabetes visits by looking at how often it led to pharmacy referrals, tobacco abuse assessment codes, and smoking cessation billing codes (E079, K039, Q042). Through two PDSA cycles, we achieved an approximate improvement in discrepancy rate from 31 to 20%, achieving an overall 80% accuracy rate, below our initial 100% accuracy target.

**Drs. Druvtej Ambati, Alethea Anderson, and Samantha Chittick – Hanover**

**How do we help patients understand? Information retention with progressively more active patient involvement in COPD education: A Quality Improvement Project**

Faculty Project Lead: Dr. Nick Abell

Project Type: Quality Improvement

Background: Patient education is a powerful tool in disease management. To enhance patient understanding, various educational materials can be utilized to increase health literacy and awareness of modifiable risk factors. The objective of this study is to increase patient understanding about their COPD.

Methods: Over three months, enrolled patients with COPD were surveyed using a 10-point numerical scale to assess their level of understanding of the disease, its management, and associated risk factors. After gaining baseline data, we used the same survey in three subsequent cycles that involved varying modalities for transmission of information including posters, brochures, and educational sessions.

Results: Over the course of three cycles, 30 surveys were collected and overall a good improvement in understanding of COPD was achieved (+33.2%). While there was a trend in improved patient understanding of the importance of vaccinations and the use of puffers (+19.1% and +21.1% respectively), we did not achieve a 25% increase from baseline in these areas. Knowledge about regular puffer use and smoking as a risk factor, measured by unfortunately confusing "double negative" survey questions, appeared to decrease between PDSAs and compared to baseline.

Conclusion: Overall, more active patient involvement seems to correlate with increased level of understanding of COPD management and risk factors. Further study and improved survey questions would further elucidate these results.

**Drs. Hau Huu Doan, Muhammad Dulymamode, Fatima Hashmi, and Michelle Welch –**

Byron Family Medical Centre, London

### **Increasing Waist Circumference Measurements During Periodic Health Examinations at Byron Family Medical Centre**

Faculty Project Lead: Dr. Scott McKay

Project Type: Quality Improvement

While several aspects of patients' health are regularly tackled during Periodic Health Examinations (PHEs) at Byron Family Medical Centre, we have found that waist circumferences (WCs) were not frequently measured; indeed, a survey of residents prior to starting the project revealed that 5 out of 6 residents had not measured waist circumferences at all, and the remaining resident had measured it during only 40% of PHEs. Our aim with this project was to increase the rate of waist circumference measurements performed by residents during periodic health examinations for patients aged 40 and above up to 90% by October 18, 2016, which was our last placement day at the center. A total of four PDSAs were performed, whereby different strategies were used to raise the rate of WC measurement, including making announcements, placing tape measures next to BP machines, putting up posters and placing tape measures next to weighing scales. The percentage of PHE visits for these patients incorporating waist circumference measurements was our primary outcome. By the last PDSA, residents were measuring waist circumferences in 66.67% of PHEs, which fell short of our target of 90%. While most residents claimed that WC measurements increased visit times by approximately 1–2 minutes, the major obstacle to performing WC measurements was forgetfulness, followed by patient reluctance. Other factors that may have prevented us from reaching our target include the low number of PHEs performed, and not monitoring the number of WCs performed more frequently.

**Drs. Humaira Nasir, Steve Sato, and Aneesh Vaghadia –** St. Joseph's Family Medical Centre, London

### **Feasibility of Implementing a Diabetic Foot Screening Tool in Diabetic Assessments**

Faculty Project Lead: Dr. Laura Lyons

Project Type: Quality Improvement

Foot complications are a major cause of morbidity and mortality in diabetic patients. In an effort to identify higher-risk patients earlier, the Primary Care Diabetes Support Program at St Joseph's Family Medical Centre (SJFMC) created a diabetic foot screening tool. However, diabetic appointments are lengthy, requiring assessment of vital signs, review of recent bloodwork, discussion regarding goals and lifestyle changes, patient education, physical examination and more. This study evaluates the feasibility of implementing such a screening tool in the family medicine practice environment. This takes into account revisions of the tool itself, patient age, known diabetic neuropathy and attachment to specialized diabetic care programs. The findings support the feasibility of the diabetic foot screening tool in order to streamline the identification and referral of diabetic patients at higher risk for developing foot complications.

**Dr. Jean-Marc Beausoleil** – Windsor

### **Improving Rates of HPV Vaccination Discussions with Young Males**

Faculty Project Lead: Dr. Paul Ziter

Project Type: Quality Improvement

Low rates of HPV vaccination persist in the young male population, including our practice setting, despite recommendation for routine use. The contributing factor that can be best influenced by clinicians is the rate at which we are discussing the topic. The unconscious bias that HPV is a disease primarily of concern to young women persists. Data has shown increased vaccination rates from concerted efforts to inform patients of its existence, benefits, and safety, which we sought to achieve in this project. Our first intervention was to use reminders and team discussions to increase awareness of the issue, and the proportion of patients we were holding discussions with. The second involved adding direct communication by mail, inviting patients to make an appointment to discuss the HPV vaccine.

The results from both cycles were promising, though not without setbacks. In PDSA 1 we increased the discussion rate to 57.5% of appointments, from 11.8% previously. In PDSA 2, we were able to increase the number of appointments in our population by 37.5%, with each of the added appointments (100%) including a discussion; however the rate of discussions held at other appointments actually dropped to 25%, likely from less frequent reminders as the clinical lead was offsite. The number of increased appointments (8, with 3 more expected) was low compared to the effort of using traditional mail, but electronic means could be used similarly in future. We held or anticipated discussions with 48 total patients by project end, surpassing our target of 40.

**Dr. Kun Huh** – Byron Family Medical Centre, London

### **Reducing clinician screen time through clinical improved work-flow**

Faculty Project Lead: Drs. Scott McKay and George Kim

Project Type: Quality Improvement

There is a growing concern that digitization of health records is causing an increase in healthcare provider screen time during patient encounters. Digitization of health records leads to use of point-of-care computing devices to record and retrieve patient information. Although it has improved legibility of clinical notes and enabled meticulous record keeping, many believe it has become another barrier in a patient-provider relationship.

There is growing evidence that an increase in provider screen time during a clinical encounter can reduce patient satisfaction. Accordingly, there has been some effort to optimize patient-provider relationship in a face-to face clinical encounter in the era of the digital health record. However, many of the suggested recommendations lack actionable details that can be directly translated into everyday practice.

In this quality improvement project, we will devise methods of automating different aspects of common primary care clinical scenarios to reduce provider screen time. One suggested method is utilization of condition specific templates on common presentations to reduce documentation burden. Other methods include automation of recurrent clinical work-flows through software automation.

Based on the 27 patient encounters during the first week of this quality improvement project, we found the average screen time during patient interviews (in-clinic screen time) was 11min 21sec. Furthermore, the average screen time post clinical encounter (back-room screen time) was 9min 37sec. Lastly, 22 of the 27 encounters started on time, and 20 of the 27 encounters had on time charting (charting finished within the scheduled time for a given patient).

**Dr. Rick Krukowski** – Strathroy Family Health Organization, Strathroy

**Does the provision of standardized exercise prescription pads improve the frequency of written prescriptions provided for the management of hypertension?**

Faculty Project Lead: Dr. Sara Puente

Project Type: Quality Improvement

The purpose of this QI project was to increase the frequency of written prescriptions for exercise for hypertensive patients by a group of practicing family physicians and one resident physician. A baseline period revealed no written prescriptions provided. The average number of eligible patients over the entire test period was 6-9 patients per week per physician. The resident's average per week was 1.

After a brief education session, prefabricated standardized exercise prescription pads were provided. The goal was one script written by each physician per week. The numbers of hypertensive patient visits were tallied for each physician during each PDSA cycle. The scripts were individually numbered for easy tracking.

Collectively, there was an increase over baseline in the number of scripts written (5) but it fell short of the stated goal of 15. Promotional materials were utilized prior to the next PDSA cycle.

Collectively, there was a 120% increase (11 scripts) over the second PDSA cycle. This increase was largely due to 6 of the 11 scripts were written by the resident physician for a majority of health conditions other than hypertension. Collectively, there was only a 25% increase (5 scripts) in the second PDSA cycle by the other 4 physicians.

Factors stated by the project physician group that contributed to not achieving the goals included time constraints and the scripts being too generic for individual patients. Studies reveal that lack of education in exercise prescription, referral and clinical tools are important factors affecting primary physicians as a whole.

**Dr. Wei-Zhen Lee** – FM-OB Kitchener and Chatham

**Missed DVT in Pregnancy: A Case Report**

Faculty Project Lead: Drs. Andrew Stewart and Alison Salhani

Project Type: Case Report

Venous Thromboembolisms are a significant cause of maternal morbidity and mortality in Canada despite advances in thromboprophylaxis and pregnancy alone increases a woman's risk of venous thromboembolism by 4-5 times.

A 33-year-old G2P0 with a di/di twin pregnancy presented to OB Triage with a 2-3 day history of marked swelling to her L leg. A venous Doppler ultrasound was appropriately ordered to rule out a DVT, but was found to be negative. She was discharged home with instructions to keep her leg elevated and wear compression stockings. The patient returned two days later with the same complaints but now having pain in her L groin. She had not tolerated compression stockings and was not following recommendations to keep her leg elevated. Because of the recent negative ultrasound and her poor compliance, no repeat ultrasound was done. Another two days later, she again returned with persistent edema and pain. A repeat Doppler was ordered and this time found an extensive DVT for which she was finally started on dalteparin.

This case illustrates the fairly significant increase in risk of VTE that pregnancy, especially a twin pregnancy, confers. It also demonstrates the importance of repeated ultrasound investigation in the setting of suspected DVT, especially given the potential mortality associated with venous thromboembolism in pregnancy.

**Dr. Mark Duckworth** – Goderich

### **Improvement in Concussion Evaluation and Management in a Family Practice Clinic With the Regular Use of the Sport Concussion Assessment Tool 3 (SCAT3)**

Faculty Project Lead: Dr. Sam Appavoo

Project Type: Quality Improvement

Family physicians play an important role in the diagnosis and management of minor traumatic brain injuries (MTBIs), also referred to as concussions. Unfortunately, there currently remains a lot of heterogeneity in the approach to diagnosis and treatment of concussions within primary care, based largely on a physician's personal experiences and training in the area.

Recent studies have suggested that the use of the Sport Concussion Assessment Tool 3 (SCAT3) without a baseline is 96% sensitivity in identification of head injury from healthy controls and 87% sensitive when compared to orthopedic physical injury without head injury control group (2).

Furthermore, in addition to diagnosis, SCAT3 can help identify and objectify severity of symptoms, which aids in targeting symptomatology and guiding treatment (1). Certainly, there is significant morbidity associated with concussions and long-term sequelae, especially when mismanaged or underdiagnosed (6).

This project aims to improve the quality of diagnosis and management of concussions in a rural Family Health Team by training members of the Family Health Team the proper administration of the SCAT3 and by making it available in paper copies as well as on the EMR when it was not previously.

**Dr. Ramona Sommerdyk** – Windsor

### **Incorporating Cardiac Risk Scores into Cumulative Patient Profiles**

Faculty Project Lead: Dr. Frank DeMarco

Project Type: Quality Improvement

Cardiovascular disease is a leading cause of death and morbidity in Canada. It follows then that the prevention of cardiovascular disease is of utmost priority for primary care providers.

Cardiovascular risk stratification for appropriate patients through verified algorithms such as the Framingham Risk Score is now standard of practice. Likewise, as with everything else in medicine, if it is not documented, it is not done. Thus, this project's purpose was to initiate the standardized documentation of patients' cardiovascular risk stratification. This was done through the electronic medical record software, Nightingale, which conveniently has the Framingham Risk stratification algorithm imbedded into its software, allowing for both calculation and documentation of cardiac risk. 50 patients of screening demographics were identified and risk stratified into low, medium or high categories. The identified patients had their risk score documented in their cumulative patient profile. Those with medium and high risk also had alerts attached to their charts. This was done to remind health care providers of their risk category and promote future discussion, as such discussion has been shown to increase compliance to cardiac risk factor lowering therapies.

Furthermore, attempts at contacting patients found to be high-risk was made in order to promote further discussion and counseling. Of the 8 identified high-risk patients, 6 were out of town, 1 was unwilling to return to the office for further discussion, and the last ultimately declined lipid lowering therapy.

**Dr. Tommy Choy** – Middlesex Centre Regional Medical Clinic, Ilderton

**Improving Penicillin Allergy Identification via Skin Test Referral**

Faculty Project Lead: Dr. Jessica Howard

Project Type: Quality Improvement

Penicillin is a widely prescribed antibiotic that is used in treatment of many different infections. Many patients with drug intolerances are labelled as penicillin allergic, which results in an increase in antibiotic resistance and prolonged hospital stays. It is unfortunate that in our EMR many allergy entries lack proper documentation of the type of allergy. Penicillin skin testing is a safe and effective way to identify if someone indeed has an IgE reaction. The vast majority of patients who undergo testing have negative results, which allows them to shed the penicillin allergic label. This project aims to improve identification of penicillin allergy by increasing the number of penicillin skin test referrals. We implemented a focused history template that helps to document the circumstances surrounding a reaction and identify those who may benefit from testing. Over the course of the project, the history template was used for 11 patients. Of these, we were able to make 9 new referrals for penicillin skin testing and identified 1 patient with (likely) IgG/IgM reaction.

**Dr. Matthew Wong** – Windsor

**Quality Improvement: Decreasing benzodiazepine use in patients over the age of 65**

Faculty Project Lead: Dr. Jeff Dennison

Project Type: Quality Improvement

Older patients are at higher risk of adverse drug events due to multiple factors. Benzodiazepines are commonly prescribed medications for older patients, despite well documented potential adverse effects including cognitive and memory impairment, falls, fracture and MVAs. Because of these risks and adverse events, benzodiazepines are considered inappropriate in patients over the age of 65. Failure to identify and educate these patients can lead to preventable adverse events in the future. A search of a Windsor family medicine practice's EMR was conducted to identify patients over the age of 65 who were on targeted benzodiazepines. At baseline, 6.4% of patients over 65 year old met the criteria. A quality improvement project was undertaken with the goal of decreasing the percentage of older patients (age > 65) who are on one or more of the targeted benzodiazepines by 10%. Three PDSA cycles spanning 3 months were performed which included discussions with identified patients, education of office staff, and utilization of flags and reminders in the EMR. The project resulted in an overall reduction of 21.6% in the main outcome measure. This project used an EMR search, education, and chart flags to effectively decrease the percentage of older patients on benzodiazepines.

**Drs. Lucy Chung and Stephanie Solcz** – Southwest Middlesex Health Centre, Mt. Brydges  
**Implementation of cognitive behavioural therapy (CBT) for treatment of insomnia in Clinics at Southwest Middlesex Health Centre in Mt. Brydges**

Faculty Project Lead: Dr. Julie Copeland

Project Type: Quality Improvement

Insomnia is one of the most common presenting problems to primary care. About 13% of the Canadian population or over 3 million people have insomnia. The usual practice for a family physician is to gain insight into their sleep hygiene, and rule out any organic and social reasons for insomnia. Typically, counselling on basic sleep hygiene and standard sedatives or benzodiazepines are prescribed despite their concerning side effect profiles. Insomnia commonly becomes a chronic issue and causes a significant disruption of a patient's quality of life. Cognitive behavioural therapy for insomnia (CBT-I) has been shown to be more effective than medication at treating insomnia but is rarely utilized in primary care. This project seeks to make CBT more frequently used as a means to treat insomnia.

**Drs. Narisa Duboff, Cara McMahon, and Sarah Sikkema** – Thamesview Family Health Team – Chatham

**Improving Implementation of the Simplified Lipid Guidelines**

Faculty Project Lead: Dr. Donna Watterud

Project Type: Quality Improvement

The Simplified Lipid Guidelines address lipid testing in the context of cardiovascular risk assessment and is aimed particularly at family physicians. However, many physicians have not yet implemented the new guideline and continue to order lipid profiles inappropriately. Our project aimed to increase appropriate lipid testing, encouraging physicians to order lipids according to the Simplified Lipid Guidelines. In order to facilitate this change, we created an information presentation reviewing the details of the Simplified Lipid Guideline and assessed rates of appropriate lipid testing before and after the information session. First we targeted the practices of our own preceptors (Cycle 1), then expanded the intervention to the Family Health Team (Cycle 2). We were able to improve appropriate lipid testing, both in our preceptors' practices and the Family Health Team. Cycle 1 improved appropriate lipid testing from 32% to 57%, an improvement of 78%. Cycle 2 improved appropriate lipid testing from 46% to 53%, an improvement of 18%. Presenting an information session on the Simplified Lipid Guideline was an effective intervention to improve appropriate lipid testing, and we should consider expanding the intervention to other Family Health Teams and independent practitioners in the community.

**Drs. Baraa Achtar, Mansur Rahal, and Sandeep Thind** – Victoria Family Medical Centre, London  
**Nephropathy Screening for Diabetic Population at Victoria Family Medical Centre (VFMC)**

Faculty Project Lead: Dr. Anna Pawelec-Brzychczy

Project Type: Quality Improvement

Background: In Canada, diabetes mellitus is the leading cause of kidney disease. Screening guidelines have been established to detect microalbuminuria using albumin creatinine ratio (ACR). The screening schedules are well specified for patients with Type 1 and 2 DM. At VFMC, only 71% of eligible patients had appropriate screening using ACR with appropriate follow up in 2014-2015. This CQI project is aimed at increasing the rate of appropriate screening to 90%.

Methods: The CQI project was designed with 2 PDSA cycles being conducted. In the initial cycle a lecture on diabetic nephropathy was provided with a review of the most up-to-date guidelines for diabetic nephropathy screening. In the following PDSA cycle, poster reminders which included a flow chart about the screening tests were placed in the examination rooms. These were used to prompt physicians providing care for diabetic patients to appropriately order nephropathy screening using ACR during a diabetes checkup.

Results: The first PDSA cycle carried out was designed at educating physicians about appropriate screening. Unfortunately this cycle did not provide any improvement in the number of patients accurately screened. The reminder poster placed in the examination rooms, yielded a 5% increase in appropriate screening of the diabetic population at VFMC.

Interpretation: The first PDSA cycle did not provide any improvement in screening for diabetic nephropathy. The second PDSA cycle provided only modest positive response to appropriate screening. This determined that factors affecting screening in the diabetic population are more complex than first thought, and require further trials.

**Dr. Cael O'Reilly** – Southwest Middlesex Health Centre, Mt. Brydges

**Screening Smokers aged 40-65 for COPD with the Canadian Lung Health Test (CLHT) Tool**

Faculty Project Lead: Dr. Vikram Dalal

Project Type: Quality Improvement

Acute Exacerbations of Chronic Obstructive Pulmonary Disease (COPD) is the 4th leading cause of death in Canada and is responsible for 15% of hospital admissions. Although smoking cessation remains the best intervention to prevent disease onset and progression, conversations around quitting stagnate when smokers have sub-clinical symptoms. The Canadian Lung Health Test (CLHT) is an excellent tool for screening smokers with sub-clinical symptoms for COPD, but remained underutilized in our clinic. This project attempted to improve rates of COPD screening in ex or current smokers aged 40-65 with the CLHT tool from a baseline of 5.9% documentation to 25% on the Annual Health Exam (AHE) after intervention through education and alteration to the AHE template. Although we did not hit our target of 25%, there was a modest increase in screening from 5.9% to 12.2%.

**Drs. Afiza Elahi, Jaclyn Klein, and Phillip Tran** – St. Joseph's Family Medical Centre, London

**Diabetic foot assessment: Provider satisfaction with implementation of a new standardized tool**

Faculty Project Lead: Dr. Laura Lyons

Project Type: Quality Improvement

Diabetes Mellitus is a common condition affecting 2.4 million Canadians. The complications are numerous, but our focus was on foot ulcers and subsequent amputations. The morbidity and mortality of foot ulcers are significant and one that we know can be prevented with standardized foot assessments. However, many centres, including our own, do not have such a tool in place. As such, this project aimed to monitor the implementation of a standardized tool, with a focus on usability and satisfaction of providers. The project consisted of using surveys to rate the user's overall satisfaction, with a goal to obtain 50% user satisfaction. Additionally, we assessed comprehensibility of the tool, its use as a referral form and disruption to the visit. Results were periodically discussed, and the tool was modified accordingly. There were two versions of the tool used, and based on satisfaction scores, the second version was superior (0% vs 66%). However, when the project was expanded to include users outside of the primary investigators (i.e., staff, medical students and PGY1s) there was a decrease in user satisfaction (66% vs 57%). Based on the survey results, this decrease was due to comprehensibility of the form, and many felt that it required clarification. In addition, it was noted that the form did not intuitively convey that it was a referral form and therefore missed one of its primary purposes. Hence, though the goal of 50% satisfaction was achieved, we believe the results could be further improved with formalized training prior to use.

**Drs. Narges Ghodsi and Jinoos Jianfar** – Victoria Family Medical Centre, London

**Increasing the Shingles vaccination rate among the VFMC patients age 65-70 years old eligible for funded vaccine**

Faculty Project Lead: Dr. Stacey Valiquet

Project Type: Quality Improvement

The aim of our study was about the increase to the coverage rate of shingles vaccine among the people 65-70 years old in Victoria Family Medical Centre. The whole project took 6 weeks; 3 PDSA cycles. We had 336 patients who were above 65-70 years old in our clinic. 63 of them were vaccinated before (19.15%) and 7 patients (2.08) were not eligible for shingles vaccine due to contraindications.

The interventions included informative sessions to educate the clinic staff and residents, distributing handouts, designed forms to be filled by the participant, informational posters mounted in the hallways, waiting area and examination rooms, and setting reminders at the alarm section of EMR. The last intervention was to call eligible patients 70-71 years old who should be vaccinated by the end of 2016. A total of 54 patients were visited over three individual intervals coinciding with our interventions, and 53 of them received vaccine (98%).

We were able to increase the coverage of the vaccination to 35.25% over the time of our interventions which is 8.16% higher than target of the Healthy People 2020 target which is 30% for people aged 60 years and older. It was due to the well-informed participants and patients, not missing any eligible patients during those intervals. Spending enough time with each patient could make the patients believe that their overall health will improve with the vaccinations. Our primary outcome of shingles vaccine rate was estimated at 5.77%, 3.34% and 6.99% during each intervention. The time of patient encounters didn't increase (balance measure) through the study.

**Drs. Michelle Edwards, Abhishek Jariwala, and Christopher MacCarthy** – Byron Family Medical Centre, London

### **Reducing the Number of Urine Cultures Ordered in Women Presenting with Acute Uncomplicated Cystitis**

Faculty Project Lead: Dr. Sonny Cejic

Project Type: Quality Improvement

Acute uncomplicated UTIs in women are one of the most common clinical presentations encountered in the outpatient setting. Despite the existence of several studies examining the diagnostic power of different elements of the history and physical examination in the evaluation of women presenting with acute uncomplicated UTI, this knowledge is frequently underutilized and there remains to be significant inter-physician variability in the evaluation and treatment of such patients (Berg, 2004). Underutilization of such diagnostic tools can lead to unnecessary urine cultures being submitted for otherwise healthy women presenting with an acute uncomplicated UTI, where an evidence-based approach in many cases would justify empiric treatment without such diagnostic studies being performed. While the idea of ordering routine urine cultures on such patients may seem trivial, one can predict that such behaviour will lead to unnecessary health-care costs, additional administrative burden, and a delay in necessary treatment for such patients. Through the provision of a concise, evidence-based diagnostic approach to women presenting with uncomplicated UTI, our quality improvement project aims to reduce the number of unnecessary urine cultures sent for this patient population.

**Drs. Kristin Chow, Jonathon Griffin, Nathan Lansdell, Mark Mousseau, and Rushika Perera** – Southwest Middlesex Health Centre, Mt. Brydges

### **Introducing Diabetic Sick Day Plans into Routine Diabetic Visits at the Southwest Middlesex Health Centre**

Faculty Project Lead: Dr. Kyle Carter

Project Type: Quality Improvement

The Canadian Diabetes Association recommends including a “sick day plan” as standard practice for all diabetics. The CDA guidelines recognize that the vast majority of diabetic patients will be maintained on drugs that can have adverse effects during times of acute illness. A sick day plan aims to prevent these adverse effects, such as acute kidney injury, by providing patient education and a physical handout on which medications to discontinue when experiencing volume losses or decreased oral intake. At baseline, no patient at the Southwest Middlesex Health Centre had a sick day management plan in place. The identified goal was to provide sick day plan education and physical handouts to 100% of type 2 diabetic patients during our study period. Two PDSA cycles were completed. The first PDSA cycle included incorporating the sick day plan into the EMR. During this cycle, 18% of diabetic patients received a sick day plan. The second PDSA cycle included a physical written reminder taped to the computer screen. During this cycle, 20% of diabetic patients received a sick day plan. There was an obvious variance between predicted and realized outcome, largely attributed to technical difficulties incorporating the sick day plan directly into the electronic diabetic flowsheet. Despite this variance, the project was a success overall. The project identified significant benefits to be had from incorporating sick days into standard practice and there was no negative impact on clinic flow identified.

**Dr. Phillip Tremblay** – Windsor

**A survey of family physician comfort level in providing palliative care in Southwestern Ontario with a special focus on advanced heart failure**

Faculty Project Lead: Drs. Paul Ziter and Lawrence Aoun

Project Type: Research

Objective: Determine the comfort level of family physicians in Southwestern Ontario in providing palliative care to their patients, with a focus on their patients with advanced heart failure.

Design: This was a cross-sectional survey study of practising family physicians in Southwestern Ontario.

Participants: Participants were sampled by sending an email link to faculty members of the Schulich School of Medicine & Dentistry, Department of Family Medicine, family physician members of the Essex County Medical Society and members of two family health organizations in Essex County.

Main outcome measures: The main outcome measures were family physician comfort level in Southwestern Ontario in providing palliative care to (a) their patients and (b) their patients with advanced heart failure.

Results: Overall, family physicians in Southwestern Ontario were comfortable providing palliative (93.75%) and end-of-life (91.67%) and were significantly more comfortable than those surveyed nationally in The Way Forward Initiative's survey. Respondents may be slightly less comfortable in providing this type of care to their patients with advanced heart failure (87.24% and 87.24%, respectively), although this result was not significant. The survey was limited by response bias, given the voluntary nature and a poor response rate. Additionally, given the survey was sent primarily to groups with an academic focus, results may overestimate physician comfort level.

Conclusions: The results of this survey suggest that family physicians practising in Southwestern Ontario feel comfortable providing palliative and end-of-life care to their patients but are perhaps less comfortable providing this type of care to patients with advanced heart failure.

**Drs. Lauren Kolecki and Andrew Pylypiak** – Southwest Middlesex Health Centre, Mt. Brydges  
**Safe Opioid Prescribing – The Use of Narcotic Treatment Agreements**

Faculty Project Lead: Dr. Vikram Dalal

Project Type: Quality Improvement

In light of the epidemic of opioid misuse, it has become more evident the need to ensure safe and responsible opioid prescribing in primary care. Studies have shown benefits for both the patient and the physician with regular use of narcotic treatment agreements. Unfortunately, its uptake is often poor among primary care physicians. Southwest Middlesex Health Centre is an academic training site with a large amount of resident trainees and a large population of patients on chronic opioids. Prior to this quality improvement project, only 60% of opioid prescriptions had documentation of an up-to-date narcotic treatment agreement. Over the course of five months, multiple cycles were implemented to help improve uptake of these agreements. Initial improvement was minimal with the use of educational sessions and message reminder in EMR. Further cycles involved ensuring continued improvement after resident changeover including colour-coding patients in the EMR and involving the nurses to keep track of opioid users. With these efforts, the rate of updated agreements rose to 75.4%. Multiple challenges were made evident and explained the difficulty in reaching our target of 80%. Nonetheless, this project showed significant improvement in narcotic treatment agreement use. Further efforts are required to ensure sustainable improvement in the long run.

**Dr. Chris Mireault** – Southwest Middlesex Health Centre, Mt. Brydges

**Completeness of Pre-operative Visits in a Regional Academic Primary Care Setting**

Faculty Project Lead: Dr. Jennifer Parr

Project Type: Quality Improvement

Preoperative evaluations are not infrequent in primary care, with the ability to enhance patient outcomes and reduce perioperative morbidity, their importance is indisputable; however, the lack of formal teaching in primary care residency programs (only 30% of subjects received formal teaching in residency) leads to a lack of comfort and completeness of documentation amongst trainees and primary care providers when performing assessments. Further barriers to completeness of preoperative documentation include poorly designed preoperative evaluation forms in current family practice electronic medical records (EMRs) and a lack of formal teaching in medical school (only 50% of subjects received formal training in medical school). That being said, with the plasticity of the EMR templates, in conjunction with other simple interventions such as informative posters and interactive teaching sessions, this project aims to improve the completeness of preoperative assessment documentation in a regional academic primary care clinic. The above-mentioned changes were implemented creating a ~44% increase in completeness of preoperative documentation using a 20-point evaluation scale of critical information to the anesthesia team. Furthermore, staff and resident confidence in completing preoperative assessments rose 9.5%, while all subjects felt that adequate time was allocated for preoperative visits pre and post interventions. The results of this project are quite promising, but further work needs to be completed on a system-wide level to achieve appropriate training of primary care graduates to ensure adequate information is documented in primary care preoperative visits.

**Drs. Stacie Kling and Rachel Orchard** – Middlesex Centre Regional Medical Clinic, Ilderton

**Increasing discussion around HPV vaccination in eligible males at the Middlesex**

**Centre Family Medicine Clinic**

Faculty Project Lead: Dr. Michael Craig

Project Type: Quality Improvement

Human papillomavirus (HPV) is one of the most common sexually transmitted infections, affecting approximately 550,000 Canadians each year. Approximately 40 types of HPV are known to infect the anogenital region of males and females, and are associated with many cervical, vaginal, anal, vulvar, penile, and oropharyngeal cancers, in addition to benign genital warts. Gardasil® is a quadrivalent HPV vaccination currently approved in males aged 9-26 for prevention of HPV-related anal cancers and anogenital warts. In 2016, the Ministry of Health and Long-Term Care expanded their provincial HPV vaccination program to include school-aged boys in Grade 7, in addition to school-aged girls (Grade 8 girls have been eligible to receive the vaccine through school programs for several years now). A catch-up program will be available for males of a certain age who do not receive the vaccine at school for whatever reason. With the implementation of the expanded vaccination program, we are hoping to improve patient awareness of both HPV infections and vaccination by having discussions around the vaccine at any given office visit. Our baseline discussion rate around HPV vaccination was 0.22% in the year 2016, and by simply placing information pamphlets and encouraging signs in our exam rooms, we were able to increase the discussion rate to 4.55% from January to March of 2017.

**Dr. Meg Hagarty** – Middlesex Centre Regional Medical Clinic, Ilderton

**Exploring the Barriers to Advanced Care Planning in Primary Care**

Faculty Project Lead: Dr. Jessica Howard

Project Type: Quality Improvement

We attempted to improve rates of Advanced Care Planning (ACP) screening patients over age 65 at Middlesex Centre Family Medicine Clinic through a Quality Improvement model. Advanced care planning has been shown to improve the overall end-of-life experiences for both patients and their families. Despite the known benefits of ACP, the estimated rate of ACP in Canadian primary care practices remains low. Research shows that there are physician, patient and system barriers that reduce the rates of ACP. Patients feel it is the responsibility of the physician to raise these discussions and that many would prefer these conversations to occur earlier. The aim of this project was to increase the rates of advanced care planning discussions in patients over 65 who were seen for a periodic health exam. We implemented provider education, patient resources from SpeakUP Ontario, and EMR reminders. The periodic health exam template in the EMR for patients over 65 was edited to include a screening section on advanced care planning. We were able to increase the rate of ACP discussion over a two-month period for patients seen for a PHE from a baseline of 0% to 16.7%.

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