

Resident Project Day

Abstract Collection

Department of Family Medicine

The Western Centre for Public Health
and Family Medicine
Wednesday, June 11, 2014

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 5.5 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

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|-------------------------|--|
| 8:00 a.m. | Registration, Coffee and Light Refreshments – 1st Floor, WCPHFM |
| 8:30 a.m. | Opening Remarks: Dr. Jamie Wickett, MD, CCFP, Assistant Professor and Postgraduate Director, Family Medicine, Western University Dr. Ted Osmun, MD, MCISc, CCFP Associate Professor, Family Medicine, Western University |
| 9:15 a.m. - 10:45 a.m. | Concurrent Sessions – Oral Presentations (breakout rooms) |
| 10:45 a.m. - 12:00 p.m. | Break – Poster viewing & Lunch |
| 12:00 p.m. - 1:30 p.m. | Concurrent Sessions – Oral Presentations (breakout rooms) |

Session A: Oral Presentations, 1150 WCPHFM (London Regional Program)

| Time | Presenter | Presentation |
|------------------|--|---|
| 8:00 a.m. | Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – 1st Floor, WCPHFM | |
| 8:30 a.m. | | Opening Remarks |
| 9:15 a.m. | Dr. Rachel Bevan | The Benefits of Home-based Palliative Care |
| 9:30 a.m. | Dr. Matthew Solomon | Assessment of Canadian and American Treatment Guidelines for Use of Opioids for Chronic Non-Cancer Pain using the AGREE II Tool |
| 9:45 a.m. | Dr. Tamra Steinmann | FMrounds.com: A Podcast Website for Family Medicine Education |
| 10:00 a.m. | Dr. Kathleen Thomasson | Cancer Screening – Who, When, How and Why?: A Patient Guide to Cancer Screening |
| 10:15 a.m. | Dr. Matthew Moss | Pediatric Emergencies: How Confident Are We? |
| 10:30 a.m. | Dr. Amanda Brown | An atypical presentation of Crohn's disease |
| 10:45 a.m. | Poster Displays & Lunch | |
| 12:00 p.m. | Sessions D, E & F | |
| 1:30 p.m. | | Closing Remarks |
| 1:45 - 2:00 p.m. | Evaluations | |

Dr. Rachel Bevan – Southwest Middlesex Health Centre

The Benefits of Home-based Palliative Care

Supervisor: Dr. Lauren Kopechanski

Project Type: Literature Review

Home-based palliative care provides comfort focused support to patients with life limiting illnesses. Palliative care has been shown to improve quality of care outcomes for patients and also to reduce health care costs. Despite the need for a provincial/national palliative care system, there is currently no unified home-based palliative care model throughout Ontario and Canada. Some of the requirements for such a system are discussed.

Dr. Matthew Solomon – Southwest Middlesex Health Centre

Assessment of Canadian and American Treatment Guidelines for Use of Opioids for Chronic Non-Cancer Pain using the AGREE II Tool

Supervisor: Dr. Ted Osmun

Project Type: Research

Objectives: The three primary goals of this study were to evaluate the quality of the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain and the American Pain Society's Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain using the AGREE II tool, to assess the underlying evidence for each recommendation, and to review the conflict of interest among authors.

Methods: Four reviewers scored both guidelines using the Appraisal of Guidelines for Research and Evaluation (AGREE) II tool, determined the level of evidence for each recommendation, and assessed the conflict of interest among the authors.

Results: Overall, the American Guideline scored 3.75 out of 7 and was recommended with modifications and the Canadian Guideline scored 5 out of 7 and was recommended without modifications. Of the 25 American Guideline recommendations, 21 (84%) were strong and 4 (16%) were weak. Furthermore, the level of evidence for the strong recommendations were high 0 (0%) times, moderate 4 (16%) times, and low 17 (68%) times. All 4 (16%) weak recommendations were supported by low quality evidence. Of the 36 Canadian recommendations, 4 (11%) were grade A, 11 (31%) were grade B,

And 21 (38%) were grade C. 15 (71%) of the authors in the American Guideline group declared a conflict of interest, While 25 (45%) authors of the Canadian Guideline group did so.

Conclusion: Long-term opioid therapy for chronic pain management is necessary in many situations despite a lack of good evidence for their benefit and established risks. The strengths in design of both sets of guidelines cannot make up for the lack of high-quality evidence, nor the conflicts of interest among authors. More research needs to be done to elicit more high-quality evidence to provide the basis for a nationally recognized clinical practice guideline.

Dr. Tamra Steinmann – Southwest Middlesex Health Centre

FMrounds.com: A Podcast Website for Family Medicine Education

Supervisor: Dr. Vikram Dalal

Project Type: Medical Education Project

With the widespread availability of hand-held computers, smartphones and tablets, being able to access learning resources anytime and anywhere has become the new norm. Audio podcasting is one of the new rapidly emerging educational tools. It involves informative audio excerpts that can be downloaded and listened to on audio-players. A survey of Canadian medical students at McMaster University in 2012 found that compared to conventional methods of learning such as textbooks, podcasts were the preferred learning resource.

In light of this information, I chose to create a podcast website called "FMrounds.com". It features a link to several audio podcasts that can be accessed and downloaded with most computers, tablets and smartphones. It was designed with the intention of providing medical students with an easily-accessible, convenient and up-to-date resource for learning about commonly encountered family medicine topics. Information presented in each podcast was obtained from a compilation of widely-supported medical resources. The majority of the podcasts were recorded using the program Audacity, an audio-editing tool. Subsequently, the recorded files were converted to MP3 format using the LAME MP3 encoder.

The finished files were uploaded directly onto the podcast website and can be accessed at www.fmrounds.com. Podcasting may allow the family medicine department at Western to further develop the CanMEDS-FM model by broadcasting family-medicine specific curriculum topics to its trainees. It may also present an opportunity for family physicians and residents to teach and thus may encourage peer-to-peer collaboration.

Dr. Kathleen Thomasson – Southwest Middlesex Health Centre

Cancer Screening – Who, When, How and Why?: A Patient Guide to Cancer Screening

Supervisor: Dr. Lauren Kopechanski

Project Type: Patient Education Project

Rationale: There have been changes to cancer screening guidelines in recent years and uptake of cancer screening remains low. Information directed at patients about current screening guidelines and their rationale may increase participation in screening.

Description: This project involved the development of a patient information booklet on statistics related to colon, breast and cervical cancer, risk factors for these cancers, current screening guidelines, methods of screening and what has changed in screening recommendations.

Relevance: Primary prevention and early detection of disease is an important part of family medicine. Screening can detect precancerous changes or find cancer early which impacts morbidity and mortality. Family physicians have an impact on their patients' cancer screening behaviours and therefore play a large role in the implementation of screening.

Methodology: A review of current provincial and national cancer screening guidelines was conducted. Development of the booklet was completed with assistance from the resource "Writing Health Information for Patients and Families" from Hamilton Health Sciences.

Application: This booklet can be used by family physicians to help facilitate discussion around appropriate cancer screening. Patients may have difficulty remembering discussions around healthcare topics and support from written materials can assist understanding.

Conclusion: Cancer screening is an important part of family medicine. Through this project, a booklet has been developed that will provide patients with information about cancer screening to help them make more informed decisions. Family physicians can utilize this booklet to help support their discussions with patients on this important topic.

Dr. Matthew Moss – Southwest Middlesex Health Centre

Pediatric Emergencies: How Confident Are We?

Supervisor: Dr. Julie Copeland

Project Type: Research

Purpose: The purpose of this study was to determine whether or not family medicine residents at Western University feel confident managing pediatric emergencies.

Methods: Family medicine residents from Western University were invited to participate in an online survey to assess their self-perceived confidence managing pediatric emergencies. Confidence ratings were collected using a 5-point Likert scale assessing the resident's confidence managing neonatal/infant cardiac arrest, pediatric cardiac arrest, pediatric multisystem trauma, anaphylaxis, asthma exacerbation, seizure, sepsis and diabetic ketoacidosis. Frequency distributions and affirmative and non-affirmative responses were calculated for each case. Residents also provided feedback on how they felt their confidence could be improved through their residency training.

Results: Seventy residents completed the survey (response rate 43.2%). Residents felt least confident with pediatric cardiac arrest, pediatric multisystem trauma, and neonatal cardiac arrest and less confident managing pediatric seizures, sepsis and diabetic ketoacidosis. Residents felt their confidence could be improved with formal training courses (27.3%), increased teaching at academic days (26.3%), increased exposure to pediatric emergency cases (25%), mandatory pediatric ER rotations (10.7%) and simulation training (10.7%).

Conclusions: Family medicine residents at Western University do not feel confident managing many critical pediatric emergency medicine cases, particularly cardiac arrest and trauma. Increased teaching time and specialized courses, in conjunction with simulation training, should be strongly considered by medical educators to help improve resident's knowledge and confidence managing these rare, but life threatening clinical scenarios.

Dr. Amanda Brown – Strathroy Family Health Organization

An atypical presentation of Crohn's disease

Supervisor: Dr. Sara Puente

Project Type: Case report

This case report highlights the illness experience of a 58 year old man who presented to the emergency room with abdominal pain, recurrence of chronic splenic vein thrombosis and acute exacerbation of chronic pancreatitis. The patient developed persistent fevers, elevated white count and melena stool despite treatment with metronidazole, vancomycin and meropenem. Biopsy from a colonoscopy confirmed Crohn's disease as the diagnosis and the patient's symptoms improved with prednisone. There was no history of recurrent diarrhea or weight loss, which are some of the classic signs of Crohn's disease, and the patient was older than usual for a first time presentation. Given the prevalence of Crohn's disease in developed countries and an estimated 233,000 Canadians diagnosed with Crohn's disease in 2010, it is important for family physicians to recognize common presentations but to be aware of atypical presentations as well.

**Session B: Oral Presentations, 1120 WCPHFM
(Bryon Family Medical Centre/Windsor Program/Hanover Program)**

| Time | Presenter | Presentation |
|------------------|--|---|
| 8:00 a.m. | Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – 1st Floor, WCPHFM | |
| 8:30 a.m. | | Opening Remarks |
| 9:15 a.m. | Dr. Kapil Goela | Q Fever: An Illusive Diagnosis |
| 9:30 a.m. | Dr. Rhea Mae Uy | “Breaking-In” Insulin: A Web-based Interactive Module on Initiating and Titrating Insulin in Type 2 Diabetes |
| 9:45 a.m. | Dr. Parvin Akter | The Role of Comprehensive Care to Improve Obstetric Outcome |
| 10:00 a.m. | Dr. Magbule Doko | The Importance of Narratives in Family Medicine |
| 10:15 a.m. | Dr. Diana Boughan | Building an Online Presence: Development of a Residency Program Website for the Hanover Rural Family Medicine Program |
| 10:30 a.m. | Dr. Imrana Muhammad | Deep Venous Thrombosis and the Importance of Patient centered Management |
| 10:45 a.m. | Poster Displays & Lunch | |
| 12:00 p.m. | Sessions D, E & F | |
| 1:30 p.m. | | Closing Remarks |
| 1:45 - 2:00 p.m. | Evaluations | |

Dr. Kapil Goela – Byron Family Medical Centre

Q Fever: An Illusive Diagnosis

Supervisor: Dr. George Kim

Project Type: Case Report

Q fever is an internationally found zoonotic disease caused by the highly infectious pathogen *Coxiella burnetii* and manifests in acute and chronic forms. This report presents a case of acute Q fever in a 52 year old female farmer. The patient presented with fever, influenza like illness and transaminitis. Q fever was considered only after multiple other infectious etiologies were ruled out. This case illustrates the difficulty in diagnosis of Q fever even when an occupational risk for Q fever is known. It also reviews the microbiology, epidemiology, clinical presentation, diagnosis and management of acute and chronic infections.

Dr. Rhea Mae Uy – Byron Family Medical Centre

“Breaking-In” Insulin: A Web-based Interactive Module on Initiating and Titrating Insulin in Type 2 Diabetes

Supervisor: Dr. George Kim

Project Type: Medical Education Project

Although a large proportion of type 2 diabetics need more aggressive glycemic management, which may include either starting or increasing insulin therapy, a treatment gap exists. The failure to sufficiently intensify treatment to achieve glycemic targets is known as clinical inertia. Barriers identified are both patient and physician-related. For physicians, lack of time, knowledge and comfort with insulin selection and dosing are the foremost challenges. The purpose of this project is to develop an online “interactive” module that will bridge knowledge gaps and increase comfort level of learners on type 2 diabetes insulin management. A search for evidence-based guidelines and recommendations on insulin therapy was conducted through PubMed, Medline, UpToDate, Google Scholar, Canadian Diabetes Association, American Diabetes Association and Ontario College of Family Physician websites. The most current and reliable information was condensed into a streamline approach to initiating and titrating insulin regimens among type 2 diabetics, and formed the content of the tutorial. Hot Potatoes™ freeware was then used to create the web-based module, which was published online through Western’s free public web space. Initial review by few peers and experts in the field yielded positive results on its usefulness. The “Breaking-in” Insulin module, indeed, has many attributes that make it a very effective learning tool: 1) it is comprehensive but concise, 2) it is interactive, and 3) it is accessible through various platforms (i.e. smartphones). If piloted into a study and proven effective, it holds promise of preventing and overcoming clinical inertia in learners’ future training and practice.

Dr. Parvin Akter – Byron Family Medical Centre

The Role of Comprehensive Care to Improve Obstetric Outcome

Supervisor: Dr. John Jordan

Project Type: Case Report

Objective: To discuss a case report featuring a successful outcome in a pregnancy complicated by multiple psychosocial risk factors which highlights the importance of a family physician as a maternity care provider.

Method: An in depth analysis of related literature retrieved from search of PubMed, cinahl, Google, and uptodate was done. Involved patients medical record was reviewed retrospectively.

Case Description: This report describes a 35 year old, new immigrant single woman in her third pregnancy with multiple psychosocial risk factors. Although she did not have any significant biomedical risk, providing obstetric care was challenged by psychosocial risk factors.

Discussion: Pregnancy itself can predispose a woman to multiple physical and psychological ailments. With the addition of psychosocial risk factors, a woman can become more vulnerable to develop multiple complications. Comprehensive obstetric care provided by family physician could be a great resource for a woman overburdened with psychosocial risk factors. Involving a multidisciplinary collaborative team can improve maternity care outcomes.

Conclusion: Obstetrics is an integral part of family medicine. Comprehensive care provided by family physicians can improve the outcomes of the pregnancies complicated by multiple psychosocial risk factors. Necessary measures should be taken to support family physicians providing obstetric care.

Dr. Magbule Doko – Windsor Family Health Centre

The Importance of Narratives in Family Medicine

Supervisor: Dr. Dale Ziter

Project Type: Major Essay

Narrative medicine is defined as the practice of medicine by a clinician that has narrative competence, which is the ability to recognize, absorb, process, and interpret stories of illness. The objective of the paper is to demonstrate that narratives are important in Family Medicine. Through storytelling, patients can process their illness and suffering and physicians can interpret and reflect on patient encounters. Narrative medicine allows Family Physicians to practice medicine with empathy, reflection, professionalism, and attention. In this presentation, the three movements of narrative medicine will be discussed in addition to how narrative medicine benefits Family Physicians, medical learners, patients, and society. Stories allow Family Physicians to develop an appreciation for their patients' illness experience. The process of writing can be transformative for the physician since it allows for acceptance, reflection, and connection. Narratives are doorways to the genuine understanding of both the patients' and physicians' experience in medicine.

Dr. Diana Boughan – Hanover Medical Clinic

Building an Online Presence: Development of a Residency Program Website for the Hanover Rural Family Medicine Program

Supervisor: Dr. Rochelle Dworkin

Project Type: Medical Education Project

The Hanover Rural Family Medicine program is a new rural program through Western University as of 2009. The purpose of this residency project was to create an easy-to-navigate residency program website to help attract new learners and enrich the experience of current residents by providing information about the program, information about benefits of rural medicine, necessary orientation materials, and on-line learning resources.

Canada continues to experience a shortage of family doctors in rural areas. Providing high quality rural learning experiences to residents and medical students is an important step in the "Rural Pipeline" theory to help recruit physicians to rural practice in Canada. Applicants to residency programs have been shown to use program websites to help make decisions regarding where they apply. Information technology continues to grow in importance in medical education and helps mitigate the challenges of learning in a rural setting by linking learners, instructors, and resources. The website's menus include program information, current residents, visiting learners, prospective residents, and learning resources. Current resident pages include information regarding teaching and how-to tutorials. Both current residents and visiting learner menus include necessary orientation materials for starting a rotation in Hanover. Prospective resident information includes a frequently asked questions page, learner testimonials, a "Why Rural Medicine?" page, and helpful related links. The learning resources menu includes resident notes and presentations as well as clinically focused articles.

Future goals for this project are to link the program website to the Hanover Hospital website and potentially the Western Family Medicine website.

Dr. Imrana Muhammad – Hanover Medical Clinic

Deep Venous Thrombosis and the Importance of Patient centered Management

Supervisor: Dr. Susan Boron

Project Type: Case Report

Deep Venous Thrombosis (DVT) is a serious and life threatening condition. Early diagnosis, treatment and prevention of the recurrence can be life saving. The purpose of this case report is to discuss the presentation and importance of screening and diagnosis of DVT in a young healthy female after approximately 3 months of initiation of oral contraceptive therapy for birth control.

A 16-year-old female, grade 11 student in a local high school, presented to the emergency department with pain in her left leg. According to the patient, she was playing dodge ball when she felt strain in her left groin 4 days ago. However, on examination her signs and symptoms were consistent with DVT, later confirmed with venous Doppler ultra sound. Ultra sound showed both proximal and distal DVT in left leg and she was treated with Coumadin and low molecular weight heparin.

Since DVT is a serious and life-threatening condition, it is very important to keep DVT at the top of our list of differentials for any lower extremity pain in all patients including young males or females. This case report presents a relatively unlikely finding of DVT in a young active female with no other risk factors except OCPs for 3 months.

Session C: Oral Presentations, 4th Floor, WCPHFM (Enhanced Skills Program)

| Time | Presenter | Presentation |
|------------------|--|--|
| 8:00 a.m. | Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – 1st Floor, WCPHFM | |
| 8:30 a.m. | | Opening Remarks |
| 9:15 a.m. | Dr. Katie Hoenselaar | The Impact and Management of a Shortened Cervix on Pregnant Women and their Families |
| 9:30 a.m. | Dr. Jennifer Kong | Common Advice Given in Pregnancy |
| 9:45 a.m. | Drs. Erin Weersink & Bryan Lemenchick | Does a four-week rotation in primary care sports medicine improve family medicine residents' knowledge and confidence in the assessment of musculoskeletal conditions? |
| 10:00 a.m. | Dr. Cecilia Li | Implementing Steps in Creating a Guideline for Deactivation of Cardiac Implantable Electrophysiological Devices (CIEDs) in Palliative Care |
| 10:15 a.m. | Dr. Aurelia Ona Valiulis | Noninvasive prenatal testing: The Good, the Bad, and the Slippery Slope Into the Unknown |
| 10:30 a.m. | Dr. Victoria Smith | Corticosteroid use in the Treatment of Anaphylaxis in the Emergency Department |
| 10:45 a.m. | Poster Displays & Lunch | |
| 12:00 p.m. | Sessions D, E & F | |
| 1:30 p.m. | | Closing Remarks |
| 1:45 - 2:00 p.m. | Evaluations | |

Dr. Katie Hoenselaar – Obstetrics Program

The Impact and Management of a Shortened Cervix on Pregnant Women and their Families

Supervisor: Dr. Daniel Grushka

Project Type: Case Report

Case Description: A 34 year old female, G3P2, presented at 30+1 weeks gestation with an incidental finding of a shortened cervix on ultrasound.

Introduction: Cervical shortening is common in pregnancy and is concerning as it is a risk factor for preterm birth. High-risk pregnancies, including those at risk for preterm birth, cause significant distress to mothers and families. The purpose of this report was to examine current management of cervical shortening and explore the effect it has on families.

Methods: Information was gathered from UpToDate and SOGC guidelines. PubMed was searched for articles on the effect of high-risk pregnancies on families. Written consent was obtained from the patient. Ultrasounds were printed from her chart and discussions from her weekly prenatal appointments were recorded.

Results: Women without risk factors for cervical insufficiency and an incidental finding of a cervix <2 cm on TVUS before 24 weeks should receive vaginal progesterone.

My patient was anxious about delivering early and felt helpless. She was taken off work and put on bed rest. The family had excellent social supports, which helped minimize her stress.

Conclusions: Vaginal progesterone can reduce preterm birth rates in women with short cervixes. Several studies have demonstrated a link between pregnancy-related anxiety and shorter gestations. My case illustrates that women with short cervixes experience high levels of anxiety in their pregnancy. More research is needed to clarify the impact various supports may have on preterm birth rates in cervical shortening.

Dr. Jennifer Kong – Women's Health and Obstetrics Program

Common Advice Given in Pregnancy

Supervisor: Dr. Kirk Hamilton

Project Type: Literature review

Newly pregnant patients often have multiple questions and concerns about body and lifestyle changes that occur in pregnancy. There is a lot of information widely available to patients on the internet but unfortunately not all of it is evidence-based. Family physicians are often looked upon to give advice and recommendations about food, exercise, vitamins and various other topics. However, much of this information comes from experience and the answers are not always easily found in textbooks or guidelines. This project will look at the evidence behind common advice given to patients in early pregnancy. It will specifically look at vitamins, food, drink and exercise recommendations. It will also look at our current treatments for varicose veins, leg cramps, stretch marks and back pain. Finally, it will briefly review some of the common alternative treatments used in pregnancy.

Drs. Erin Weersink & Bryan Lemenchick – Sport and Exercise Medicine

Does a four-week rotation in primary care sports medicine improve family medicine residents' knowledge and confidence in the assessment of musculoskeletal conditions?

Supervisor: Dr. Lisa Fischer

Project Type: Quasi-experimental design (or Observational)

Introduction: Despite the fact that musculoskeletal (MSK) injuries are the second most common reason for a visit to the primary care physician, family medicine residents and physicians indicate a low level of knowledge and confidence in MSK assessment. The goal of this study is to evaluate whether a four-week rotation in primary care sports medicine improved family residents' knowledge and confidence in the assessment of the knee, ankle, and shoulder.

Methods: Eight Family Medicine residents were enrolled in this prospective pilot study during an elective four-week rotation in Sport and Exercise Medicine. Pre- and post-rotation assessment of the participants' physical examination skills of the ankle, knee, and shoulder joints were made using an OSCE-like checklist on a normal standardized patient. A 6-point Likert scale was used to assess the participants' pre- and post-rotation confidence in both performing the above joint examinations and subsequently developing a differential diagnosis.

Results: Wilcoxon Signal Rank Test revealed statistically significant ($p < 0.05$) improvement in pre- and post-rotation physical examination test scores for the ankle, knee, and shoulder. Post-rotation confidence for examination of the shoulder and knee joints significantly improved ($p < 0.05$), however this did not occur for the ankle joint. Also, participants' post-rotation confidence in developing a differential diagnosis after physical examination significantly improved ($p < 0.05$) for all three joints.

Conclusion: In conclusion, family medicine residents completing a four-week rotation in primary care sports medicine demonstrate significant improvements in pre- and post-rotation physical examination test scores of the ankle, knee, and shoulder examinations.

Dr. Cecilia Li – Palliative Care Program

Implementing Steps in Creating a Guideline for Deactivation of Cardiac Implantable Electrophysiological Devices (CIEDs) in Palliative Care

Supervisor: Dr. Darren Cargill

Project Type: Major Essay/Literature Review

CIEDs are cardiac devices that have been introduced to the medical field for more than 50 years with millions of devices implanted in the USA. They include both Implantable Cardioverter Defibrillators (ICDs) and Pacemakers (PMs), which have seen exponential growth in technological advancement and indications for implantation. However, the management for CIEDs becomes less clear in the palliative care setting.

When patients are near the end of life, deactivation of CIEDs is frequently requested by patients or their family as they believe the electrophysiology of the device may lead to harmful shocks, prolongation of death, or artificial sustainment of life. These concerns are often not raised by healthcare professionals until an acute deterioration or when patients are actively dying. There is relatively few scientific data that guide clinicians, especially in the case of PMs which are the majority of implants over the years. Despite professional organizations in the USA and Europe developing guidelines with two publications in 2010 from the Heart Rhythm Society and European Heart Rhythm Association, there are no protocols in Canada and clinical practice continues to be uncertain in regard to ethical and legal concerns.

This paper will provide recommendations on implementing steps for deactivation of cardiac devices. It will serve to guide clinicians on what considerations are required, how to approach the topic to discuss with patients and their family, as well as aim for future themes to address. We hope that this paper will allow for better communication and attempt to deliver better quality of care for patients' journey.

Dr. Aurelia Ona Valiulis – Obstetrics Program

Noninvasive prenatal testing: The Good, the Bad, and the Slippery Slope Into the Unknown

Supervisor: Dr. Daniel Grushka

Project type: Literature Review

The noninvasive prenatal test (NIPT) is a newly available first-trimester screening test for trisomies 13, 18, and 21. It is a simple blood test that measures cell free fetal DNA in the maternal circulation, intended to identify pregnancies suspicious for these aneuploidies. Patients with positive results may then be offered definitive, more invasive investigations, such as chorionic villus sampling or amniocentesis. Although it has the potential to one day replace Integrated Prenatal Screening in Ontario, NIPT is currently available only through private funding at laboratories who have partnered with genetics companies from the United States. The SOGC has recently established recommendations for the use of this test, indicating that it may be considered in women deemed to be at high risk; however, since the test is relatively new to Ontario healthcare providers, there is potential for it to be requested and inappropriately ordered for those at average risk if healthcare providers are unfamiliar with the test. Without informed guidance on the proper use and interpretation of this screening test, women may potentially make definitive decisions early in the pregnancy based on NIPT results. Furthermore, the ability to identify and evaluate fetal DNA in the first trimester has the potential to evolve to include more detailed genetic information, bringing with it important ethical considerations and concerns. This project seeks to evaluate NIPT, make other physicians aware of this test's availability, its appropriate use, its limitations, and to examine the ethical sequelae of this new technology, so that we may appropriately guide our patients.

Dr. Victoria Smith – Emergency Medicine

Corticosteroid use in the Treatment of Anaphylaxis in the Emergency Department

Supervisor: Dr. Eman Loubani

Project type: Retrospective medical record review

Introduction: Emergency department (ED) treatment of an acute anaphylactic episode should consider the possibility of biphasic reactions, which can develop within 72 hours of the initial allergic reaction. Although corticosteroids have been suggested for prevention of biphasic anaphylaxis, there is no clear consensus regarding their use. The objective of this study was to determine the proportion of patients treated with corticosteroids after presenting to the ED with acute anaphylaxis, and the proportion that had a biphasic reaction within 72 hours of their initial ED visit.

Methods: This was a retrospective chart review of all patients presenting to one of two tertiary care EDs with a discharge diagnosis of anaphylaxis or anaphylactic shock from April 2012-March 2013. Patient demographics, medications

administered, corticosteroid use, admissions and in-hospital deaths were recorded by trained research personnel. Results: Of the 140 patient encounters included, 118 (84.3%) had epinephrine administered either pre-hospital or in-hospital. Mean (SD) age was 22.3 (17.5) years and 76 (54.3%) were male. 127 (90.7%) patients received corticosteroids in the ED. Of these, 40 (31.5%) were given orally and 87 (68.5%) were given intravenously. Median (IQR) time to steroid administration was 36.5 min (19, 57). 5 (3.6%) patients were admitted. There were no in-hospital patient deaths. Biphase reactions occurred in 6 (4.3%) patients, all of whom were given corticosteroids during the initial ED presentation. Conclusions: Despite the paucity of evidence supporting their use in the prevention of biphasic anaphylactic reactions, corticosteroids were used by the majority of clinicians in the treatment of anaphylaxis in the ED. Future studies should assess the use of corticosteroids to prevent biphasic reactions in anaphylaxis.

Session D: Oral Presentations, Room 1150 WCPHFM (Victoria Family Medical Centre)

| Time | Presenter | Presentation |
|------------------|--|--|
| 8:00 a.m. | Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – 1st Floor, WCPHFM | |
| 8:30 a.m. | | Opening Remarks |
| 9:15 a.m. | Sessions A, B & C | |
| 10:45 a.m. | Poster Displays & Lunch | |
| 12:00 p.m. | Dr. Sarah Kawaguchi | Breast cancer screening practices in southwestern Ontario: an evaluation of adherence to evidence-based guidelines |
| 12:15 p.m. | Dr. Vida Omidvar | PalliCare: Your Free Palliative Symptom Management App. |
| 12:30 p.m. | Dr. Caitlin Thompson | 'Chat it Up': a Health Education Community Outreach Project. |
| 12:45 p.m. | Dr. Jeffrey Lee | Squamous cell cancer in primary care: Not another sore throat |
| 1:00 p.m. | Dr. Michael Tancio | Development and Implementation of an Information Sticker to Better Facilitate Home Care |
| 1:15 p.m. | Dr. Jillian MacDonald | Community naloxone distribution programs: The solution to the public health epidemic of opioid overdose? |
| 1:30 p.m. | | Closing Remarks |
| 1:45 - 2:00 p.m. | Evaluations | |

Dr. Sarah Kawaguchi – Victoria Family Medical Centre

Breast cancer screening practices in southwestern Ontario: an evaluation of adherence to evidence-based guidelines

Supervisor: Dr. Jamie Wickett

Project type: Research

Objective: To determine the extent to which the 2011 Canadian Task Force for Preventive Health Care (CTFPHC) guidelines for breast cancer screening have been implemented in primary care settings

Design: Cross-sectional survey

Setting: London, Ontario

Participants: Subgroup of primary care providers with hospital privileges in London, Ontario

Main outcome measures: Current breast cancer screening practices for asymptomatic, average-risk women

Results: Thirty-six completed surveys were returned (response rate 24%). Over 90% complied with current recommendations for mammography screening in both age categories 40-49 and 50-74. Most respondents (94%) indicated that they had implemented the new CTFPHC guidelines, yet only 14% had changed their practice of routinely performing clinical breast examination. Similarly in opposition to the guidelines, almost half (43%) reported that they continue to teach breast self-examination to their patients. No significant associations were detected between physician and practice characteristics and overall guideline adherence. Male physicians were less likely to routinely perform clinical breast examination ($p=0.029$), but no gender-based differences were detected in any of the other screening maneuvers.

Conclusion: Our study found high rates of adherence to CTFPHC guidelines for mammography, but lower rates for breast self-examination and clinical breast examination. Most primary care providers reported that they continue to perform clinical breast examination as part of routine care.

Dr. Vida Omidvar – Victoria Family Medical Centre

PalliCare: Your Free Palliative Symptom Management App.

Project Type: Medical Education Project

PalliCare is a free web application that is meant to assist medical learners and physicians in improving their palliative care skills for their patients. It is accessible from www.pallicare.ca which can instantaneously install on a smart phone or a tablet. This app is important in clinical practice as in many medical schools, there is limited learning opportunities in palliative care for learners. There is not an available app to this day that can make essential palliation information in London, ON available as easily and efficiently as PalliCare.

This WebApp assists the clinicians in managing different grades of the seven commonest symptoms in palliative care which include: anxiety/depression, constipation, delirium, dyspnea, loss of appetite, nausea/vomiting, and pain.

PalliCare also provides the key resources available in the community and has a collection of useful forms, which are utilized commonly by clinicians in palliative care, available on the app.

The creator retrieved the content of this app from Cancer Care Ontario website as well as the CPS Essentials App. She ensured that the presented information is concise and easy to follow.

In order to provide a patient centred care, it's important for Family Physicians and residents to assist patients with their medical needs, especially with their end of life care. This app has the potential to assist clinicians in helping patients improve their symptoms. This would hopefully translate in keeping palliative patients out of hospital and in their homes, where they would be able to spend the remaining of their lives symptom free and with their loved ones.

Dr. Caitlin Thompson – Victoria Family Medical Centre

'Chat it Up': a Health Education Community Outreach Project

Supervisor: Dr. JoAnne Hammond

Project Type: Community Outreach Project

There are many barriers to accessing health care among immigrants such as poor health literacy, cultural, financial and language barriers and negative stigma for some health conditions such as mental health and HIV. Health care services are often underutilized in immigrant populations. Therefore, more effort needs to be put toward outreach health education services to help newcomers to Canada overcome these barriers. In conjunction with local community agencies, The Regional HIV/AIDs Connection and the London Community Chaplaincy, a program called 'Chat it Up' was developed to promote health education and address specific health questions among a small immigrant population in London, Ontario. The goal was to help participants find ways to incorporate healthy living into their own culture and daily lives. Despite a small number of participants, the program was well received. This program helped its participants take on a more active role in their health and hopefully make them more comfortable in discussing their own needs

with their physician. In addition, developing and attending this program has increased my awareness of specific needs and challenges in providing health care to immigrant populations. This will ultimately improve patient care by allowing me to better understand my patients' needs and find common ground with them more effectively. It will also help me to understand ways in which I may alter my practice in order to accommodate some of these needs and improve access to healthcare.

Dr. Jeffrey Lee – Victoria Family Medical Centre

Squamous cell cancer in primary care: Not another sore throat

Supervisor: Dr. Daniel Grushka

Project Type: Case Report

Case: This report describes a 51 year old female patient presenting to her family physician's office with mouth and throat pain who would eventually be diagnosed with squamous cell cancer of the head and neck. Side effects from her treatments as well as poor pain control had a significant impact on her quality of life for which she sought the support of her family medicine team.

Purpose: This case is relevant to family medicine as it highlights some the challenges of being a general practitioner. The family physician is challenged with being the front line medical expert for patients with any type of complaint but also with the expectation of providing a holistic approach using the patient centered model of care.

Methods: Information for this case report was gathered from the patient's electronic medical record at the primary care physician's office. Literature search was done through PubMed as well as the Western University databases.

Discussion: Head and neck cancers account for 3% of adult malignancies in the US. Smoking and alcohol work synergistically to increase ones risk of disease. Recurrence is typically in the region of the primary, but previous treatments can leave the area disfigured and diagnosis of recurrence difficult. The patient's use of walk-in clinics likely delayed her diagnosis. The challenge of building rapport as a resident in a teaching centre and techniques for building it are discussed.

Dr. Michael Tancio – Victoria Family Medical Centre

Development and Implementation of an Information Sticker to Better Facilitate Home Care

Supervisor: Drs. K. Hamilton and S. Valiquet

Project Type: Quality Improvement Project

Patient care within the home is a unique aspect of Family Medicine, presenting distinctive challenges for the patient, their loved ones, and their care team. In the Palliative Care setting, a patient's condition fluctuates rapidly and management decisions must be made urgently. Timely communication with the appropriate member of the care team is imperative for delivery of care.

Anecdotal experience has shown that many patients and caregivers within the home are unaware of the proper method to contact their care team. This can lead to unnecessary trips to the emergency room, which is a known indicator of poor quality end of life care. Thus, having accurate information readily displayed and accessible for the patients and caregivers can greatly improve the likelihood that the correct health care professional is contacted when necessary. Using the roster of the London Home Palliative Care team, a reminder sticker was developed and implemented on the front of the patient's home care chart. The sticker served as an educational aid for the home care physician to instruct patients and their caregivers about the proper method to contact the care team and as an accessible visual reminder for patients and their caregivers.

Following implementation, patients and caregivers' knowledge regarding proper contact protocol improved. The reminder sticker could potentially dissuade patients from presenting to the emergency room. Future studies may aim to track the prevention of emergency room visits following review of contact protocol and implementation of the reminder sticker. The sticker was well received and since been used by a number of patients or caregivers to contact the care team.

Dr. Jillian MacDonald – Victoria Family Medical Centre

Community naloxone distribution programs: The solution to the public health epidemic of opioid overdose?

Supervisor: Dr. Anna Pawelec-Brzychczy

Project Type: Literature Review

Background: Non-fatal and fatal overdose from opioids is increasing with death estimates in Canada between 500-1000 per year. Many of these overdoses are witnessed and take between one and three hours after drug use to occur. This presents an opportunity for intervention. Naloxone is a opioid antagonist that can completely reverse the

potentially fatal opioid side effect of respiratory depression. The objective of this paper was to review the recent relevant literature on the distribution of community take-home naloxone programs and their use in preventing opioid overdose.

Methods: A PubMed search was conducted on articles published between January 2004 and 2014 using search terms "naloxone distribution". Those publications were reviewed, along with their reference lists. Exclusion criteria included articles that were not available in English, unpublished work, and research not involving humans.

Results: Many community take home naloxone programs have been implemented in the United States and other countries, but only three exist in Canada. Studies show that naloxone is an effective and safe treatment for overdose prevention. However, factors complicating the implementation of programs include users willingness to participate in education and administration of naloxone, physicians' and other healthcare providers knowledge and views and fear of police involvement and prosecution.

Conclusions: Though a promising solution to the opioid overdose epidemic, continued research and education is essential to our understanding of addiction and drug users and the utility of opioid prevention programs in reducing deaths.

**Session E: Oral Presentations, Room 1120 WCPHFM
(St. Joseph's Family Medical and Dental Centre/Tavistock Program/
Stratford Program)**

| Time | Presenter | Presentation |
|------------------|--|---|
| 8:00 a.m. | Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – 1st Floor, WCPHFM | |
| 8:30 a.m. | | Opening Remarks |
| 9:15 a.m. | Sessions A, B & C | |
| 10:45 a.m. | Poster Displays & Lunch | |
| 12:00 p.m. | Dr. Ilango Thirumoorthi | The continuing challenges of relieving chronic non-cancer pain with narcotics |
| 12:15 p.m. | Dr. Kaitlyn Brown | Common injuries in Runners: A guide to diagnosis and management for family doctors |
| 12:30 p.m. | Dr. Lance Miller | The Role of Social Media in the Future of Family Medicine Training and Continuing Education in Canada |
| 12:45 p.m. | Dr. Alison Yeung | Childhood Immunizations: A Patient Education Website |
| 1:00 p.m. | Dr. Caroline Albion | Can a Complex Medical Case be Simplified by a Patient Centred Approach? |
| 1:15 p.m. | Dr. Ashley Lee | Management of Acute Diverticulitis in a Primary Care Setting |
| 1:30 p.m. | | Closing Remarks |
| 1:45 - 2:00 p.m. | Evaluations | |

Dr. Ilango Thirumoorthi – St. Joseph's Family Medical and Dental Centre

The continuing challenges of relieving chronic non-cancer pain with narcotics

Supervisor: Dr. Saadia Hameed

Project Type: Major Essay

Pain is the primary presenting physical complaint in general practice. Of the subsets of pain, chronic non-cancer pain (CNCP) is a common reason for consultation with a physician. When it comes to the management of CNCP, there continues to be a lack of consensus regarding the appropriate use of narcotic medications. This paper aims to explore physician and patient factors that contribute to a reluctance or refusal to prescribe opioids for CNCP, and to review the effect of educational initiatives and national guidelines on prescribing practices. Using broad search terms on PubMed (pain management, chronic non-cancer pain, opioid pain control and under treatment of pain) related articles over the past 30 years were reviewed. Common and consistent themes have been identified in regards to opioid use for CNCP including medication effectiveness, identifying appropriate candidates for treatment, addiction potential, regulatory scrutiny, lack of knowledge and side effects. Even with new national opioid guidelines and increasing focus on physician education, there continues to be a significant burden of CNCP in Canada. As family physicians are on the front lines of the treatment of CNCP, it is vital that they have both knowledge of the major issues surrounding the use of narcotics for treatment of CNCP and continuing education on identifying suitable patient populations for treatment. Such capabilities on the part of family physicians will play a key role in improving the quality of life for this patient population and also minimize the burden on the health care system.

Dr. Kaitlyn Brown – St. Joseph's Family Medical and Dental Centre

Common injuries in Runners: A guide to diagnosis and management for family doctors

Supervisor: Dr. Saadia Hameed

Project Type: Medical Education Project

This project was carried out to create an education and reference document for family physicians to refer to when faced with common running injuries in the clinic. A literature review process using PubMed and UpToDate was employed to create an overview of symptoms, causes, diagnosis and treatment of common running injuries that may be encountered. This is important because the injuries are often very specific, and can have serious physical and psychological ramifications if not recognized and treated properly and promptly. Family doctors may not have adequate exposure to sports medicine to make a timely diagnosis, and the standard recommendations of rest, ice and anti-inflammatories are often inadequate and/or ineffective in resolving injuries where complex biomechanical, training and nutrition factors may be at play in the cause of, and solution to the injury. The purpose of this document is to guide injury recognition, treatment and triage to appropriate colleagues (PT, sports med specialists, ortho) so that these complex injuries are not misdiagnosed and mistreated, both of which delay return to running.

Dr. Lance Miller – St. Joseph's Family Medical and Dental Centre

The Role of Social Media in the Future of Family Medicine Training and Continuing Education in Canada

Supervisor: Dr. Larry Schmidt

Project Type: Major Essay

Social media has been a rapidly growing part of day to day life for many people over the past decade, and not immune to this are medical professionals and trainees, for both personal and professional uses. The goal of this paper is to examine current attitudes and evidence regarding social media use as an educational tool, as well as highlight current implementations of these relevant to Family Medicine. Social media tools have many potential benefits including decreasing the knowledge translation window, the ability to provide massive platforms for distribution and real time discussion of content, and these interactive mediums may improve learning. This must be balanced with proper implementation of these tools, with caution being taken to ensure that professional boundaries are not being violated, and learners and educators must both be aware of concerns about the accuracy of the content itself and barriers to its effectiveness. Improving training in creating and utilizing these resources could improve the usefulness of a rapidly expanding educational tool which could be especially relevant to Family Medicine in Canada, where internet and social media could span the broad geographical gaps in order to reach many rural and remote trainees and practicing physicians.

Dr. Alison Yeung – St. Joseph's Family Medical and Dental Centre

Childhood Immunizations: A Patient Education Website

Supervisor: Dr. Susan McNair

Project Type: Patient Education Project

My website on Childhood Immunizations was designed to be an educational resource for parents and physicians. The website contains vital information on the preventable childhood diseases, as well as the vaccinations used to prevent them. Being a parent can be scary and everyone wants to do what is best for their children. It is hard to know what to read and what to believe when it comes to immunizations. This patient education project takes information from reputable sources grounded in science and clinical trials, and presents it in an easy-to-read format. The diseases that I will discuss include measles, mumps, rubella, diphtheria, tetanus, pertussis, polio, haemophilus influenza b, meningococcal disease, hepatitis B, Human Papilloma Virus, pneumococcal disease, rotavirus, and influenza. Childhood immunizations are recommended by the Centres for Disease Control (CDC), the Canadian Pediatric Society (CPS), Public Health Agency of Canada, and many others. My ultimate goal was to provide parents with the website during pregnancy, so they can educate themselves and ask questions before it is time to immunize. I also hope that using my website early will prevent parents from going on the internet and reading many different resources, some of which may not be reliable. I hope to improve vaccination rates in my future practice, which in turn will improve herd immunity and public health. This website may also be a resource for other health care practitioners, and will be available on the World Wide Web.

Dr. Caroline Albion – Tavistock Family Health Network

Can a Complex Medical Case be Simplified by a Patient Centred Approach?

Supervisor: Dr. Ken Hook

Project Type: Case Report

This case report outlined the case of a 74 year-old man who presented with recurrent fevers, weakness and confusion, initially diagnosed as a straight-forward urinary tract infection. His recent medical history included cystoscopy and six cycles of intravesical Bacillus Calmette-Guerin (BCG) for low-grade bladder cancer. Intravesical BCG is a live attenuated form of Mycobacterium bovis, an acid fast bacilli related to Mycobacterium tuberculosis used for patients diagnosed with superficial transitional cell carcinoma of the bladder. Four weeks after initial presentation to hospital and much invasive testing to rule out common etiologies such as metastatic cancer, endocarditis or lymphoma, urinary culture demonstrated acid fast bacilli. Further testing identified the BCG organism used for immunotherapy for bladder cancer. The patient's hospital chart was reviewed and compared to published cases to review risk factors for systemic infection following BCG immunotherapy. This paper highlights the approach to determine a difficult diagnosis when imaging and lab tests are not helpful. It also highlights the patient's perspective while the medical team struggles to make sense of the presentation of symptoms. Family Physicians are in a unique position, for diagnosing difficult cases using the patient centred method. This case is relevant to Family Medicine as it demonstrates that the best decisions are often made in partnership with our patients. The patient's perspective is key; in the initial planning of investigations, to the timing of initiation of treatment and finally overseeing successful discharge.

Dr. Ashley Lee – Avon Family Medical Centre

Management of Acute Diverticulitis in a Primary Care Setting

Supervisor: Dr. Stacey Snider

Project type: Chart Audit

Purpose: This chart audit evaluated patients with suspected uncomplicated acute diverticulitis, and their diagnosis and management in the family practice setting.

Methods: Charts of interest were found by searching for the key term "divertic" and charts billed with the ICD code for diverticulitis from the EMR of a family medicine clinic in Stratford, Ontario. Data was collected for demographic and clinical variables including age, gender, history of previous diverticulitis, fever, presence of urinary or bowel symptoms, and whether bloodwork and imaging investigations were ordered.

Results: Seventy encounters between Jan 1, 2008 and June 30, 2013 were evaluated. 72.9% of patients received no investigations and were diagnosed with diverticulitis based on clinical presentation. Rate of treatment failure was 21.43% (+/- 10.0%, 95% CI). No variables were significantly different between the bounce back and treatment success groups. There was a trend towards significance for gender and age ($p=0.08$ in both cases). 2.9% required subsequent hospital admission, and none required surgery. In terms of management, almost all (98.6%) patients received antibiotics but less than a quarter (24.2%) of charts documented recommended bowel rest. Approximately half (49.2%) of patients without recent colonoscopy were referred for follow-up colonoscopy.

Conclusion: This limited study suggests that diverticulitis is usually diagnosed by family physicians using clinical findings alone. In this audit, almost all patients were treated with antibiotics while bowel rest was less likely to be encouraged. This approach might be reasonable and safe given that no patients required surgery and only 1.4% of patients had complications, however larger studies are needed.

Session F: Oral Presentations, 4th Floor, WCPHFM (Enhanced Skills Program)

| Time | Presenter | Presentation |
|------------------|--|--|
| 8:00 a.m. | Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – 1st Floor, WCPHFM | |
| 8:30 a.m. | | Opening Remarks |
| 9:15 a.m. | Sessions A, B & C | |
| 10:45 a.m. | Poster Displays & Lunch | |
| 12:00 p.m. | Dr. Jean Chen | Initial presentations and outcomes of necrotizing infections: a retrospective chart review. |
| 12:15 p.m. | Dr. Britta Laslo | Transitions in medical education - the experiences of a final year medical student preparing for the transition into residency: a qualitative study |
| 12:30 p.m. | Dr. Alexandra George | White Matter changes in the brain: an important marker of risk and clinical presentation in the elderly |
| 12:45 p.m. | Dr. Augene (AJ) Seong | Comparison of cardiac enzyme testing in the emergency department before and after introduction high-sensitivity troponin testing. |
| 1:00 p.m. | Dr. Kate Gushulak | Are we adhering to diabetic ketoacidosis management guidelines in the emergency department? |
| 1:15 p.m. | Dr. Thomas Cheung | Are patients presenting with hip fracture to LHSC ED treated in accordance with Health Care Ontario's recommended Quality-Based Procedures for hip fracture? |
| 1:30 p.m. | | Closing Remarks |
| 1:45 - 2:00 p.m. | Evaluations | |

Dr. Jean Chen – Emergency Medicine

Initial presentations and outcomes of necrotizing infections: a retrospective chart review

Supervisor: Dr. Victor Ng

Project Type: Chart Review

Objective: To determine the clinical features at presentation of patients diagnosed with necrotizing fasciitis and the in-hospital outcomes.

Methods: Retrospective review of adult patients with a discharge diagnosis of necrotizing fasciitis at LHSC (annual census 125,000) over a 5-year period (April 2008 to March 2013).

Results: 60 patients were included. Mean (SD) age was 53.7 (17.8) years, 60% were male and the median (IQR) hospital length of stay was 17.1 (7.8, 33.5) days. Common co-morbidities at presentation included immunocompromise (58.3%), diabetes mellitus (41.7%), vascular disease (45.0%) and obesity (24.6%). Initial presentations included swelling (91.7%), erythema (86.7%), bullae (28.3%), petechiae (8.3%), and bruising (45.0%). 59 (98.3%) patients received antibiotics, of which 69.5% were ordered by the ED. Median (IQR) time to antibiotic administration was 3.5 hours (1.9, 7.5). 50 (83.3%) underwent surgery, with a median (IQR) time from initial presentation to surgery of 15.5 hours (7.8, 74.9). In-hospital mortality amongst those who had surgical intervention was 14.0%, compared to in-hospital mortality of 60.0% for those who did not receive surgical intervention (fj 46%, 95% CI 14.8 – 70.2%).

Conclusions: This study suggests that diabetes mellitus, immunocompromise, and obesity are common co-morbidities of necrotizing fasciitis, and that survival is higher amongst patients who receive surgical treatment. Patients presenting to the ED meeting this clinical picture warrant a high degree of suspicion.

Dr. Britta Laslo – Academic Family Medicine

Transitions in medical education - the experiences of a final year medical student preparing for the transition into residency: a qualitative study

Supervisor: Dr. Darren Van Dam

Project Type: Qualitative Research

Introduction/Rationale: The continuum of medical education includes many transitory periods for students and residents. These periods have been shown to be associated with personal negative emotions as well as poor patient care such as a focus on efficiency over patient-centeredness, lying or withholding information from supervisors, and increased turfing behaviour.

Objective: To explore the feelings and experiences of a final year medical student preparing for the transition to residency.

Design: A phenomenological study using a one-on-one interview to collect data.

Participant: A purposive sample of one final year medical student from the Michael G. DeGroot School of Medicine in Hamilton, Ontario.

Method: One semi-structured interview was conducted by a trained investigator. The interview was audiotaped and transcribed verbatim. Field notes were kept throughout data collection and analysis. Data analysis employed iterative techniques that allowed for concurrent analysis with data collection. Transcripts were reviewed for key words, themes and emerging patterns. Reflexivity was used to ensure trustworthiness of the findings.

Main Findings: The participant described the competing feelings of fear and excitement and the overall experience of uncertainty versus opportunity. Three key concepts promoted the feeling of fear and the experience of uncertainty: increased risk and repercussions, logistical learning and a lack of understanding by loved ones. Three key concepts promoted the feeling of excitement and the experience of opportunity: adventure and challenges, supportive relationships and past transitional experiences.

Conclusions: These findings support recommendations to strengthen formal undergraduate mentorship programs, explore peer support groups and recognize the fear and negative emotions experienced by learners during this transitional period. A larger sample will provide further insight into the experiences of learners during transitory periods in their medical education.

Dr. Alexandra George – Care of the Elderly

White Matter changes in the brain: an important marker of risk and clinical presentation in the elderly

Supervisor: Dr. Scott McKay

Project Type: Literature Review

INTRODUCTION:

White matter changes on imaging are common in older adults, yet are often ignored. However, recent studies have demonstrated white matter changes may provide important information on mobility, urinary control, mood, and

cognition in the elderly (1,2). A review of the literature was performed to summarize current research on white matter changes and their importance in common geriatric syndromes.

METHODS: A MEDLINE search was done using both MeSH words from key articles and key words of white matter changes and geriatric presentations. Articles were limited to English language and the last 10 years. 277 articles were identified. All abstracts were reviewed for content describing a relationship between white matter and geriatrics syndromes including mobility, urinary control, mood or cognition. From this, full articles of selected abstracts were reviewed in more detail.

RESULTS: 21 articles reported a relationship between white matter and gait/mobility changes; 7 articles reported a relationship between white matter and urinary incontinence; 15 reported a relationship between white matter and mood; and 61 articles reported a relationship between white matter and cognition.

CONCLUSIONS: White matter changes are often ignored. However, emerging studies suggest white matter changes explain important clinical presentations in the elderly, notably gait changes, urinary incontinence, mood, and cognitive changes. White matter changes should no longer be viewed as an artifact of vascular disease, but as an important marker of common geriatrics syndromes, of which progression can, and should be slowed by appropriate treatment.

Dr. Augene (AJ) Seong – Emergency Medicine

Comparison of cardiac enzyme testing in the emergency department before and after introduction high-sensitivity troponin testing.

Supervisors: Drs. Munsif Bhimani and Karl Theakston

Project type: Retrospective chart review

Introduction: The purpose of this study was to compare the use of cardiac enzyme testing in the ED before and after introduction of the new hs-TnT assay.

Methods: TnT and HsTnT data was retrieved for all visits to one of two academic tertiary care EDs during two separate one-year periods; before and 6 months after introduction of hs-TnT testing. Frequency of tests ordered, frequency of positive tests, time between repeat tests, and ED length of stay were compared between the two groups.

Results: During the first study period, there were 111,206 ED visits for which 18,606 (16.7%) had an initial TnT ordered. During the second study period there were 111,769 ED visits and 19,420 (17.4%) had an initial hs-TnT ordered. The proportion of these initial tests that were positive increased from 9.2% to 10.8%. Of those patients who had an initial test done, 3,059 (16.4%) went on to have repeat testing with the TnT system, while 5,666 (29.2%) had repeat testing in the hs-TnT period. Of those patients who had repeat testing, positive repeat tests increased from 5.6% to 8.3%. After implementation of hsTnt, the median time between initial and repeat tests decreased by 57 minutes. For those patients discharged home after repeat testing, the median ED length of stay decreased by 30 minutes.

Conclusions: This study suggests that hs-TnT has reduced the time for repeat testing as well as length of stay for patients discharged after repeat testing. However, it has also increased the frequency of repeat testing.

Dr. Kate Gushulak – Emergency Medicine

Are we adhering to diabetic ketoacidosis management guidelines in the emergency department?

Supervisor: Dr. Christine Richardson

Project type: Chart Review

Introduction: The management principles of DKA in the emergency department (ED) include rapid fluid resuscitation, appropriate administration of insulin, avoidance of hypokalemia, avoidance of rapid changes in serum osmolality, and a search for a precipitating cause. The objective of this study was to determine how often adult patients with DKA are provided with treatment in the ED that meets the current published guidelines.

Methods: This was a retrospective chart review of patients 18 years of age and older with a discharge diagnosis of DKA at one of two tertiary care EDs from April 2011 to April 2013. 102 patients were included.

Results: 78 (76.5%) patients had at least 2 litres of fluids given in the first 4 hours since physician assessment, which meets the guideline. Of the 85 patients that were on an insulin infusion, 49 (57.6%) had a fingerprick glucose test done every hour, as is recommended. 29 patients (28.4%) received a bolus of insulin at initiation, which is discouraged by the guidelines. Of the 100 patients who were in the ED for ≥ 2 hours, 34% had serum electrolytes measured every two hours, as is recommended. The incidence of hypokalemia during ED stay was 18.6%. 43.1% of patients had a precipitating cause of their DKA identified by the emergency physician.

Conclusions: The results of this study provide impetus to educate ED staff about the management guidelines for DKA. A specific care pathway in the ED may standardize treatment and facilitate adherence to guidelines.

Dr. Thomas Cheung – Emergency Medicine

Are patients presenting with hip fracture to LHSC ED treated in accordance with Health Care Ontario's recommended Quality-Based Procedures for hip fracture?

Supervisor: Dr. Lisa Sheperd

Project Type: Retrospective Chart Review

Introduction: Health Care Ontario released a Clinical Handbook in May 2013 outlining recommended practices and time related goals for the management of patients presenting with hip fracture. Those specific to the Emergency Department (ED) are that 90% of patients should a) be seen by a physician within 1 hour b) receive an orthopedic consultation within 2 hours and c) be admitted within 4 hours spent in the ED.

The purpose of this study was to determine if patients presenting with hip fracture to the London Health Sciences Centre (LHSC) EDs are treated in accordance with Health Care Ontario's recommended quality-based procedures for hip fracture.

Methods: A retrospective medical record review was conducted for all patients with a discharge diagnosis of hip fracture from April 2012 to March 2013. Charts were evaluated for the following date/time points: registration, physician initial assessment (PIA), X-ray ordered, X-ray completed, consult requested, consult arrived, and time left ED.

Results: 366 patients were included over the one-year study period. The average (SD) age was 79 years (12.1) and 35.5% were male. 44.6% of patients were seen by a physician within 1 hour. The median (IQR) time to X-ray ordered was 46 minutes (20, 115 minutes) and the median (IQR) time to X-ray completed was 97 minutes (65, 175 minutes). 17.9% of patients received an orthopedic consultation within 2 hours. 356 (97.3%) patients were admitted with 8.7% being admitted within 4 hours.

Conclusions: Patients presenting to LHSC EDs are not being treated in accordance with Health Care Ontario's recommended quality-based procedures for hip fracture. Less than half (44.6%) of patients met the recommended PIA time of 60 minutes, even fewer (17.9%) met the recommended time to consult arrival of 120 minutes, and only a fraction (8.7%) of patients leave the department within the recommended 240 minutes.

Poster Presentations, 1st Floor, WCPHFM

| Presenter | Presenter |
|---|---|
| Dr. Chris Anderson – Emergency Medicine | Dr. Han Sol Kang – Emergency Medicine |
| Dr. Kyle Armstrong – Emergency Medicine | Dr. Tiffany Lo – St. Joseph’s Family Medical and Dental Centre |
| Dr. Sarah Ashton – Anesthesia Program | Dr. Maya Maliakkal – Victoria Family Medical Centre |
| Dr. Christina Cookson – St. Joseph’s Family Medical and Dental Centre | Dr. Karolina Martyniak – Middlesex Centre Regional Medical Clinic, Ilderton |
| Dr. Craig Campagna – Windsor Family Health Centre | Dr. Craig Meloche – Windsor Family Health Centre |
| Dr. Lesley Cannon – Petrolia Medical Clinic | Dr. Mallory Myers – Southwest Middlesex Health Centre |
| Dr. Laura Caria – Byron Family Medical Centre | Dr. Frank Myslik – Byron Family Medical Centre |
| Dr. Kyle Carter – Emergency Medicine | Dr. Neeraj Patel – St. Joseph’s Family Medical and Dental Centre |
| Dr. Fred Cheng – Emergency Medicine | Dr. Baldeep Paul – Obstetrics Program |
| Dr. Rory Crabbe – Southwest Middlesex Health Centre | Dr. Patrick Prendergast – Strathroy Family Health Organization |
| Dr. Allison Crombeen – Palliative Medicine | Dr. Robert Reid – Middlesex Centre Regional Medical Clinic, Ilderton |
| Dr. Andrew Gray – Southwest Middlesex Health Centre | Dr. Vincent Ruisi – Windsor Family Health Centre |
| Dr. Sunita Gupta – Byron Family Medical Centre | Dr. Katarzyna Rycerz – Southwest Middlesex Health Centre |
| Dr. Andrew Hemphill – Strathroy Family Health Organization | Dr. Heba Taha – Victoria Family Medical Centre |
| Dr. Shoan Kale – Byron Family Medical Centre | Dr. Melissa Tenbergen – Southwest Middlesex Health Centre |

Dr. Chris Anderson – Emergency Medicine

What are the practice patterns of the diagnosis and management of suspected Group A strep pharyngitis at a community hospital in a population ≥ 15 years of age?

Supervisor: Drs. M. Klingel and T. Meriano

Project Type: A retrospective chart review

Introduction: Group A beta hemolytic streptococcus (GABHS) is the leading cause of bacterial pharyngitis. Only 5-15% of adult cases of pharyngitis are caused by GABHS. CDC guidelines state the Mclsaac criteria should be used in the emergency department (ED), and rapid streptococcal antigen test (RAT) rather than cultures be done. The purpose of this study is to describe adherence to the Mclsaac criteria and assessment of antibiotic prescription patterns.

Methods: This was a retrospective chart review of patients ≥ 15 years of age presenting to a tertiary ED with a discharge diagnosis of pharyngitis from July 1, 2012 – June 30, 2013. Patients who were immunocompromised, pregnant, or had a history of tonsillar abscess or rheumatic fever/heart disease were excluded. A random sample of patients was examined for patient demographics, presentation, and management.

Results: 109 charts were reviewed. Examining practitioners, 72 (66%) were MDs, 37 (34%) were NPs. 70 (64%) had ≥ 2 Mclsaac criteria, 48 went on to have RAT. 39 had < 2 criteria and 16 went on to have a RAT. A total of 64 (59%) patients had a RAT done in the ED, of which 31 (48%) were positive. 47 (43%) patients had a throat culture done, of which 8 (17%) were positive. 60 (55%) received antibiotics, 72% were Beta-lactams (28% Macrolides). 16% received steroids.

Conclusions: The results of this study suggest that current guidelines for the management of pharyngitis in a healthy adult population in a tertiary care centre ED are not being adhered to.

Dr. Kyle Armstrong – Emergency Medicine

A descriptive study of paediatric patients presenting to a community hospital with a chief complaint of nausea and vomiting

Supervisor: Dr. Miriam Mann

Project Type: Chart review

Introduction: Nausea and vomiting in the pediatric population is a presenting complaint to emergency departments (ED) of a wide range of disease processes including diabetic ketoacidosis (DKA) as one of the more severe causes. The objective of this study was to describe the presentation and management of pediatric patients presenting with nausea and vomiting, including adherence with a local medical directive.

Methods: This was a retrospective medical record review of patients aged < 18 presenting to a community ED with a presenting complaint of nausea and/or vomiting. A random sample of charts was reviewed for demographics, triage vitals, management strategies, final diagnosis, unexpected return visits and admission status.

Results: 108 patients were included. The mean (SD) age was 4.9 (5.3) and 46% were male. Glucose was obtained at triage, meeting the medical directive, in 32% of patients. Of these patients, 3 were hypoglycemic and 2 were hyperglycemic. Blood work was requested on 42 (38.9%) patients and imaging was ordered for 24 patients (22.2%). 43 (39.8%) patients received antiemetics and 71 (66%) received rehydration therapy. Most common discharge diagnoses were gastroenteritis (36%) and undetermined vomiting (23%). There were no cases of DKA found. 14 (13%) patients were admitted and 17 (16%) patients had an unexpected ED return visit.

Conclusions: The medical directive for giving pediatric patients presenting with nausea or vomiting a finger stick glucose test at triage has low compliance. In the future, larger studies could be performed to assess the ability of finger stick glucose to help rule out DKA.

Dr. Sarah Ashton – Anesthesia Program

TBD

Dr. Christina Cookson – St. Joseph's Family Medical and Dental Centre

Family Medicine Clerkship Handbook

Supervisor: Dr. George Kim

Project Type: Medical Education Project

The scope of family medicine as a specialty is vast, ranging from prenatal care to elder care and everything in between. Family physicians manage acute symptom presentations, chronic diseases, and are responsible for health maintenance and screening. As a result, it is very difficult for family medicine clinical clerks to be exposed to and learn the entire range of presentations that family physicians treat within a six week rotation. To address this issue, a comprehensive family medicine handbook to be used during the family medicine core clerkship rotation has been developed. The handbook includes sections on the top ten symptom presentations in family medicine, management of various chronic diseases, as well as health maintenance throughout the continuum of life. Canadian guidelines were used whenever

such guidelines existed, and resources commonly used by practicing family physicians were used to supplement these guidelines. The daily use of this point-of-care resource by clinical clerks should improve and focus their learning while attempting to study the comprehensive field of family medicine.

Dr. Craig Campagna – Windsor Family Health Centre
Preventative Care App: Facilitating Screening with the Patient's Help

Supervisor: Dr. Paul Ziter

Project Type: Patient Education Project

Preventative medicine is becoming an important aspect of family medicine. Early detection generally allows more time to intervene. Screening allows for early detection in an asymptomatic individual. Finally, ensuring compliance requires the patient to be educated in order to be willing to take part in their medical management. In a busy practice, it is difficult to ensure that all patients are educated about preventative care and screened appropriately. An iPhone application was created aimed at addressing all these issues. Common diseases and their appropriate screening investigations were extracted from Ontario and Canadian guidelines. Users will answer questions on their demographics and past medical history. Based on these answers, the user will be provided with their individual screening recommendations, information about each disease and users will be encouraged to discuss further with their physician to facilitate screening. With the proper use of this free application, the physician will be aided in ensuring that their roster will be appropriately screened. Further, the application will help promote patient-centred care through education.

Dr. Lesley Cannon – Petrolia Medical Clinic
Patient Satisfaction with Advanced Access Scheduling: The Experience of one Rural Practice

Supervisor: Dr. Angela Wang

Project Type: Research Project

Background: Advanced access is a scheduling strategy endorsed by the College of Family Physicians of Canada. This system emphasizes patients being seen on the day they call, with reduced ability to schedule appointments in advance. Advanced access has been widely introduced across the United Kingdom and United States as a way to achieve timely access to care. Advanced access was recently implemented by one family physician in a rural setting in Ontario.

Objectives: To determine patients' satisfaction with how quickly they are seen by their family physician. To determine if patients find it is important to be able to book appointments ahead of time. To determine if patient's age, gender, employment status, or presence of a chronic disease has any impact on their scheduling preferences.

Design of Study: Patient survey.

Methods: Over a three-month period, an adaptation of the General Practice Assessment Questionnaire was available for voluntary completion by patients meeting the inclusion criteria.

Results: Patients were seen on average 1.6 days from the time they called. 89% of patients were satisfied with how quickly they were seen. Half of all surveyed patients felt it was important to be able to book appointments more than one day in advance.

Conclusions: Patient satisfaction was high in this practice with advanced access scheduling. Despite high satisfaction, many patients do still find it important to be able to book appointments in advance. Patient satisfaction was similar between all demographic subgroups studied. The advanced access scheduling system is successfully continuing in this rural practice.

Dr. Laura Caria – Byron Family Medical Centre
Promoting Exercise During Pregnancy to Prevent Childhood Obesity

Supervisor: Dr. Michelle Levy

Project Type: Major Essay

Childhood obesity today is a global health epidemic, affecting millions of children. As the prevalence of childhood obesity continues to rise, new ways that target risk factors predisposing youth to this epidemic, need to be investigated. Over the last decade the prevalence of obesity during pregnancy has risen. Excessive weight gain during pregnancy has been shown to increase the risk of childhood obesity and elevated infant BMI. Although there are established guidelines from the Institute of Medicine, which serve as a guide for appropriate weight gain during pregnancy, many women gain excessively. One way to prevent childhood obesity would be to target the earliest determinant of obesity, which appears to be during pregnancy with maternal excessive weight gain. One factor that is attributed to excessive weight gain is that during pregnancy a large proportion of women become inactive and refrain from exercise. This reduction in activity occurs despite the Society of Gynecology's recommendations supporting exercise. Exercise can reduce excessive weight gain by up to 70% in pregnancy. By engaging in exercise throughout pregnancy, women will be able to prevent excessive weight gain and in turn reduce their child's future risk of developing childhood obesity.

Dr. Kyle Carter – Emergency Medicine

Recent Graduates of Western's Emergency Medicine Residency Training Programs Comfort with Teaching

Supervisor: Dr. Christine Richardson

Project Type: Research

Background: Physicians choosing to work in academic hospitals are expected to provide clinical teaching to learners in the emergency department. However, little is known about whether comfort with teaching directs recent graduates future practice characteristics. The purpose of this study was a pilot study to determine the comfort levels of recent graduates with teaching prior to a national study aimed to identify trends across Canadian training programs.

Methods: A 23-item survey was distributed to graduates within the last two years of Western University's CCFP-EM residency program in March 2014. Demographics, teaching experience, comfort with teaching and current practice characteristics were collected.

Results: Completed surveys were received from 10 (58.8%) of the 17 graduates. The majority of respondents indicated they had received formal teaching on how to teach during residency (60%). Most graduates directly supervised junior learners during training (90%) however, most for less than 10 shifts in total. Half of all participants had completed training on how to teach after graduating. Several felt electronic learning modules would have been helpful after becoming staff. More exposure to junior learners during shifts was indicated by 3 of the respondents. Overall, 66% of respondents felt they were somewhat effective teachers.

Conclusion: This pilot survey indicates that residents are being provided with opportunities during residency to learn how to teach. However, that exposure is limited. A need for further education regarding teaching may be needed to help improve comfort with teaching learners.

Dr. Fred Cheng – Emergency Medicine

The predictive value of the shock index in emergency department patients admitted with sepsis

Supervisor: Dr. Tony Meriano

Project Type: Retrospective chart review

Introduction: The Shock Index is a simple measure that has been shown to accurately prognosticate the outcome of critically-ill patients in the ED. This study sought to determine whether an elevated SI (>1.0) was associated with a greater risk of mortality among septic patients.

Methods: A retrospective review was conducted of all adults admitted with a diagnosis of sepsis. SI was calculated from the triage vital signs. Patients were categorized into a normal SI (≤ 1.0) or an elevated SI (>1.0) cohort. Death in hospital, ICU admission, serum lactate and white blood cell (WBC) count were recorded. Logistic regression models determined predictor variables associated with mortality.

Results: 124 patients were enrolled; 61 with a SI ≤ 1.0 and 63 with a SI >1.0 . There were no age or gender differences between the two cohorts. An SI >1.0 was associated with higher mortality (59% vs. 28%; fj 31%, 95% CI: 14, 47%) and ICU admission (81% vs. 46%; fj 35%, 95% CI: 19, 51%). Patients with a SI >1.0 also had a higher serum lactate (6.6 vs. 2.4, fj 4.1, 95% CI: 3.3, 4.9). SI >1.0 was independently associated with mortality (OR: 3.7, 95% CI: 1.7, 7.8).

Conclusions: Patients with an elevated SI had higher mortality, ICU admission rates and hyperlactatemia. Utilization of this marker in the ED may hasten identification of severe sepsis.

Dr. Rory Crabbe – Southwest Middlesex Health Centre

Exercise Prescription Patient Handouts for Common Family Practice Musculoskeletal Problems

Supervisor: Dr. Jennifer Parr

Project Type: Patient Education Project

Musculoskeletal complaints are a common presentation in the Family Physician's office. Often, our recommendations to patients include physiotherapy for rehabilitation of their affected joint. While some patients have third-party coverage or have the financial means to see a physiotherapist by paying out-of-pocket, many of our patients are unable to afford to see a physiotherapist. This may pose as a barrier to recovery for those unable to afford a consultation by a physiotherapist. As Family Physicians, once we've established a diagnosis for a patient's presenting complaint, education regarding the management of the particular diagnosis is an important part of our role in the patient-physician encounter.

Herein, physiotherapy exercise instructional pamphlets were created for five common orthopedic diagnoses, shoulder pain, lateral epicondylitis, low back pain, knee osteoarthritis, and plantar fasciitis. Each pamphlet was created by researching beneficial exercises for each condition using physiotherapy textbooks and journal articles on PubMed. Exercises are described in writing and displayed pictorially in take-home handouts in order for the patient to understand how to perform the recommended exercises properly. In addition, if Family Physicians understand which stretching and strengthening exercises a physiotherapist may recommend, we can easily review each exercise with the patient to ensure their understanding and clarify any questions they may have in office.

Dr. Allison Crombeen – Palliative Medicine

A Moving Target: Episodic Communication and Inconsistent Terminology Complicate Palliative Care Conversations on the Heart Failure (HF) Team

Supervisors: Drs. Valerie Schulz, Lorelei Lingard, Denise Marshall

Project Type: Qualitative Research Study

Objectives:

1. To identify factors influencing the evolving palliative care conversation on the HF team.
2. To discuss why addressing these factors may improve patient care.

Background: Patient-centred palliative care conversations should be informed by experiences and expectations to identify the patient's 'goals of care' so that 'care plans' act in accordance with these goals. However, a preliminary literature search suggests inconsistent use of these two concepts. This presentation examines how the use of these concepts, the patients' experience and the communication practices among team members influence these conversations within the HF team.

Methods: This presentation draws on data from a constructivist grounded theory study of HF care team experiences. Individual interviews of 42 patients with NYHA Class III or IV HF and their 106 healthcare team members produced 36 team sampling units (TSUs) consisting of 3-10 interviews per patient. A constant comparative analysis approach identified recurrent themes.

Results: Multiple episodic conversations involving different TSU members who used the concepts of 'goals of care' and 'care plans' interchangeably and unreliably created ambiguity amongst participants. Patients' shifting disease trajectories and evolving goals compounded this ambiguity.

Conclusion: Data from TSUs suggest that palliative conversations on the HF team are a moving target, complicated by their episodic nature, their occurrence at various points in the patient's evolving disease trajectory, and their inconsistent use of the concepts of 'goals of care' and 'care plans'. Efforts to address these features could support more meaningful patient-centred outcomes in HF, strengthen team communication and inform educational principles.

Dr. Andrew Gray – Southwest Middlesex Health Centre

Decreasing wait room overcrowding: an example of fast track success in a single physician emergency department

Supervisor: Dr. Julie Copeland

Project Type: Retrospective Chart Review

Fast tracks are one approach to reducing emergency department (ED) overcrowding. No studies have addressed the benefit of fast tracks in smaller hospitals with single physician coverage. Study objective was to determine if implementation of a fast track in the above setting could improve wait times for low acuity patients without negatively impacting those of higher acuity.

Methods: Daytime fast track opened 2010 in a southwestern Ontario community hospital. Before and after intervention groups representing 1 year of ED visits in 2009 and 2011 were compared first for all Canadian Triage and Acuity Scale (CTAS) patients, and then between subgroups CTAS 2-5, for outcome measures: wait time (WT), length of stay (LOS), wait times that met national CTAS time guidelines (MNCTG), and left without being seen (LWBS) rate.

Results: WT and LOS were reduced by 6 minutes (88min to 82min, $p = 0.002$) and 15 minutes (158min to 143 min, $p < 0.001$) respectively. Subgroup analysis showed CTAS 4 benefited most with decrease in WT of 13 minutes (98min to 85 min, $p < 0.001$). There was statistical improvement in MNCTG and higher acuity patients had no change in any outcome measures, but no group showed improvement in LWBS.

Conclusions: Implementation of a fast track in a medium volume community hospital with single physician coverage can improve patient throughput by decreasing WT and LOS. One can infer that the reduction in WT will also improve patient satisfaction, although it was unclear in this study.

Dr. Sunita Gupta – Byron Family Medical Centre

Onabotulinumtoxin A for Prophylactic Treatment of Chronic Migraines

Supervisor: Dr. Scott McKay

Project Type: Major Essay

Chronic Migraine is a neurological disorder characterized by headaches on 15 days or more per month for at least three months, with at least eight headache days per month being migraine. Onabotulinumtoxin A (BOTOX®) is a medical product containing tiny amounts of a highly purified botulinum toxin which blocks neuromuscular transmission. Recent clinical trials have highlighted the role of prophylactic treatment for chronic migraines and it has received FDA and health Canada approval too. At present, chronic migraines are under recognized and under treated with Onabotulinumtoxin A, this treatment being mainly administered by specialists. The objective of this review was to examine the evidence for the use of Onabotulinumtoxin A in the prophylaxis of chronic migraines and explore the cost-effectiveness of this treatment choice in Family Medicine.

Evidence in literature including the PREEMPT 1 and 2 trials shows that superiority of Onabotulinumtoxin A was statistically significant for all secondary outcomes including frequency of migraine days, monthly cumulative headache hours, and frequency of headache episodes. PREEMPT 2 also demonstrated that Onabotulinumtoxin A was statistically significantly superior to placebo for the primary endpoint of lower frequency of headache days per 28 days. Cost is a concern with respect to Onabotulinumtoxin A treatment but a cost-effective analysis performed in UK has shown that Onabotulinumtoxin A treatment for chronic migraines can be considered a cost-effective use of resources. Clinical trials have generally demonstrated that Onabotulinumtoxin A treatment was modestly effective, safe, and well tolerated in adults with chronic migraines.

Dr. Andrew Hemphill – Strathroy Family Health Organization

Bigger belly despite weight loss: A rare and ominous presentation of GIST

Supervisor: Dr. John Marcou

Project Type: Case Report

Gastrointestinal stromal tumours (GISTs) are rare tumours most commonly located in the stomach and small intestine, and although they make up the majority of nonepithelial neoplasms of the GI tract, they constitute only 1% of gastrointestinal cancers. They are thought to be derived from the interstitial cells of Cajal – the gastrointestinal pacemaker cells that form the interface between nerves and smooth muscle. The unique immunohistochemistry of GISTs with positive staining of CD117 and CD4 (unlike their smooth muscle counterparts) has revolutionized their diagnosis, and the discovery of the KIT protooncogene and the transmembrane receptor kinase it produces has revolutionized their treatment. This report presents a rare case of a 79 year old man diagnosed with GIST which had metastasized to his peritoneum. He presented with three months of progressive fatigue, weakness, abdominal pain and weight loss despite increasing abdominal girth. Despite treatment with the tyrosine kinase inhibitor Imatinib, the patient quickly succumbed to his cancer within 6 weeks of his presentation. The purpose of this report is to inform my family medicine colleagues about GIST including its epidemiology, histopathology, clinical presentation, diagnosis and treatment, and help them recognize this disease in its earlier stages to help improve patient outcomes.

Dr. Shoan Kale – Byron Family Medical Centre

Osteoporosis Fracture Risk Assessment and Management

Supervisor: Dr. George Kim

Project type: Practice Tools

Osteoporosis is a generally preventable, chronic disease with a lifetime prevalence estimated as high as one in three Canadians, causing 80% of fractures over the age of 50. Fewer than one in five patients who experience a fracture are diagnosed or appropriately treated for osteoporosis. The morbidity and mortality of these fractures, particularly hip fractures, is high, costing the healthcare system more than \$2.3 billion annually, greater than 1.3% of total health expenditures. Given the quickly growing aging population, the health and financial burdens are expected to more than double in the next 30 years.

Given this, the objective of this project was to prepare tools to guide learners and practitioners at a local teaching clinic to the appropriate screening and management outcomes to adequately address and mitigate fracture risk. The tools were developed to be easily accessible, concise and thorough. Based on the “2010 Clinical Practice Guidelines for the Diagnosis and Management of Osteoporosis in Canada,” a pair of practice tools were developed and implemented into the Nightingale electronic medical record. One tool guided users through criteria for screening and the second provided entry for determined risk stratification and management.

The created tools are now readily available for use through the clinic electronic medical record. Hopefully, they will improve identification and treatment of at-risk individuals. Further, the tools are a practical educational guide in osteoporosis screening and management for learners.

Dr. Han Sol Kang – Emergency Medicine

Presentation and outcomes of patients certified in the emergency department under the Ontario Mental Health Act

Supervisor: Drs. Laura Price and Marcia Edmonds

Project Type: Chart Review

Introduction: Under the Ontario Mental Health Act, a physician may certify a patient under a 'Form 1' if they believe the patient is at serious risk of harming themselves or others. The objective of this study was to describe the demographics of patients were placed under a Form 1 and to determine the number of patients who recertified in the ED within 30 days.

Methods: This was a retrospective chart review of adult patients who had a Form 1 completed at a tertiary care centre from Jan 1, 2012 to Dec 31, 2012. A sample of charts was reviewed for patients who had a second Form 1 completed within 30 days of their initial Form.

Results: During the study period, 1487 Form 1s were completed by ED physicians for 1148 patients. A second Form 1 was completed within 30 days of the initial Form 1 in 9.4% patients during the study period. Mean (SD) patient age was 36.8 (15.1) years and 53.9% were male. 62.3% patient encounters led to hospital admission. 46.7% of the visits had a mood disorder (such as anxiety, depression and adjustment disorders) as the ED discharge diagnosis.

Conclusions: This study suggests that a significant number of ED certified patients require recertification within 30 days. This suggests that additional outpatient and urgent psychiatric follow-up may be required for previously formed patients.

Dr. Tiffany Lo – St. Joseph's Family Medical and Dental Centre

Travel Medicine for Primary Care Physicians

Supervisor: Dr. Eric Wong

Project type: Medical Education

Family physicians are often the first contact for patients seeking medical advice for international travel. With the ever-changing disease epidemiology and patterns of drug resistance, travel medicine is becoming increasingly complex. Studies have shown that family physicians are not always equipped to provide the most up-to-date and evidenced based recommendations for their patients regarding travel. Travel medicine is often an area that is not emphasized in medical education. Thus, a handbook, Travel Medicine for Primary Care Physicians, was created to provide a concise education tool for family medicine trainees to learn fundamental issues in travel medicine. The recommendations from the handbook are based on evidence-based guidelines from the Committee to Advise on Tropical Medicine and Travel for Canadians, the US Centres for Disease Control and Prevention, and the Infectious Diseases Society of America. As travelers are relying on their family physicians in providing travel-related care, this handbook will address the gap in knowledge in travel medicine and will help to improve delivery of care for patients that travel.

Dr. Maya Maliakkal – Victoria Family Medical Centre

Advocacy Toolkit for Western University Family Medicine Residents

Supervisor: Dr. Jamie Wickett

Project Type: Medical Education Project

Family physicians, in addressing the physical, mental, and social needs of their patients, are uniquely positioned to draw on their clinical experience to advocate for the greater community. Mediating the needs of the patient can improve the health of the individual, while influencing policy can result in system-wide results that benefit many. Despite the importance of physician involvement in population advocacy, and its emphasis in the CanMEDS-FM and Triple C curriculum, limited medical education resources have been developed to fine-tune these skills particularly during the post-graduate years. Far fewer advocacy resources have emerged from within the family medicine community. The purpose of this project was to examine the landscape of advocacy in post-graduate medical education in Canada through a review of the literature as well as family medicine residency program and medical association websites, and secondly, to develop an easy-to-use toolkit to encourage family medicine residents to become involved in effective grassroots and population-level advocacy.

Dr. Karolina Martyniak – Middlesex Centre Regional Medical Clinic, Ilderton

The Pap and You: New recommendations for cervical cancer screening

Supervisor: Dr. Jessica Howard

Project Type: Patient Education Resource

Background: Screening for pre-cancerous and early cancerous cells with the Papanicolaou (pap) test has been proven to reduce the mortality from cervical cancer. A recent change in the screening recommendations published by the

Canadian Task Force of Preventive Health (CTFPH) suggests less frequent screening intervals and screening commencement at a later age than previous guidelines. A brochure was developed to help educate patients about the new screening recommendations for cervical cancer.

Methods: This brochure was developed and assessed to be at a grade school education level for ease of readability for the target population of women including those of lower educational and socioeconomic levels. The information presented in the brochure is a summary of the primary literature and CTFPH guidelines for pap testing to screen for cervical cancer.

Results: The result is an easy-to-read brochure that summarizes the epidemiology and risk factors for cervical cancer, as well as presents a simple summary of the benefits and risks associated with screening for cervical cancer at various age groups. There is a “bottom line” statement for each age group that aims to summarize the relevant literature and to help women decide if pap testing is appropriate for them.

Conclusion: This brochure is a patient-centered and time-efficient way to communicate the new changes to cervical cancer screening, in order to optimize the patient’s screening outcomes and the physicians’ clinical time.

Dr. Craig Meloche – Windsor Family Health Centre

Motor Vehicle Accident Assessment In the Family Physician’s Office

Supervisor: Dr. Paul Loebach

Project Type: Practice Tools Development Project

Assessment following a minor motor vehicle accident is a common presentation in family practice. Proper documentation of the details of the accident, symptoms, and clinical findings is a big part of such a visit. These details can be crucial to managing the patient’s recovery, coordinating potential referrals, and preparing for the possibility of medico-legal involvement. The objective of this project was to develop a structured assessment form to increase efficiency, consistency, and completeness of such an assessment. A literature review was performed to identify key accident details which may impact patient outcome or indicate severity of injuries, as well as identify common injuries that should be specifically screened for in a family medicine environment. The developed tool consisted of a section to be filled out by the patient and another to be filled out by the physician. The purpose of the patient portion of the form was to collect subjective information while increasing efficiency because it can be filled out while waiting for the physician. It consisted mostly of check boxes to increase consistency between assessments and limit subjective content to relevant details. The physician portion of the form outlined key areas that should be addressed during an assessment. It consisted of mostly open-ended boxes so as to not restrict the physician’s personalization of their note. Use of this assessment form ensures the family physician will have a thorough and consistent assessment of motor vehicle accident patients.

Dr. Mallory Myers – Southwest Middlesex Health Centre

Physical Inactivity: A Call to Family Physicians

Supervisor: Dr. Julie Copeland

Project Type: Major Essay

Physical inactivity is an important modifiable risk factor with over 5.3 million deaths attributed to it annually. Unfortunately, although family physicians are in a key position to provide physical activity counseling, it is not a part of regular preventative or therapeutic care. While there are multiple factors responsible for this, misconceptions about the efficacy of physical activity as a viable treatment option, limited medical education in this area, and lack of effective approaches are points that need careful consideration. The report will work to explain why family physicians should incorporate exercise prescription into a regular part of their care with techniques that are easy to integrate into existing practice strategies.

Dr. Frank Myslik – Byron Family Medical Centre

The Effect of Primary Care Reform on Emergency Department Visits in Ontario

Supervisor: Dr. Scott McKay

Project Type: Secondary Data Analysis

Introduction: In Ontario, primary care reform was implemented in 2005 to increase access to family physicians. Greater access to family physicians might decrease usage of the emergency department for non-urgent visits. We examined Ontario emergency department acuity, wait time, and disposition data during 2004-2011 to explore any relationships to primary care reform initiatives.

Methods: A secondary data analysis of emergency department visits from 2004-2011 in Ontario was done using National Ambulatory Care Reporting System (NACRS) data. Non-urgent visits were classified as CTAS 4 and 5 and urgent visits as CTAS 1, 2 and 3. Trends were explored graphically and using chi-square, where possible.

Results: The number of urgent visits increased linearly from 2004 to 2011 by an overall 33.5%, while non-urgent visits linearly decreased by 17.8%. The difference between these trends was significant ($X^2 = 282601$, $p < 0.01$). Wait times for all CTAS visits increased from 2004-2008, then remained stable until 2011. Regarding disposition data, there was a decrease of 52% in non-urgent visits admitted to hospital from the ED while urgent visits saw no overall change in admission rates.

Conclusions: The data does support the claim that primary health care reform in Ontario may have contributed to decreased non-urgent emergency department visits. Further research is needed to explore this relationship. Primary care can have a strong influence in other sectors of the healthcare system and reform of this service needs to be studied thoroughly and longitudinally.

Dr. Neeraj Patel – St. Joseph's Family Medical and Dental Centre

A Clinical Practice Toolkit for Primary Care Management of Depression

Supervisor: Dr. Larry Schmidt

Project Type: Clinical Practice Tool

Major depressive disorder is a common, burdensome condition and a leading contributor to disability worldwide. While DSM diagnostic criteria can make diagnosis of depression more straightforward, the same cannot necessarily be said for its management. Measurement-based care for depression using validated depression scales may help guide clinical decisions in managing depression and help identify treatment response, relapse, remission, or recovery.

Psychotherapy as first-line management for mild to moderate depression faces several challenges with respect to accessibility, including wait lists to see formally trained professionals, financial cost, and fear of stigmatization. This project aimed to develop a clinical practice toolkit for depression implementing several resources. First, it aimed to include a validated depression self-report scale to allow for measurement-based assessments accompanying clinical interviews during follow-up. The PHQ-9 scale was incorporated into a depression flow sheet designed using a previously created flow sheet found in past literature as an influence. Finally, the toolkit included lists of self-help resources for bibliotherapy and computerized therapy that can be used as adjunctive treatment to bridge the care gap for depressed patients who face limitations in accessing traditional face-to-face psychotherapy. Overall, this practice toolkit can facilitate a structured clinical interview that will help guide management in a longitudinal fashion, and provide resources for primary care providers to guide patients through self-help therapy when access to traditional psychotherapy is limited.

Dr. Baldeep Paul – Obstetrics Program

Diagnostic Imaging in Pregnancy: Patient Information Handout

Supervisor: Dr. Connie Nasello

Project Type: Patient Education Project

Diagnostic imaging is an important tool when it comes to evaluating maternal and fetal well-being. However, asking a pregnant woman to be exposed to imaging often produces the question "will this harm my baby". There are some guidelines and a few RCT trials describing the benefits and risks of diagnostic imaging. I hope to focus on the potential risks of X-ray, CT, MRI and U/S to the unborn fetus. Information dissemination is a difficult task in the general practitioner's office. Often the combined approach of verbal, visual and written communication are important. As part of this project a preliminary search demonstrated handouts currently available from diagnostic imaging clinics. These appear to be restricted to the risks of X-ray imaging or focused on the description of various imaging modalities. Having encountered the above question throughout my PGY3 year I hope to develop a succinct patient handout for use in the family physicians office to explain the effects of imaging modalities on the fetus. I plan to use the Hamilton Health Sciences guidelines for writing patient information to create a patient pamphlet describing the risks of X-ray, CT, MRI and Ultrasound in pregnancy.

Dr. Patrick Prendergast – Strathroy Family Health Organization

Antibiotic Stewardship: Opportunities for Judicious Antibiotic Prescription

Supervisor: Dr. Philip Vandewalle

Project Type: Medical Education Project

Purpose: The goal of this project was to briefly describe the causes of antibiotic overuse and subsequent resistance, but more importantly this project will aim to review and re-emphasize the role we can play as family physicians in judicious antibiotic prescription.

How it was conducted: This medical education project has been created as a website that can be easily accessed on desktop or laptop computers and mobile devices. The project aims to provide background on the current state of antimicrobials broadly, to provide an introductory curriculum on Antimicrobial Stewardship Principles gleaned from

a variety of sources including the CDC, Stanford University's Antimicrobial Stewardship Program and from the Public Health Agency of Canada. Also, it aims to consolidate guidelines from Anti-infective Guideline for Community Acquired Infections, Do Bugs Need Drugs and the Canadian Pediatric Society. Finally the project aims to provide an introduction or review of the concept of the Number Needed to Treat in the hopes of providing a risk benefit analysis of antibiotic prescription for Pharyngitis and Acute Otitis Media.

Dr. Robert Reid – Middlesex Centre Regional Medical Clinic, Ilderton

Pacemaker Deactivation in Palliative Care

Supervisor: Dr. Gordon Giddings

Project Type: Major Essay

Millions of patients in the world have had pacemakers implanted, but very few are made aware of the possibility of deactivation when nearing end-of-life. Deactivation is a controversial topic in palliative care and few hospitals have policies or protocols addressing this management decision. While withdrawal of care is common in patients who are critically ill, pacemaker deactivations in patients suffering from a terminal disease are not as common. Some opponents to deactivation describe it as a form of euthanasia, that deactivation can lead to more suffering, and there is not enough time to inform the patient prior to deactivation. Many good ethical analyses of this issue (such as the European Heart Rhythm Association Guideline) have addressed that it is a question of patient autonomy and similar to withdrawal of other medical interventions. A major component of hospital adoption of pacemaker deactivation is education targeted at all levels of medical professionals, as well as patients and their families. The goal of this paper is to assemble recommendations put forth by previous authors that aim to assist in advanced care planning in regards to pacemaker deactivation that can be adopted at various health care centres.

Dr. Vincent Ruisi – Windsor Family Health Centre

CIWA-Ar in a Community Hospital: The Launching of a Quality Improvement Project

Supervisor: Dr. M. Chevalier

Project Type: Quality Improvement Project

Background and Objectives: The CIWA-Ar (Clinical Institute Withdrawal Assessment for Alcohol Scale, Revised) is a validated scoring system that indicates the severity of alcohol withdrawal and can be used to guide treatment. With quality improvement as our goal, we attempted to launch a program to introduce the CIWA-Ar in a community hospital in Windsor, Ontario.

Methods: A draft CIWA-Ar was prepared by a multidisciplinary team of physicians, pharmacists, and nurses. Following approval, we used small group nursing sessions, Morbidity and Mortality Rounds, Family Medicine Grand Rounds, and a Family Medicine Hospitalist meeting as teaching opportunities.

Results: Our version of the CIWA-Ar was modified from other existing order sets to fit best with our hospital's needs.

The CIWA-Ar has been successfully implemented on two of the seven inpatient wards at Windsor Regional Hospital.

Teaching sessions were well attended by nurses and physicians.

Discussion: With a standardized alcohol withdrawal assessment tool we anticipate a positive impact on our patient population.

Conclusion: It is our hope that the success of this project will encourage other community hospitals to invest in an alcohol withdrawal order set to better treat this at risk population.

Dr. Katarzyna Rycerz – Southwest Middlesex Health Centre

Summary of Evidence Behind the Periodic Health Evaluation

Supervisor: Dr. W.E. Osmun

Project Type: Descriptive Systematic Literature Review

The Periodic Health Evaluation is a common reason for family physician visits, despite a lack of clear evidence supporting its use and controversy surrounding its continued implementation. This systematic literature review was completed to evaluate the current evidence supporting or refuting the benefit of the periodic health evaluation, by reviewing literature from 2000 onwards using Cochrane Database, PubMed, EMBASE and Medline. Randomized controlled trials and higher levels of evidence were initially included, however, since all identified randomized controlled trials were accounted for in the systematic literature reviews, this literature review evaluated only the identified systematic literature reviews. Studies evaluated asymptomatic adults at average risk to determine if receipt of periodic health evaluations affected morbidity or mortality rates, or receipt of recommended preventative services. Three systematic literature reviews were identified, which showed no consistent effect on morbidity or mortality rates with use of period health evaluations. One systematic literature review found improvement in receipt of certain preventative

care services, however there was controversy as to whether this justifies the continued use of periodic health evaluations. Recommendations from this review are that family physicians carefully evaluate their practice of routinely offering periodic health evaluations to their patients, and, when possible, focus on providing preventative health services within the context of other visits.

Dr. Heba Taha – Victoria Family Medical Centre

West Nile virus causing Myocarditis

Supervisor: Dr. Daniel Grushka

Project Type: Case Report

Background: West Nile Virus (WNV) is a mosquito-transmitted flavivirus. Most human WNV infections are subclinical but clinical infections can range in severity from self-limiting West Nile fever (WNF) to fatal neuroinvasive disease. In a very few cases, fulminant hepatitis, pancreatitis, and myocarditis have been reported. WNV myocarditis has been documented pathologically in birds and mammals but has rarely been reported in humans. In this case review, we will describe myocarditis associated with WNV.

Method: Reviewed results of a case and searched PubMed using the following key words: West Nile Virus, Viral Myocarditis, and West Nile Myocarditis to find relevant articles.

Clinical case: A 50 year old woman who was diagnosed with serology-confirmed WNV infection presented with persistent fatigue one month post-infection. Later, she started to develop dyspnea and left shoulder pain. Further investigations showed abnormal findings in electrocardiograph and echocardiogram. A diagnosis of myocarditis due to WNV was made after consultation with an infectious disease specialist and a cardiologist. She was started on an angiotensin converted enzyme inhibitor and was followed closely by her family health team and the cardiologist. Six weeks later, her repeated investigations and clinical symptoms were improving.

Conclusion: Physicians need to consider WNV infection in any patient with fever and skin rash, particularly during the summer and fall seasons when mosquitoes are most prevalent. Physicians should be aware of the possibility of WNV rare complications. Our case is relevant to family practice as we are the first to see the patient, we have the best chance to interact with patient in an ongoing caring relationship, and we can utilize all available resources to ensure the patient's best outcome.

Dr. Melissa Tenbergen – Southwest Middlesex Health Centre

Prevalence, Screening and Treatment of Depression in Patients with Heart Failure at a Rural Family Medicine Clinic

Supervisor: Dr. Vikram Dalal

Project Type: Chart Review

Background/Purpose: Heart Failure (HF) and depression are two large chronic health burdens that family physicians actively manage. Objectives of this chart review were to ascertain a) prevalence of depression in HF, b) timing of each diagnosis, c) prevalence of screening for depression in HF, and d) proportion of patients receiving treatments for depression with a dual diagnosis of HF.

Methodology: Charts at Southwest Middlesex Health Center, were searched for a diagnosis of HF. Only patients (n=48) with an echocardiogram confirmed diagnosis of HF were included in the study. Patient charts were reviewed for a) concurrent diagnosis of depression, b) timing for each of the two diagnoses, c) evidence of a depression screen after the diagnosis of HF, and d) concurrent treatment of depression.

Results: Forty Eight patients were found to have an echocardiogram confirmed diagnosis of HF. Thirty one percent (n=15) had a concurrent diagnosis of depression. Ninety-three percent (n=14) of patients with a dual diagnosis were treated for depression. Only thirty percent (n=10) of patients with HF had documented screening for depression. In patients with a dual diagnosis, forty seven percent (n=7) had a diagnosis of depression that preceded the diagnosis of HF.

Discussions/Conclusions: At this clinic, screening for depression is suboptimal in patients with HF. Addition of a depression screen to the HF flow sheet set out by the Ontario government may prove beneficial for family physicians to prevent associated adverse outcomes. It is also evident that in susceptible populations, depression is a risk factor for developing HF.

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