



Department of Family Medicine

Resident Project Day Abstract Collection

Huron University College, 8:00 a.m.
Wednesday, June 12, 2013

Western



Agenda

8:00 a.m.	Registration, Coffee and Light Refreshments – Kingsmill Room, Huron University College
8:00 a.m. - 12:00 p.m.	Poster Viewing – Kingsmill Room
8:30 a.m.	Dr. Eric Wong, Opening Remarks – Kingsmill Room, Huron University College
8:45 a.m. - 10:00 a.m.	Concurrent Sessions – Oral Presentations (breakout rooms)
10:00 a.m. - 11:00 a.m.	Break – Poster Viewing, Coffee and Light Refreshments – Kingsmill Room, Huron University College
11:00 a.m. - 12:00 p.m.	Concurrent Sessions – Oral Presentations (breakout rooms)
12:00 p.m.	Dr. Eric Wong, Closing Remarks – Kingsmill Room, Huron University College
12:15 - 12:30 p.m.	Evaluations – Kingsmill Room, Huron University College

Session A: Oral Presentations, Room W8, Huron University College (St. Joseph's Family Medical & Dental Centre/Windsor)

Time	Presenter	Presentation
8:00 a.m.	Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – Kingsmill Room, Huron University College	
8:30 a.m.	Dr. Eric Wong	Opening Remarks, Kingsmill Room
8:45 a.m.	Dr. Michael Craig	What Every Patient Should Know About Osteoarthritis: An Educational Patient Handout
9:00 a.m.	Dr. Kate Gushulak	Discussions About Advance Directives: Are They Happening in the Primary Care Office?
9:15 a.m.	Drs. Britta Laslo & Manjot Grewal	Becoming a Family Medicine Resident Teacher: A Qualitative Study
9:30 a.m.	Dr. Irram Sumar	A HRT to HRT Discussion: What Hormone Replacement Therapy May Mean to You
9:45 a.m.	Dr. Alla Osadchy	Late Onset Anorexia Nervosa: Awareness of the Rare Entity in the Primary Care Setting
10:00 a.m.	Poster Displays, Coffee, Refreshments – Kingsmill Room	
11:00 a.m.	Dr. Dan Beamish	Canadian Vaccination Guidelines Android App
11:15 a.m.	Dr. Alexandra Gow	"Be Heart Smart" – Patient Education Seminar
11:30 a.m.	Dr. Christopher Ray	The Kibbeh War
11:45 a.m.	Dr. Michele Askew	Physician Attitude on Physician Assisted Suicide and Euthanasia: A Systematic Review
12:00 p.m.	Dr. Eric Wong	Closing Remarks, Kingsmill Room
12:15 p.m.	Evaluations	

Dr. Michael Craig

What Every Patient Should Know About Osteoarthritis: An Educational Patient Handout.

Supervisor: Dr. Saadia Hameed

Project Type: Patient Education Handout

The education of patients is an important component of good Family Medicine practice. Osteoarthritis is a very common problem encountered in the family medicine office. The morbidity experienced by OA should only increase, in absolute terms, as our population ages and the average BMI increases. The objective of this project was to create a simple handout for patients explaining the prevalence, pathogenesis, diagnosis and therapeutic options available to most patients with OA. Since it is a common problem, many patients have preconceived notions regarding OA, based in their "lay-referral network". This education tool will aim to dispel myths surrounding OA, (ex: it is safe to exercise with OA), and to provide patients with insight as to how physicians view the step-wise approach to treatment here. To create the tool, initial time was spent researching effective ways to educate patients via easy-to-read literature. Core information provided in the handout was derived from well-accepted published materials on the topic. More informally, both general Family Physicians as well as those who work exclusively in Sports Medicine, (Fowler Kennedy Sports Medicine physicians), were asked about common hurdles they have experienced when attempting to educate their patients about OA and treatments. By dispelling myths and leading patients to more evidence-based treatment options, the author anticipates reducing the significant morbidity burden from this disease.

Dr. Kate Gushulak

Discussions About Advance Directives: Are They Happening in the Primary Care Office?

Supervisor: Dr. Nelson Chan

Project Type: Clinical Audit

Advance care planning is important to respect the values and beliefs of patients and their families as they approach the end of life. Primary care physicians have a central role in initiating these discussions with patients when appropriate. To assess how frequently these conversations take place, a clinical chart audit was done at St. Joseph's Family Medical Centre, an academic family medicine practice. The charts of deceased patients who had life-limiting diseases were reviewed for evidence of advance directive discussions. Only 14% of patients or their caregivers had discussed advance directives with their family medicine team. Physicians were also more likely to discuss advance directives with patients who had malignant disease than with patients who had non-cancer life-limiting diseases. This identifies a significant need to improve the delivery of end-of-life care to patients with terminal illnesses. Possible interventions to increase the occurrence of these conversations in this setting are discussed.

Drs. Britta Laslo & Manjot Grewal

Becoming a Family Medicine Resident Teacher: A Qualitative Study

Supervisors: Drs. Eric Wong & Judith Belle Brown

Project Type: Qualitative Research

Objective: Family medicine residents (FMRs) inadvertently become teachers during their residency to other residents and medical students. However, this particular role may not always be recognized or supported by their residency programs. The purpose of this study was to clarify how FMRs feel about their role as clinical teachers, how they perceive their roles as teachers, and what kind of support is needed to facilitate them enacting this role.

Methods: A purposive sample of 29 first, second and third year FMRs were recruited from the Section of Residents at the College of Family Physicians of Canada and Western University, London, Ontario. Data collection was completed through five focus groups using a semi-structured interview. Focus group data was transcribed verbatim and reviewed by two investigators to identify emerging themes. Descriptive qualitative method was used for data analysis. Peer audit was performed to ensure credibility of the findings.

Setting: The College of Family Physicians of Canada, Mississauga, Ontario and Western University, London, Ontario.

Findings: Participants identified as clinical teachers and highly valued this role. The process of becoming a FMR clinical teacher is a dynamic developmental process. This process is centered on the cultivation of a curriculum culture of support and holding the belief in one's ability to create a positive learning experience to promote internalization of the teacher role.

Conclusions: The findings support the creation of a supportive training environment centered on supportive relationships, feedback, more teaching opportunities and recognition of FMR teachers to promote development and internalization of the teacher role.

Dr. Irram Sumar

A HRT to HRT Discussion: What Hormone Replacement Therapy May Mean to You

Supervisor: Dr. Nelson Chan

Project Type: Medical/Patient Education Project

Objective: In 2002, the Women's Health Initiative trials indicated a small excess risk in breast cancer, coronary artery disease, stroke and venous thromboembolism in the estrogen/progesterone arm, negatively impacting on the use of hormone replacement therapy. The aim of this project is to provide a tool for the physician to facilitate the hormone replacement therapy discussion in-office, demystifying the initial trial results.

Methods: A post-hoc subgroup analysis of the WHI results was performed. A literature review was also conducted with the focus on hormone replacement therapy effect on breast cancer, stroke, coronary artery disease and venous thromboembolism. The SOGC Guidelines for menopause was also reviewed with regards to these comorbidities. These results were summarized in a patient-friendly manner using pictographs to demonstrate absolute risk.

Results: In a post-hoc analysis of the WHI Trial, the risk of coronary heart disease (non-fatal MI) was not significantly increased in younger aged-women (50-59 years old). The risk of breast cancer, while present, was not significant. Stroke risk was increased in all age groups; however it was the lowest in younger aged women. The incidence of venous thromboembolism was modified by type of progesterone used, and use of transdermal estrogen.

Conclusions: Hormone replacement therapy should not be dismissed by younger menopausal women concerned about the risk of stroke of coronary artery disease. The risk of venous thromboembolism can be offset by type of progesterone used and route of estrogen administration. Through visually demonstrating absolute risk, patients should hopefully gain more individual perspective on hormone replacement therapy.

Dr. Alla Osadchy

Late Onset Anorexia Nervosa: Awareness of the Rare Entity in the Primary Care Setting

Supervisor: Dr. Saadia Hameed

Project Type: Systematic Literature Review

Objective: To systematically review the existing literature on published cases of late onset anorexia nervosa (AN) in order to raise awareness among family physicians to this rare entity and provide practical recommendations on its recognition and management.

Methods: MEDLINE, EMBASE and ProQuest Research Library were searched from inception to October 2012 using the following terms: "anorexia nervosa" or "eating disorder" combined with "late onset" or "adult onset".

Findings: A total of 164 published cases of AN presented de novo in individuals aged 25 or older were included. Based on limited low quality evidence, clinical presentation of late onset AN appears to be similar to early onset cases. Comorbid psychiatric illnesses were more common in a late onset group. Role of precipitating stressful life events requires further elucidation. Unfavorable outcomes including increased mortality are suggested in late onset cases of AN.

Conclusion: Family physicians should be aware of uncommon presentation of AN later in life. SCOFF is a simple screening tool appropriate for primary care setting. Screening for co-existing psychiatric conditions is important. Management of late onset cases of AN might be challenging with multidisciplinary approach being essential. Psychotherapy remains a mainstay treatment of adults with AN. The role of pharmacotherapy is limited. Intensive inpatient treatment might be required to prevent life threatening complications of AN and improve outcomes.

Dr. Dan Beamish

Canadian Vaccination Guidelines Android App

Supervisor: Dr. Eric Wong

Project Type: Clinical Practice Tool

The Ontario schedule of vaccinations contains a large amount of information that Physicians working in a busy clinic might often need to look up. Beyond the basic routine vaccination schedule, this includes specific vaccine benefits for patients in high-risk populations, OHIP billing codes, catch-up schedules for different vaccines which are dependent on age group as well as vaccination history, as well as specific information about the various vaccines. Here we developed an Android application to be used on mobile phones or tablet PCs as a clinical tool to provide a handy reference to the Ontario vaccination guidelines and schedule of benefits. Implementation for the Android 4.0 Jelly Bean platform was carried out using the MIT App Inventor and preliminary distributed carried out using Google Drive. The tool is designed to be used in clinic to look up information quickly instead of having to rely on printed references or an internet connection. It can be used alongside other mobile phone medical applications such as drug references and clinical guidelines and has the advantage that the software can be automatically updated and distributed to users through the Google Store when there are changes to the Ontario Vaccination Guidelines.

Dr. Alexandria Gow

“Be Heart Smart” – Patient Education Seminar

Supervisor: Dr. R. Park

Project Type: Patient Education Project

In 2009, heart disease and stroke were two of the three leading causes of death in Canada, out-numbered only by malignant neoplasms. Heart disease accounted for 20.7% of all deaths that year and stroke for 5.9%. At the Leamington and Area Family Health Team, cardiovascular disease affects a large proportion of patients, and therefore a need was identified for an educational seminar to teach patients about five specific diseases. The pathophysiology, risk factors, diagnosis and management were outlined for hypertension, hyperlipidemia, coronary artery disease, atrial fibrillation and cerebrovascular accident. It was felt that a better understanding would lead to more compliance with treatment plans and in theory higher attainment of disease targets. A 2 hour patient education seminar was designed with 1.5 hours designated to a powerpoint presentation outlining the five specific diseases. References used were mainly patient education resources as the information was tailored to the general population. The remaining time was designated for individual questions. The feedback from the seminar was overall very positive. It is the hope that future sessions can measure primary outcomes such as lipid profiles and blood pressure targets to determine if the small group seminars are efficacious.

Dr. Christopher Ray

The Kibbeh War

Supervisor: Dr. Paul Ziter

Project Type: Systematic Literature Review

The statistics on microbial food-borne illness are staggering. In the United States alone, it is estimated that there are 76 million illnesses annually attributed to foodborne disease. Of these 325,000 are hospitalized and 5,000 succumb. The issue of food safety, in particular meat safety has recently been thrust into the spotlight in Windsor. The Windsor Essex County Health Unit (WECHU) instituted a crackdown on restaurants serving Kibbeh, a popular dish containing raw beef prompted by a Canadian Food Inspection Agency (CFIA) report of possible E. coli O157:H7 contaminated beef for use in preparing the dish. Searching PubMed for articles that contained both 'E. coli' and 'beef' in either the title or the abstract netted 32 articles. These were pared down based on article theme to 5 articles that were used for this review. Accordingly, there seems to be an approximately 1% risk of E. coli O157:H7 contamination from eating raw Kibbeh with a corresponding risk of clinically significant infection. How this risk compares to consuming other raw meats and non-meats and alternative actions that could have been taken by the WECHU are left as open questions.

Dr. Michele Askew

Physician Attitude on Physician Assisted Suicide and Euthanasia: A Systematic Review

Supervisor: Dr. Helena Hamdan

Project Type: Systematic Literature Review

Recent events have brought into question Canada's current laws on the legalization of physician-assisted suicide (PAS) and components of euthanasia (EU). Current physician surveys suggest their attitudes on PAS and EU are not favourable especially when it is voluntary and active. Through this systematic review I endeavoured to uncover physician attitude based on questionnaire and survey findings in studies world wide over the last 13 year period. The search strategy involved the MEDLINE database and found 21 studies which met the criteria for inclusion. Studies were analyzed for characteristics of physicians involved, potential bias and results which included physician's attitudes towards PAS and EU, whether or not they should be legalized, if they were okay in certain circumstances, if they have participated in PAS or EU in the past, if they would participate in EU or PAS and if they have received requests for them. Euthanasia is defined as 'a doctor intentionally killing a person by the administration of drugs, at that person's voluntary and competent request' and PAS as 'a doctor intentionally helping a person to commit suicide by providing drugs for self-administration, at that person's voluntary and competent request.' It was found that physicians were more likely to disagree with PAS and EU if they valued religion. In total 11 studies considered only PAS, two studies considered only EU and eight studies considered both EU and PAS. Overall 18 studies were found to have a negative attitude towards PAS and nine were found to be negative towards EU. All of the positive studies were in countries where PAS or EU are legal. This review finds that available data on physician opinion and attitude does not favour legalization of PAS or EU. This study provides a gateway for recommending the necessity of further research that will be needed to understand Canadian physician opinion and barriers to providing PAS or EU in practice.

Session B: Oral Presentations, Room W116, Huron University College (Southwest Medical Health Centre & Rural/Regional Program)

Time	Presenter	Presentation
8:00 a.m.	Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – Kingsmill Room, Huron University College	
8:30 a.m.	Dr. Eric Wong	Opening Remarks, Kingsmill Room
8:45 a.m.	Dr. Augene Seong	Effect of family medicine residents on utilization of diagnostic investigations in a rural community emergency department
9:00 a.m.	Dr. Kyle William Carter	A Case Report of Hyperkalemia and Herbal Supplements
9:15 a.m.	Dr. Wang Xi	Impact of Resident Physicians on Emergency Department Wait Times and Patients Leaving Without Being Seen
9:30 a.m.	Dr. Michael Trevail	Bisphosphonate Related Osteonecrosis of the Jaw: A Case Report
9:45 a.m.	Dr. Joel Runk	Pandemic Influences on Seasonal Influenza Vaccination Uptake in a Southwestern Ontario Family Medicine Centre
10:00 a.m.	Poster Displays, Coffee, Refreshments – Kingsmill Room	
11:00 a.m.	Dr. Susan Batten	Residency Directed Learning in a Rural setting: The development and implementation of a comprehensive teaching program in Hanover, ON.
11:15 a.m.	Dr. Dax Biondi	Is Fitness Medicine?
11:30 a.m.	Dr. Amanda Worden-Rogers	Implementing a healthy living program in a primary care center: A pilot project
11:45 a.m.	Dr. Samantha Boshart	Is Non-Celiac Gluten Sensitivity on your Radar? A look at a new clinical entity through the lens of a self diagnosed Family Medicine Resident
12:00 p.m.	Dr. Eric Wong	Closing Remarks, Kingsmill Room
12:15 p.m.	Evaluations	

Dr. Augene Seong

Effect of family medicine residents on utilization of diagnostic investigations in a rural community emergency department

Supervisor: W. E. Osmun

Project Type: Clinical Audit

Objectives: A retrospective chart audit was conducted to determine the effect of family medicine residents on the utilization of laboratory and imaging investigations in a rural Emergency Department (ED) in Canada.

Methods: The electronic medical record for 2000 ED visits was reviewed. Four background characteristics and 22 distinct categories of investigations were compared between patients seen by staff physicians working with residents and patients seen by physicians working without residents.

Results: There was no statistical difference between study groups for 19 of the 22 categories of investigations. There were significant differences in 3 categories: an increased number of D-dimer assays for staff physicians working alone (1.7% of patients vs 0.5% of patients, $p = 0.03$) and increased CT and ultrasound imaging for physicians working with residents (4.8% vs 1.8%, $p = 0.0012$ and 5.3% and 1.7%, $p = 0.0002$ respectively). These differences are likely not due to resident involvement but explained by a confounding factor between both groups. Conclusions: The presence of family medicine residents in a rural community ED does not substantially affect the overall use of diagnostic investigations.

Dr. Kyle William Carter

A Case Report of Hyperkalemia and Herbal Supplements

Supervisor: W. E. Osmun

Project Type: Case Report

We report a case of a man with severe hyperkalemia. Prior to undergoing coronary angiography, he had been metabolically stable. Follow up investigations revealed an acute on chronic kidney injury and hyperkalemia.

On investigation of his medications it was found that he had started taking natural supplements for his worsening heart health, which contained a high content of potassium. We hypothesize that this contributed to his life-threatening condition and emphasize the importance of including herbal and natural supplements in the complete medication history.

Dr. Wang Xi

Impact of Resident Physicians on Emergency Department Wait Times and Patients Leaving Without Being Seen

Supervisor: Dr. Vikram Dalal

Project Type: Clinical Audit

Background: Emergency departments (EDs) often have resident physicians on shifts, but residents' impact on ED wait times is not well characterized.

Methods: In a medium-volume community ED over the course of twelve months, we used retrospective chart review to compare wait times between patients seen during shifts where staff was working alone and shifts where staff was working with a family medicine resident. We measured the time from initial triage time to physician initial assessment time (T1), from initial triage time to disposition time (total length of stay, LOS), and number of patients leaving without being seen.

Results: Our analysis included 21141 patient visits, of which 51.8% were in the staff only group, and 48.2% were in the staff with resident group. Mean T1 and total LOS were significantly shorter in the resident group than the staff only group by 15 and 12 minutes, respectively ($p < 0.001$ for both). Fewer patients left without being seen in the resident group than the staff only group (4.9% versus 2.8%, $p < 0.001$). Subgroup analysis showed significant time savings for T1 and total LOS for triage level 3 and 4 patients for the resident group, but there were no difference between first and second year residents.

Conclusions: This is the first study to demonstrate that residents are associated with a reduction in ED wait times and patients leaving without being seen. The magnitude of wait time reduction is similar to EDs with nurse practitioners or EDs implementing process improvement plans.

Dr. Michael Trevail

Bisphosphonate Related Osteonecrosis of the Jaw: A Case Report

Supervisor: Dr. Julie Copeland

Project Type: Case Report

Introduction: This paper discusses the risk factors, pathophysiology, diagnosis and treatment of osteonecrosis of the jaw (ONJ) in osteoporosis through presentation of a case of ONJ in the primary care setting. The purpose of this case report is to increase clinical suspicion of ONJ amongst primary care providers in order to lessen potential morbidity.

Methods: Case information was extracted from the Health screen EMR as well as Cerner Power Chart and from personal clinical interactions with the patient. ONJ was further researched by completing literature searches using Pub Med and Google Scholar. Appropriate guidelines, primary sources and review articles were reviewed.

Results: Incidence of ONJ in those treated for osteoporosis is as low as 1:100,000 but is extremely debilitating.

Numerous modifiable risk factors have been identified including oral hygiene, smoking and corticosteroid use.

Treatment strategies range from cessation of bisphosphonate and supportive management to resection of necrotic bone, which can be life altering.

Conclusion: A high clinical suspicion and cooperation amongst primary care providers and dental professionals is critical for early recognition and treatment of ONJ. While treatment can result in successful resolution, numerous preventative strategies exist and should be practiced in all patients undergoing treatment for osteoporosis.

Dr. Joel Runk

Pandemic Influences on Seasonal Influenza Vaccination Uptake in a Southwestern Ontario Family Medicine Centre

Supervisor: Vikram Dalal, MD, CCFP(EM)

Project Type: Clinical Audit

Purpose: To examine annual rates of seasonal influenza vaccination in patients age 65 and older rostered at a family medicine centre during and after the occurrence of the H1N1 influenza pandemic in 2009 to determine if the pandemic caused an increase in seasonal influenza vaccination uptake.

Methods: Influenza vaccination data was extracted from the EMR of four practices at a family medicine centre in Southwestern Ontario for the 2008-09, 2009-10, 2010-11 and 2011-12 influenza seasons for patients age 65 and older. Cross-tabulation calculations were carried out.

Results: Overall the centre saw an increase in vaccination rate over the four influenza seasons (40.7% vs. 39.9% vs. 50.3% vs. 58.0%, $p < 0.05$). Three practices had an increase in vaccination rates over the four seasons and all did after the H1N1 pandemic, however only practices 1 (25.9% vs. 36.8% vs. 57.1% vs. 76.7%, $p < 0.05$) and 2 (45.2% vs. 34.3% vs. 51.9% vs. 56.1%, $p < 0.05$) had a statistically significant increase in vaccination rate.

Discussion: Two of four practices showed a significant increase in seasonal vaccination rate post-H1N1 pandemic, while the other two increased at a non-significant rate. EMR vaccination data was incomplete and did not accurately represent vaccination rates in two of the practices.

Conclusions: Seasonal influenza vaccination rates increased at this clinic after the H1N1 pandemic. This trend does not match previously published national-level data. The increase likely reflects a combination of factors related to payment model, preventive health bonuses, and vaccination recording, along with residual effects of the awareness created by the H1N1 pandemic.

Dr. Susan Batten

Residency Directed Learning in a Rural setting: The development and implementation of a comprehensive teaching program in Hanover, ON.

Supervisor: Dr. Randy Montag

Project Type: Evaluation Project

Background: Comprehensive learning focused on family medicine resident preparation for exams might be insufficient in certain residency programs. As well, opportunities for residents to play a significant role in teaching of trainees is logistically difficult to provide in rural programs. A pilot teaching program was developed and implemented into the Hanover Rural Family Medicine Residency Program to help address this current void in education.

Methods: The resident teaching had two components. First, weekly resident taught events focused on learning the 99 topics needed for the written portion of the Certificate of the College of Family Practice of Canada (CFPC) exam. Once presented, a summary paper was distributed and a copy kept in the resident library. Second, monthly preceptor evaluated practice SOO exams for preparation of the clinical portion of the CFPC were held.

Findings: The schedule developed for this teaching was effective with good participation at events. Discussions with both residents and preceptors yielded positive comments. The support for this pilot project extended beyond Hanover with visiting learners requesting to be included in the distribution of the summary documents.

Conclusion: The pilot teaching program was developed to fill a void in Hanover's residency program. It was to provide residents with more teaching opportunities, but also to balance the time constraints of preceptors for teaching. These issues are not unique to Hanover, thus can be used elsewhere. Finally, this program also promotes residents understanding of their role as educator and life long learner - essential skills needed as a rural family physician.

Dr. Dax Biondi

Is Fitness Medicine?

Supervisor: Dr. David Huffman

Project Type: Systematic Literature Review

Introduction: Prompting fitness in the primary care setting is emphasized in undergraduate medical education.

Yet, practical experience suggests fitness interventions offered pale in comparison to risk reduction interventions such as lipid and blood pressure monitoring. Why is fitness promotion done so poorly in the office? If there is quality evidence that fitness interventions lead to decreased cardiovascular morbidity/all-cause mortality, isn't it incumbent upon primary care doctors to spend more time on fitness interventions?

Literature review question: Amongst general practice adult patients, stratified by the modifiable and nonmodifiable risk factors for cardiovascular disease, does objective fitness screening and intervention by a physician or delegate result in lower incidence of cardiovascular morbidity and all-cause mortality compared to those offered usual primary care?

Results: Few clinical trials examined the impact of primary care based fitness interventions on cardiovascular morbidity/all-cause mortality. Many studies examining exercise/fitness interventions and non-cardiovascular morbidity, non-mortality outcomes were found and summarized. The non-randomized studies suggest a strong inverse relationship between fitness and mortality.

Conclusions: Few clinical trials support the importance of primary care based fitness interventions to prevent cardiovascular morbidity and all-cause mortality. Until clinical trials are done, prevention emphasis in the primary care setting will continue to focus on screening for and mitigating hypertension and dyslipidemia through pharmacotherapeutic means. Clinical trials on exercise interventions are needed in the primary care setting to both confirm their efficacy and establish dose-response data.

Dr. Amanda Worden-Rogers

Implementing a healthy living program in a primary care center: A pilot project

Supervisor: Dr. J. Marcou

Project Type: Patient Education Project

Background: Chronic diseases, such as diabetes and cardiovascular disease, are becoming more prevalent in the 21st century. Though many advances have been made to treat the disease with pharmacologic measures, little progress has been made to initiate lifestyle interventions that have been shown to prevent or slow down the progression of these diseases. Exercise, diet modifications and weight loss have all been shown to prevent or slow worsening of cardiovascular disease and diabetes, both in the short and long term. Lifestyle modification interventions have decreased the incidence of developing type II diabetes by as much as 50%, which holds true years after the intervention has finished.

Project design and methods: This study was aimed at patient education for those at risk for developing or worsening cardiovascular disease or diabetes. Patients from a family medicine practice in a small community in Southern Ontario were asked to self-refer for an eight week education project aimed to initiate healthy lifestyle changes.

Project Goals: This study is aimed at educating patients on how to initiate lifestyle changes that can lead to better health outcomes. The goal is more of a feasibility project, with qualitative outcomes including compliance and quality of life measures via a quality of life survey.

Relevance: If successful, this study could be the benchmark for similar groups in family practice centers, both in Canada and Worldwide.

Dr. Samantha Boshart

Is Non-Celiac Gluten Sensitivity on your Radar? A look at a new clinical entity through the lens of a self diagnosed Family Medicine Resident

Supervisor: Dr. Philip Vandewalle

Project Type: Major Essay

This essay explores a relatively new diagnostic entity called Non-Celiac Gluten Sensitivity (NCGS) through my own experience of a self- diagnosed family medicine resident. From a young age I was plagued with numerous seemingly unrelated symptoms that significantly decreased my quality of life including rash of unknown origin, irritable bowel syndrome, iron deficiency anemia and depression. By chance, I stumbled upon the possibility of gluten as a causative agent and with no other causes to explain my symptoms, I started a gluten elimination diet. After 30 days without gluten all of my above symptoms resolved and my quality of life improved significantly. I hypothesize that the gluten elimination diet is the best test of gluten sensitivity and should be advised for patients with symptoms of IBS, depression unresponsive to therapy, rash and/or anemia of unknown origin after ruling out overt Celiac Disease (CD).

Session C: Oral Presentations, Room W12, Huron University College (Byron Family Medical Centre & Victoria Family Medical Centre)

Time	Presenter	Presentation
8:00 a.m.	Registration, Poster Displays, Coffee, Refreshments, Light Breakfast – Kingsmill Room, Huron University College	
8:30 a.m.	Dr. Eric Wong	Opening Remarks, Kingsmill Room
8:45 a.m.	Dr. Jonathan Carter	Pay-for-Performance Medicine and Physician Gaming Behavior in Primary Care
9:00 a.m.	Dr. Sandy Shamon	Accuracy of Skin Cancer Diagnosis at a Primary Family Medicine Teaching Practice: A One-year Chart Audit
9:15 a.m.	Dr. Mandeep Deol	Transient Global Amnesia
9:30 a.m.	Dr. Sherine Naguib Khela	Dermatomyositis: Is it a Difficult Diagnosis?
9:45 a.m.	Dr. Adam Samosh	Guidelines for Diagnosis and Management of Osteoporosis
10:00 a.m.	Poster Displays, Coffee, Refreshments – Kingsmill Room, Huron University College	
11:00 a.m.	Dr. Saleha Abdur-Rehman	Cushing Disease: An Unusual Path to Diagnosis
11:15 a.m.	Dr. Katie Hoenselaar	Pediatric Dermatology Handbook: A Guide for Family Medicine Residents
11:30 a.m.	Dr. Nicole Freeman	End-stage Liver Disease in a Married Couple
11:45 a.m.	Dr. Michael Surkont	Sex Selective Abortion: A Case Report
12:00 p.m.	Dr. Eric Wong	Closing Remarks, Kingsmill Room
12:15 p.m.	Evaluations	

Dr. Jonathan Carter

Pay-for-Performance Medicine and Physician Gaming Behavior in Primary Care

Supervisor: Dr. Nancy McKeough

Project Type: Major Essay

Pay-for-performance (P4P) medicine has increased in popularity around the globe. The true benefit of P4P in improving health outcomes in Ontario has yet to be shown. Moreover, P4P medicine has triggered a widespread debate surrounding the potential downsides of P4P incentives in the primary care environment. The hypothetical consequences are presented including the undermining of team relationships, disruption of the continuity of care and shift to an incentive-centered office encounter. Furthermore, there is increasing concern that in the new climate of incentive driven checks and balances, physicians could develop an unnatural focus on the personal financial rewards of their clinical activity and may attempt to "game" the system. Both predisposing and precipitating factors are presented to help understand the evolution of gaming behavior in primary care. Four potential physician gaming behaviors are described, including diagnostic creep, patient de-rostering, discriminatory patient selection and over-consultation. There is an unpredictable effect of financial incentives on physician motivation and behavior and assuming that physicians are immune to money could prove costly to both the patient and the Ontario public health system.

Dr. Sandy Shamon

Accuracy of Skin Cancer Diagnosis at a Primary Family Medicine Teaching Practice:

A One-year Chart Audit

Supervisor: Dr. Nancy McKeough

Project type: Clinical Audit

Purpose: To evaluate the clinical accuracy of diagnosing pre-malignant and malignant skin cancer in a teaching primary care center using biopsy histology results as gold standard.

Method: Electronic charts were searched to identify all the biopsies performed during 2012 to rule out or diagnose skin cancer.

Results: A total of 153 biopsies were identified, of which 104 revealed skin cancer on histology. The overall cancer detection rate was almost 67.9%, however the overall clinical accuracy for identifying the correct type of skin lesion was only 41.2%. The clinical accuracy for diagnosing melanoma, dysplastic nevi, squamous cell carcinoma, basal cell carcinoma, and actinic keratosis were 21.4%, 23.5%, 52.9%, 41.3%, and 43.8%, respectively. The number needed to biopsy to diagnose one cancer was 11 for melanoma, 1.7 for basal cell carcinoma, and 2.8 for squamous cell carcinoma. The overall biopsy to treatment ration was 1.7. The total number of benign biopsies was 49 (32%).

Conclusion: The clinical accuracy for diagnosing skin cancer found here is lower than that documented in literature. To improve the diagnostic accuracy rate of skin cancer in primary care, new clinical and diagnostic methods can be implemented. These methods could include dermoscopy and systematic use of clinical templates. Given the limitations of this audit, further reviews of longer duration are also recommended.

Dr. Mandeep Deol

Transient Global Amnesia

Supervisor: Dr. John Jordan

Project Type: Case Report

Transient Global Amnesia is a rare disorder which presents with dense anterograde amnesia without altering the level of consciousness. This condition is poorly recognized and not always a part of teaching curriculum in medical schools. The following report discusses presentation of Mr. B, a 47 year old male Caucasian who presented to his family physician for follow up post hospitalization for an episode of acute memory loss. This report also includes a review of the literature using Google Scholar. Clinicians should be able to recognize this rare presentation by its typical clinical picture, be able to rule out and differentiate it from all clinical entities with serious implications like TIA, Seizures, and Sub-arachnoid hemorrhage. Through the ongoing patient physician relationship, a family physician is sometimes able to elicit the precipitating causes. Most importantly, clinician should be able to explain and review the benign prognosis and obscure causes of this disorder. Emphasizing on no specific treatment and no prophylaxis helped to relieve the patients and their families' anxiety in this specific case. The complete amnesic gap for the duration of the episode is the only sequel of Transient Global Amnesia.

Dr. Sherine Naguib Khela

Dermatomyositis: Is it a Difficult Diagnosis?

Supervisor Dr. Sonny Cejic

Project Type: Case Report

Background: Dermatomyositis is an inflammatory myopathy with muscle weakness and characteristic skin exanthema. It has unclear etiology and wide range of complications. The following case illustrates how patient advocacy and team cooperation in a patient centered approach help treat, heal and support patient and her family.

Methods: Reviewed results of a case and looked into the literature Clinical Case: M. was a 22 year old female who had left arm rash that spread to other areas. Later, she developed progressive muscle weakness with fatigue. From a fully active young fire fighter to being unable to raise an arm to reach a shelf, this had huge psycho-emotional impacts.

Provisional diagnosis was Dermatomyositis (DM) that was confirmed by muscle biopsy. She regained muscle strength on prednisone, imuran, IVIG, blaquenil and went back to part time university courses and modified job. M. saw relevant consultants for pharmacologic therapy and saw allied health care team for rehabilitation and counseling to improve quality of life. Psychosocial aspects were the focus of her management.

Conclusion: Diagnosing and managing DM can be difficult. Early DM presentation can mimic picture of many other autoimmune and infectious diseases. Our case is relevant to family practice as we are the first to see the patient and we have the best chance to interact with patient in an ongoing caring relationship and we can utilize all available resources for patient's best outcome.

Dr. Adam Samosh

Guidelines for Diagnosis and Management of Osteoporosis

Supervisor: Dr. Scott McKay

Project Type: Medical Education Project

Osteoporosis is an extremely relevant issue in Family Medicine as primary care physicians are generally responsible for screening and initiating management. In Canada, 1 in 3 women and 1 in 5 men will experience a fracture from osteoporosis. Guidelines for management have changed several times over the past decade. This project will be helpful to family medicine residents because it distills the numerous guidelines available for osteoporosis into a single learning resource with the most current recommendations. Several different resources were used to research osteoporosis guidelines including websites for Osteoporosis Canada, the World Health Organization and UpToDate. Some guidelines were also taken from sources such as the Journal of Obstetricians and Gynecologists of Canada, and the Canadian Medical Association Journal. PubMed was used to access specific journal articles relevant to this topic. This project outlines the important aspects of the history and physical exam for diagnosing osteoporosis. As well it reviews risk stratification using Bone Mineral Density, Fracture Risk Assessment Tool (FRAX) and Canadian Association of Radiologists and Osteoporosis Canada (CAROC) tools. Evidence based management is then briefly reviewed for conservative treatment, supplementation and pharmacotherapy. Osteoporosis is prevalent in Canada and is a relevant health issue in primary care. Because of several changes to guidelines over the past decade, it can be confusing for medical residents to stay up to date with the most current practice guidelines and relevant research impacting the diagnosis and treatment of osteoporosis. The central goal and purpose of this paper is to summarize clearly the current clinical guidelines for diagnosis, screening and management of osteoporosis using evidence based resources.

Dr. Saleha Abdur-Rehman

Cushing Disease: An Unusual Path to Diagnosis

Supervisor: Dr. Anna Pawlec

Project Type: Case Report

Cushing syndrome usually has many ill-defined presentations, and can be a challenge to diagnose. Family physicians play a central role in screening patients for Cushing syndrome as they manage patients on initial presentation. A thirty three year old woman with high blood pressure was seen during my family medicine rotation. She had multiple co-morbidities which made her case interesting. The patient was overwhelmed with multiple issues ranging from high blood pressure that was difficult to control, then being diagnosed with impaired glucose tolerance and later developing diabetes mellitus, dyslipidemia and finally the discovery that she had Cushing disease. An incidental finding of asymptomatic neutrophilia led to the diagnosis of Cushing disease. Regular follow-ups, motivational interviewing and good patient physician interaction and a continued nurturing relationship was key in helping our patient get through her multiple conditions, many investigations and numerous specialist visits. It is crucial for physicians to have a high index of suspicion for Cushing disease on their differential and to screen high risk patients with multiple comorbidities such as diabetes, hypertension, osteoporosis and obesity. Once Cushing disease is diagnosed patients should be referred to appropriate specialties for timely management to prevent morbidity and mortality associated with the disease. Furthermore, family physicians play a key role as a constant in the long term management of patients with Cushing disease and play an important role as patient's advocate.

Dr. Katie Hoenselaar

Pediatric Dermatology Handbook: A Guide for Family Medicine Residents

Project Supervisor: Dr. Jo-Anne Hammond

Project Type: Medical Education Project

Purpose: Pediatric dermatological complaints are common in family medicine. Despite this, family medicine residents receive very limited training in dermatology, especially pediatric dermatology, and they have difficulty managing common dermatologic complaints. Therefore, a pediatric dermatology handbook for family medicine residents and staff will be created to enhance their knowledge and skill in this area.

Methods: PubMed was searched for studies that determined the most common pediatric dermatology complaints presenting to primary care offices. The top diagnoses, which would make up 70-80% of patient complaints, were then selected to include in the handbook. Various resources that are commonly referenced by family physicians were used to develop the handbook. The information from these resources was then compared to UpToDate to ensure the handbook included the most current, evidence-based treatment recommendations.

Results: A concise handbook focused on pediatric dermatology was created that can be used to educate family medicine residents and physicians.

Discussion: Given the high frequency of pediatric dermatology complaints encountered in family medicine, and the lack of training in medical school and residency, a Pediatric Dermatology Handbook was created that will help educate family physicians on how to manage common pediatric dermatologic problems in their office thus decreasing the number of dermatology referrals and improving allocation of limited resources.

Dr. Nicole Freeman

End-stage Liver Disease in a Married Couple

Supervisor: Dr. Daniel Grushka

Project Type: Case Report

Alcohol related injury and disease is a global problem, and end-stage liver disease, as it relates to alcoholism, is not an uncommon cause of death and disability in the Canadian population. The following case report examines the unlikely occurrence of a married couple, simultaneously suffering from end-stage liver disease, and the emotional, psychosocial and physical considerations that must be made when providing comprehensive management of their conditions.

A multi-disciplinary team was involved in the couple's care, helping to determine placement options, provide emotional support, and manage the physical symptoms associated with their disease. Ascites and delirium are common complications of end-stage liver disease, and both conditions were either palliated or more aggressively managed throughout their hospital admission. End-stage liver disease, resultant from any cause, is likely to be a condition encountered by family physicians during their practice, and early identification of high-risk behaviours, knowledge of symptom management, and comprehensive care will be invaluable in providing quality care to such patients.

Dr. Michael Surkont

Sex Selective Abortion: A Case Report

Supervisor: Dr. Wickett

Project Type: Case Report

This case report outlines a patient-physician interaction surrounding the topic of sex selective abortion that occurred at the Victoria Family Medicine Clinic. A growing phenomenon in Canada, the topic is highly controversial. The report describes the specific family and social dynamics playing out in this particular case. This report outlines and asks some questions around the various ethical, legal and medical practice issues raised by the case. Through a compilation of literature articles, media reports and professional regulatory body policies, the case report attempts to answer some of the queries. By providing a framework for approaching difficult cases, this case report will help family physicians approach difficult cases in their medical practices and improve family medicine practice.

Session D: Oral Presentations, Room W6, Huron University College (PGY3 Enhanced Skills Program Presentations)

Time	Presenter	Presentation
8:00 a.m.	Registration, Poster Displays, Coffee, Refreshments – Kingsmill Room, Huron University College	
8:30 a.m.	Dr. Eric Wong	Opening Remarks, Kingsmill Room
8:45 a.m.	Dr. David Zeldin & Dr. Wesley Claydon, Sport & Exercise Medicine	Does a structured lecture series and four week rotation in musculoskeletal medicine improve Medical Student and Primary Care resident knowledge and confidence in the assessment of musculoskeletal conditions?
9:00 a.m.	Dr. Sheri Bergeron, Palliative Care	Exploring Experiential Learning of Family Medicine Residents during a Palliative Medicine Rotation
9:15 a.m.	Dr. Elsie Osagie, Care of the Elderly	Prevalence of Osteoporosis and Bisphosphonate Use among Residents 65 Years and Older in a Nursing Home – A Pilot Study
9:30 a.m.	Dr. Bart Mysliwicz, Anesthesia	Unexpected case of post-operative metabolic acidosis in a patient undergoing a cesarean section
10:00 a.m.	Poster Displays, Coffee, Refreshments – Kingsmill Room, Huron University College	
11:00 a.m.	Dr. Maria Tambakis, Emergency Medicine	The role of a Physician-In-Triage (PIT) in enhancing ED flow for CTAS 2 and 3 patients: A community hospital experience
11:15 a.m.	Dr. David LaPierre, Academic Family Medicine	Learning to Provide Care for Acute, Life-Threatening Problems in Family Medicine
11:30 a.m.	Dr. Behzad Hassani, Emergency Medicine	Evaluation of a brief on-line teaching module training emergency physicians and residents how to interpret hydronephrosis and its gradations using point of care ultrasonography.
11:45 a.m.	Dr. David Phillips, Emergency Medicine	Do urine cultures in the emergency department change management of young women with symptoms of lower urinary tract infection? A retrospective chart review.
12:00 p.m.	Dr. Eric Wong	Closing Remarks, Kingsmill Room
12:15 p.m.	Evaluations	

Dr. David Zeldin & Dr. Wesley Clayden, Sport & Exercise Medicine

Does a structured lecture series and four week rotation in musculoskeletal medicine improve Medical Student and Primary Care resident knowledge and confidence in the assessment of musculoskeletal conditions?

Despite the frequency of musculoskeletal (MSK) conditions seen in primary care, there is compelling evidence that medical schools fail to provide adequate MSK education in their curricula. Research has shown that graduating students lack clinical confidence in their ability to conduct an MSK examination, fail to demonstrate cognitive mastery in MSK medicine, and feel that the amount of curricular time spent on MSK medicine is lacking. Through the development of a structured lecture series, pre and post rotation surveys and clinical checklists for comprehensive physical examination of the knee and shoulder, the aim of this pilot study was to investigate whether a four week rotation in Primary Care Sports Medicine at the Fowler Kennedy Sport Medicine Clinic improves Family Medicine resident MSK knowledge and confidence in joint assessment. By building on these findings, further research will hopefully be undertaken in order to advocate for the inclusion of core MSK clinical rotations during Primary Care residency programs.

Dr. Sheri Bergeron, Palliative Care

Exploring Experiential Learning of Family Medicine Residents during a Palliative Medicine Rotation

In July of 2011, palliative medicine became a mandatory rotation for family medicine residents at The University of Western Ontario. Research to date exploring medical learner's experiences during palliative medicine rotations has focused on knowledge acquisition and evaluation of their experience using quantitative methods. The purpose of this study was to explore the experiential learning of family medicine residents during a palliative medicine rotation. This was a prospective qualitative study. Each resident was invited to participate at the beginning of their rotations to a complete a short reflective writing exercise at the end the end of the rotation. Each writing piece was analyzed using grounded theory principles. During this session, a review of the relevant literature, research methods and preliminary data will be presented.

Dr. Elsie Osagie, Care of the Elderly

Prevalence of Osteoporosis and Bisphosphonate Use among Residents 65 Years and Older in a Nursing Home – A Pilot Study

Supervisor: Dr. McKay

Project Type: Chart Audit

Objective: To determine the prevalence of osteoporosis in men and women 65 years and older in a nursing home and to determine if bisphosphonates are being used according to current Canadian guidelines.

Design: Chart audit.

Setting: A nursing home in Southwestern Ontario.

Participants: 105 residents living in four units of the nursing home.

Main outcome measures: Prevalence of osteoporosis documented in the patient chart, prevalence of osteoporotic fractures, rate of bisphosphonate use, and rate of vitamin D supplementation.

Results: Of the 105 residents, 39 residents met the eligibility criteria. Twenty four (22.9%) residents had a diagnosis of osteoporosis documented in their chart. Nineteen residents (18.1%) had a fragility fracture, but only three of these residents with fragility fractures were on bisphosphonates. None of the residents had a bone mineral density or FRAX score documented in their chart. Of those diagnosed with osteoporosis, 14 (58.3%) were on treatment, 12 (50%) of whom were on bisphosphonates. Two patients were on bisphosphonates without a diagnosis of osteoporosis in their chart. Among 39 residents, the rate of vitamin D use was 82.1%. The 14 residents receiving bisphosphonates were on vitamin D. None of the residents receiving bisphosphonates had a creatinine clearance less than 30ml/min, oesophagitis or achalasia, an allergy or intolerance to bisphosphonates or were unable to sit upright for at least 30 minutes. However, five (35.7%) residents had swallowing difficulties.

Conclusion: The prevalence of osteoporosis is underestimated in the nursing home units examined. Bisphosphonates were being administered according to current guidelines except for their use in patients with swallowing difficulties. For such residents, alternative osteoporosis treatment should be considered. Canadian Osteoporosis guidelines targeted specifically at the nursing home population are needed to help standardize management.

Dr. Bart Mysliwiec, Anesthesia

Unexpected case of post-operative metabolic acidosis in a patient undergoing a cesarean section

Supervisor: Dr. Tim Turkstra

Project Type: Case Report

Abstract: In this report, we describe an unexpected case of metabolic acidosis in a 26 year old healthy female, undergoing a Cesarean Section with general anesthesia. Additionally we explore the potential etiologies. The pregnancy was at term, there was failure to progress secondary to fetal malpresentation, and chorioamnionitis was suspected due to maternal fever and tachycardia. Nonetheless this patient appeared stable pre-operatively and had an unremarkable operative course. On emergence, it was discovered that as the patient was allowed to breathe spontaneously, her respiratory rate was in excess of 40 breaths per minute, with oxygen saturation around 94%. The decision to extubate was deferred and the patient was admitted to ICU for ventilatory support. She made a spontaneous recovery in less than twelve hours.

Dr. Maria Tambakis, Emergency Medicine

The role of a Physician-In-Triage (PIT) in enhancing ED flow for CTAS 2 and 3 patients: A community hospital experience

Supervisor: Dr. Snezana Ninkovich

Project Type: Retrospective Clinical Chart Review

Introduction: Overcrowding and lengthy emergency department (ED) wait times are challenges facing many communities. One recent strategy to reduce ED wait times has focused on decreasing the amount of time patients spend waiting for an initial assessment by an emergency physician. The objective of this study was to evaluate the effect on patient throughput after implementing a Physician-In-Triage (PIT) model in a community hospital ED.

Methods: This was a retrospective review of all patients seen in a community hospital ED (annual census 60,000) over two 3-month periods. Time to physician initial assessment (PIA), ED length of stay (LOS), and the proportion of patients who left without being seen (LWBS) and left against medical advice (LAMA) were compared over a 3-month (Sept-Nov 2011) period where there was no PIT, to a 3-month period (Sept-Nov 2012) when PIT was implemented. PIT was deployed for 4 hours daily between 1300-1500 and 1930-2130 to initiate patient management specifically for Canadian Triage and Acuity Scale (CTAS) Score 2 and 3 patients.

Results: 34,306 patient encounters were included. Of the 17,484 patients included in the PIT months, 1285 (7.3%) were seen by a PIT. Patient demographics and acuity before and after PIT implementation were similar. Median PIA time was significantly reduced during the PIT months compared to the control period (92 min vs 110 min; Delta 18 min, 95% CI -20.8, -15.2). Median ED LOS was shorter during the PIT period (180 min vs 199 min Delta -19 min, 95% CI -22.8, -15.2). The proportion of patients who LWBS decreased from 6.5% to 4.7% (Delta 1.8%, 95% CI: 1.3, 2.3) and LAMA decreased from 0.5% to 0.3% (Delta 0.3%, 95% CI: 0.1, 0.4) after PIT implementation. For CTAS 2 and 3 patients only, median PIA time decreased from 118 min to 103 min (Delta -15 min, 95% CI: -18.5, -11.5) and ED LOS decreased from 234 min to 225 min after PIT implementation (Delta -9 min, 95% CI: -13.9, -4.1).

Conclusions: The addition of an emergency physician at triage was associated with an overall decrease in median PIA time, ED LOS and a lower proportion of patients who LWBS and LAMA. Institution of a Physician-In-Triage (PIT) may help initiate the initial assessment and ED throughput for patients presenting to a community hospital.

Dr. David LaPierre, Academic Family Medicine

Learning to Provide Care for Acute, Life-Threatening Problems in Family Medicine

Supervisor: Wayne Weston

Project Type: Medical Education

Family medicine residents are required to respond to acute, life-threatening problems such as shock, unstable arrhythmias, respiratory failure and cardiac arrest during clinical training. Many of us will continue to manage such conditions during work in the emergency department or inpatient ward. Accordingly, development of competence and confidence in this domain of health care is imperative. All FM residents participate in ACLS, but it is clear that without ongoing practice, knowledge and skills rapidly degrade. To address this issue, we have started regular scenario-based training in the Chatham-Kent Health Alliance. Sessions last 20 min, with a 10 min debrief, and involve an actor, a FM resident, 2-4 medicine nurses, and a mock crash cart. Details of our program are online at PreventingCrashes.ca Feedback from residents, nurses, and hospital administration has been very positive, and we are now planning to expand to the Windsor campus. Our hope is to continue refining our model to allow easy, cost-effective implementation in other distributed sites, strengthening training infrastructure and assisting residents, nurses, and hospitals in improving outcomes in the most unstable of patients.

Dr. Behzad Hassani, Emergency Medicine

Evaluation of a brief on-line teaching module training emergency physicians and residents how to interpret hydronephrosis and its gradations using point of care ultrasonography.

Project Type: Research Project

Many Canadian emergency physicians (EPs) are trained in the core indications for point-of-care ultrasound (POC-US). Achieving training in more “advanced” applications, including detection of hydronephrosis, is currently complicated by a shortage of training opportunities. The objective of this study was to evaluate the influence of a brief, online educational tutorial on an EP’s ability to accurately diagnose and grade hydronephrosis.

Methods: Academic and community EPs and residents were invited to participate in this online study. Following a pre-test of interpreting US images of varying degrees of hydronephrosis, participants viewed a 10-minute online tutorial describing how to diagnose and grade hydronephrosis and recognize possible mimics on POC-US. Acting as their own control, participants then completed a post-test comprised of similar US images. US images were from ED patients with a clinical presentation of renal colic and diagnostic US reports that were categorized into 4 categories: none, mild, moderate, and severe hydronephrosis.

Results: The response rate was 71.1% (64/90). 60 (93.8%) respondents had completed an introductory POC-US course with 20 (31.3%) having completed an advanced application course. 52 (81.3%) stated that they were “not at all comfortable” diagnosing and grading hydronephrosis using POC-US. There was a significant increase from the pre-test (38.6%) to post-test (72.7%) in correct identification of hydronephrosis and its gradation (fj34.1%; 95% CI: 29.2%, 38.9%). When the grades of hydronephrosis were removed, there was a 14% (95% CI: 10.6%, 17.5%) increase from the pre-test (58.7%) to post-test (72.7%) in correct identification of hydronephrosis. There was no difference between physicians that had taken a basic versus an “advanced” application US course, institution, level of training or age group. Physicians practicing emergency medicine for less than 5 years did significantly better than physicians practicing 15+ years (p=0.03).

Conclusion: This study demonstrates that an on-line educational module substantially improves the accuracy of EP interpretation of hydronephrosis as well as its gradations. This brief online tutorial is an effective and accessible tool and could be utilized as one component of an advanced POC-US training curriculum.

Dr. David Phillips, Emergency Medicine

Do urine cultures in the emergency department change management of young women with symptoms of lower urinary tract infection? A retrospective chart review.

Supervisor: Dr. Jon Dreyer

Project Type: Clinical Audit

Introduction: Urinary tract infections (UTI) are one of the most commonly encountered infections in the emergency department (ED). With the rise of bacterial organisms resistant to modern antibiotics, some practitioners may order a urine culture in uncomplicated UTI despite the fact that guidelines clearly state this expensive investigation is not required. The objective of this study was to determine how many young (18-39 years) women presenting to the ED with symptoms of an uncomplicated UTI had a urine culture performed and if the urine culture results changed management.

Methods: This was a retrospective medical record review of women aged 18-39 presenting at one of two tertiary care EDs in London Ontario with a discharge diagnosis of cystitis or UTI during the study period of May 2011-May 2012.

Women who had fever, pregnancy, diabetes or cancer, were immunocompromised, were taking steroids, or had a UTI in the previous 90 days were excluded. A random sample of patients were then examined for hospital length of stay (LOS), urinalysis results, culture performance and results, antibiotics chosen, resistant organisms and a subsequent change in antibiotics or unplanned return ED visit.

Results: Of the 182 charts reviewed, 120 were included in the analysis. Mean (SD) age was 26.3 (6.1) years and median (IQR) LOS was 2.5 (1.6, 4.0) hours. 119 (99.2%) patients had a urinalysis, of which 112 (94.1%) had positive leukocyte esterase and 22 (18.5%) had positive nitrites. 118 (98.3%) patients received antibiotics (52.5% Septra, 20.3% Norfloxacin, 16.1% Nitrofurantoin, 11.0% other). 58 patients (48.3%) had urine cultures performed, of which 5 (8.6%) grew resistant organisms, and 2 (3.4%) received new prescriptions. There were 3 unplanned return ED visits within 7 days (2.5%).

Conclusions: The results of this study suggest that routine use of urine cultures in uncomplicated UTI in young healthy women is unnecessary and does not change management in 96.6% of patients. These findings suggest the need to educate ED staff about current guidelines for ordering urine cultures in this patient population in order to reduce unnecessary laboratory utilization.

Poster Presentations, Kingsmill Room, Huron University College

Presenter	Presenter
Dr. Nisreen Abumiddain - Victoria Family Medical Centre	Dr. Cecilia Li - Windsor
Dr. Kashif Ahmed - PGY3, Emergency Medicine	Dr. Yu Li - Southwest Middlesex Health Centre
Dr. Reem Al Sabbagh - Tavistock	Dr. Emma Love - Southwest Middlesex Health Centre
Dr. Muhammad Amin - St. Joseph's Family Medical & Dental Centre	Dr. Leanne McAuley - Byron Family Medical Centre
Dr. Kyle Armstrong - Southwest Middlesex Health Centre	Dr. Lindsay McAuley - St. Joseph's Family Medical & Dental Centre
Dr. Peyvand Ashtarani - Victoria Family Medical Centre	Dr. Jessica McPherson - Victoria Family Medical Centre
Dr. Mike Ballantine - Strathroy	Dr. Sienna McWilliams - Windsor
Dr. Meggan Brine - PGY3, Emergency Medicine	Dr. Brendan Peddle - PGY3, Emergency Medicine
Dr. Frederick H.T. Cheng - Victoria Family Medical Centre	Dr. Kesang Pema - St. Joseph's Family Medical & Dental Centre
Dr. Caroline Cheung - PGY3, Hospitalist	Dr. Sylvia Pillon - PGY3, Emergency Medicine
Dr. Tom Cheung - St. Joseph's Family Medical & Dental Centre	Dr. Giancarlo Pizzuti - Victoria Family Medical Centre
Dr. Allison Crombeen - Petrolia	Dr. Candice Rivest - PGY3, Emergency Medicine
Dr. Jason James Essue - Byron Family Medical Centre	Dr. Scott Seadon - Windsor
Dr. Marcus Gostelow - Byron Family Medical Centre	Dr. Paula Suffoletta - Ilderton
Dr. Dusanka Gvozdic - Southwest Middlesex Health Centre	Dr. Aurelia Valiulis - Southwest Middlesex Health Centre
Dr. Nasreen Hossain - Southwest Middlesex Health Centre	Dr. Tristan Walker - PGY3, Emergency Medicine
Dr. Kapil Kohil - Byron Family Medical Centre	

Dr. Nisreen Abumiddain

A Guide To Uncomplicated Antenatal Care In Primary Care Setting

Supervisor: Dr. Jamie Wickett

Project Type: Medical Education Project

Antenatal care (ANC) is considered one of the most critical and important pillars of family medicine. At times, it might be challenging to family medicine residents and medical students to manage obstetric patients during their ANC visits. As simple as it might be, family medicine residents may not be comfortable addressing common symptoms and concerns expressed to them by their pregnant patients. Even choosing the safest pharmaceutical treatment is not always an easy job. Moreover, keeping up with all the dates and schedules that are important for certain investigations in pregnancy can be overwhelming. The development of a clinical practice tool "A Guide To Uncomplicated Antenatal Care In Primary Care Setting" aims to support family medicine residents and medical students with a handy, quick guide at their fingertips to help them provide a better, more efficient and smoother ANC visit within their family practice setting. Text books as well as online resources were used to develop the guide practice tool. The guide is presented in a hard copy, shirt-pocket size, and a tabulated content for easier and faster navigation. The use of this clinical practice guide should improve the overall quality of ANC provided by family medicine residents, increase their obstetric patients satisfaction with visits and improve the patient-physician relationship.

Dr. Kashif Ahmed, Emergency Medicine

Imaging in the Diagnosis of Acute Appendicitis in Children: A retrospective chart review

Supervisor: Dr. Karl Theakston

Project Type: Clinical Audit

Introduction: Among the diagnostic modalities available for appendicitis, ultrasound (US) and computed tomography (CT) are commonly used. The primary objective was to determine how many pediatric patients had imaging prior to appendectomy over the last 5 years, the type of imaging and results. A secondary objective was to determine the sonographic features of acute appendicitis associated with pathologically confirmed cases.

Methods: This was a retrospective chart review of children (<18 years) who underwent an appendectomy at London's Children Hospital during the last 5 years for suspected acute appendicitis. All children who underwent an appendectomy for other conditions were excluded. US results were categorized into 4 mutually exclusive groups: positive for appendicitis, indeterminate suggestive (I-S), indeterminate non-suggestive (I-NS) and normal.

The diagnosis of appendicitis was determined by pathological examination.

Results: 663 patients had an appendectomy. Of those, 400 were reviewed and 373 met the inclusion criteria. 75 (20.1%) patients did not have any imaging prior to appendectomy. Of the 298 (79.9%) patients who had imaging, 289 (97.0%) had US, 7 (2.3%) had US and CT and 2 (0.7%) had CT alone. 225/296 (76.0%) US results were classified as positive, 207 (92%) had appendicitis. 38 (12.8%) US results were classified as I-S, 30 (79.0%) had appendicitis. 32 (10.8%) US results were classified as I-NS, 22 (68.8%) had appendicitis. 1 (0.4%) US report was normal and did not have appendicitis. Of the 296 patients who had an US prior to surgery, 35 (11.8%) were found to have a normal appendix. Of these, 17 had a positive US report (n=225), resulting in a 7.5% false-positive rate. 17 patients had indeterminate US findings (n=70), resulting in a 24.3% false-positive rate. The mean (SD) appendiceal diameter was larger in the patients who had a positive US and appendicitis, compared to patients who had a positive US but a negative pathology (10.4 mm vs. 7.4 mm; f_j 3.0; 95% CI: 1.7, 4.3).

Conclusions: Of the 373 patients who had an appendectomy for suspected appendicitis, close to 80% had imaging prior to surgery. The use of CT remains limited. While a positive US is a reliable diagnostic test for appendicitis with a low false-positive rate, indeterminate US findings are less predictive. The overall negative surgery rate for pediatric appendicitis is 11.5%.

Dr. Reem Al Sabbagh

Peanut Allergy in Children: A Case Report

Supervisor: Dr. Kenneth Hook

Project Type: Case Report

Peanut allergies have become an important topic of investigation in family medicine because they are commonly encountered in family practice. Peanut allergies pose a significant medical and legal issue due to the increasing incidence of allergies and potential for life threatening consequences. The purpose of this report is to provide an overview of peanut allergy in children by reviewing a relevant case and by highlighting the epidemiology of peanut allergies along with a discussion of emergency treatment and promising immunotherapy. Literature regarding peanut allergies was reviewed in addition to textbook use. The case review involved a two-year old child who presented to the emergency department in respiratory distress and subsequently developed hives, meeting the criteria for anaphylaxis. The case was managed successfully by the team of doctors in the emergency department. The patient and his parents were asked to follow up with their family doctor in order to provide education in prevention of this type of medical emergency, and discuss further management. When the diagnosis of peanut allergy was confirmed, the parents were advised to follow dietary restrictions and have a clear plan of action including the purchase of an epinephrine autoinjector (Epipen) and medical alert bracelet. Immunotherapy has revealed promising results for treatment. This case was important because it taught me how to manage one of the common presentations in family medicine with possible fatal consequences.

Dr. Muhammad Amin

Fibromyalgia, its Impact on Patients And Importance of management of Fibromyalgia patients

Supervisor: Dr. Susan McNair

Project Type: Case Report

Fibromyalgia Syndrome (FMS), a chronic pain disorder, presents a challenge to family physicians as many patients look well, without having apparent physiologic or anatomic abnormalities. This case study describes a 29 year old female patient who presented with fibromyalgia syndrome but with blood test positive for ANA (Anti-Nuclear antibody). Her fibromyalgia treatment was not started until 2 years as the patient was waiting for an appointment with a Rheumatologist. This delay in treatment had a negative impact on the patient's social life and occupational activities, leading to loss of her job and breaking up with her boyfriend. Family physicians can play a central and a crucial role in preventing the negative impact of fibromyalgia patient's lives, provided we as Family physicians, diagnose fibromyalgia early and if we start timely and appropriate management in such patients.

Dr. Kyle Armstrong

A Palliative Case of Metastatic Leiomyosarcoma

Supervisor: Dr. Vikram Dalal

Project Type: Case Report

Introduction: Leiomyosarcoma of the adrenal gland is a rare form of retroperitoneal sarcoma. Patients usually present late with vague symptoms and may have extensive metastatic disease. There is a poor prognosis with this type of cancer and the best treatment to improve survival is early detection and surgical resection. Because of the prognosis, management can quickly become palliative.

Methods: Case information was collected from electronic medical records and personal patient interactions.

A literature review was performed through PubMed with a search of adrenal leiomyosarcoma, retroperitoneal leiomyosarcoma, sarcoma, barriers to palliative care and techniques to help families accept a palliative prognosis.

Case report: A 46-year-old woman presented to the emergency department with right upper quadrant pain. On ultrasound a large adrenal mass was found and further investigations led to the diagnosis of leiomyosarcoma. She was treated with surgical resection, adjuvant radiation and developed extensive metastasis. The patient and her family had difficulty accepting the prognosis and were always hopeful of a cure.

Discussion: As early diagnosis is a key to longer survival, family physicians have an important role to play, with most early presentations first seeking care in their office. Palliative care is an important, and one of the most rewarding aspects of family medicine. But it can also present difficulties with barriers to care, treating the whole family and patients searching for a cure even with extensive metastatic disease. Information on how to better perform palliative care in light of these difficulties is presented with the hope to improve care in difficult palliative cases.

Dr. Peyvand Ashtarani

Combination of Framingham risk assessment and Harmonized International Diabetic Federation Criteria tools to assess impact on cardiovascular risk assessment

Supervisor: Dr. Jo-Anne Hammond

Project Type: Research Project

Background: The Metabolic syndrome increases the risk of stroke and heart attack three-fold and the risk of diabetes type II five-fold. Metabolic syndrome also increases cardiovascular risk 1.5-2 times. The purpose of this study was to diagnose metabolic syndrome and determine its impact on cardiovascular risk.

Methods: A retrospective chart review of 100 patients' charts at a family medicine centre in London, Canada was completed. Men aged 40-65 and women aged 50-65 with low or moderate cardiovascular risk as diagnosed with Framingham risk assessment tool were included in the study. All patients with high cardiovascular risk were excluded from the study. Participants diagnosed with metabolic syndrome, as determined with International Diabetic Federation criteria, had their Framingham risk scores multiplied by 1.5-2 to account for further cardiovascular risk due to the syndrome.

Results: A chart review of 54 males and 46 females with low and moderate cardiovascular risk were included in the study. Of the 100 participants, 26 were identified with metabolic syndrome. These 26 participants had their Framingham scores multiplied by 1.5-2. It was found that 7 of these 26 patients with low cardiovascular risk based of the Framingham tool moved to moderate risk. Seventeen of these 26 patients with moderate Framingham risk moved to severe cardiovascular risk. The remaining 2 patients diagnosed with metabolic syndrome did not move a risk category after the calculation.

Interpretation: Combining the diagnosis of metabolic syndrome with cardiovascular risk in family practice might increase cardiovascular risk screening sensitivity and might identify more people that are at risk.

Dr. Mike Ballantine

Organ and Tissue Donation

Supervisor: Dr. Marshall

Project Type: Patient Education Project

Objective: Organ and tissue donation is a very important issue that has the potential to impact everyone and yet it tends to be a little-discussed and often overlooked topic. Given the long-term nature of the patient relationships formed in family medicine, we have a unique opportunity amongst healthcare providers to address issues such as organ and tissue donation, which may not be immediately relevant to the patient. Given the dire need for improved rates of donation, and the ease with which the information could be distributed to patients in family medicine clinics, I have opted to create a patient education resource in the form of a brochure for my residency project.

Methods: To gather the information for the brochure the websites of Trillium Gift of Life Network and Be A Donor were reviewed. Additionally, PubMed and GoogleScholar searches were performed with relevant search terms.

Results: A template was created for the brochure specifying the various sub-topics within organ and tissue donation that were to be addressed, including; what organs can be donated, how the process takes place, and various religious viewpoints on the matter. After finding supporting evidence in the literature, the brochure was created using Microsoft Word, in a "questions and answers" format to address frequently asked questions regarding organ and tissue donation.

Conclusions: This brochure is a succinct and condensed patient education resource that could easily be adapted for use in family physicians offices to educate patients with regards to organ and tissue donation.

Dr. Meggan Brine, Emergency Medicine

Bag versus catheter: How are we collecting urine in infants at LHSC?

Project Type: Clinical Audit

Introduction: Previous pediatric literature has examined the effectiveness of bag versus catheter sample collection and has found bag urine collection to be more sensitive for detection of urinary tract infection (UTI) compared to catheter samples, however consistently less specific. The present study was undertaken to determine clinical practices for urine sample acquisition in the Pediatric Emergency Department (ED) at London Health Sciences Center (LHSC).

Methods: This was a retrospective chart review of a random sample of 121 ED visits for patients aged 12 months and younger presenting to the Pediatric ED at LHSC with a chief complaint of fever, vomiting, or unwell over a one-year period. Visits were excluded if triaged CTAS 1 or if patient had known renal disease or history of UTI. Charts were reviewed to determine if urinalysis was obtained, by what method, if catheterization was performed after initial bag specimen and if method of collection affected ED length of stay.

Results: 103 patient encounters met inclusion criteria. Urinalysis was performed in 66 (64%) patients. Catheterization was the initial method of collection in 56 (84%) patients (19 [90.5%] ages 0-3 months, 19 [90%] ages 3-6 months, and 19 [75%] ages 6-12 months). Of 10 (15%) urine samples initially collected by bag, repeat samples by catheterization were obtained in 6 (60%). Of 56 samples sent for culture, 13 (23%) grew organisms (3 [23%] initially collected by bag).

Median (IQR) ED length of stay was 2.7 (1.9, 5.1) hours in the catheter group and 2.2 (1.1, 2.5) hours in the bag group. Conclusions: Catheterization for urine sample collection was the most common method utilized for infants under 12 months at LHSC. Most samples collected by bag required a subsequent catheterization. However, sample collection by catheterization did not shorten ED length of stay.

Dr. Frederick H.T. Cheng

Physical Activity Levels Among Adults: Are the Design of Our Cities to Blame?

Supervisor: Dr. Jamie Wickett

Project Type: Research Project

Background: Bolstering physical activity is a public health priority. While previous efforts sought to induce behaviour change through mass-media campaigns, factors within the built environment are now recognized as a significant determinant of active lifestyles. Perceived inaccessibility to recreation has been correlated with sedentary behaviours, but objective measures of proximity have not yet been linked to physical activity.

Purpose: To examine the relationship between physical activity and the distance from home to recreational locales.

Methods: In a cross-sectional survey, adults revealed whether they partook in physical activity and the different types/frequency. Inactive participants were asked the primary reason for their sedentarism. The place of residence and the nearest walking trail/large park, community centre, indoor/outdoor pool and public arena were elicited. Google Maps Distance Measurement Tool was used to calculate the travel distance and compared with physical activity levels.

Results: Of the 266 participants, 56.8% were physically active and dedicated 227.9 minutes/week in any form of physical activity, with walking (72.8%) most popular. Inaccessibility (33.9%) was the primary rationale for inactivity. Increasing distance to all five recreational locales was positively associated with greater sedentary behaviour – the inactive cohort travelled an additional 2.65 km on average.

Discussion: The built environment can either facilitate or discourage active lifestyles. This study provides objective evidence to suggest that reducing the distance to various recreational opportunities may passively promote increased rates of physical activity. Creating these supportive environments should be the future intervention target for public health officials and community planners.

Dr. Caroline Cheung, Hospitalist

The “do-not-resuscitate order”: a history of resuscitation and implications for family physicians

Project Type: Major Essay

As a resident in the Enhanced Skills program in Hospitalist medicine I have been exposed to a wide range of patients. I have participated in the care of a broader range of patients than most family medicine residents. One recurring theme I have seen in hospital is that everyone must have a DNR status. Whether being admitted into the ICU or on a family medicine service that piece of information is crucial to obtain as soon as possible. A patient being labelled a “full-code” would mean the patient would want cardiopulmonary resuscitation (CPR) and mechanical ventilation, i.e. all life-saving measures. Naturally, the majority of people want to live. Even people with terminal conditions such as cancer want to live despite the natural course of their illness. A desire for survival is a primitive instinct in all animals. What separates us from animals is an ability for logical reasoning. As physicians we must advocate for our patients and provide the logic and rationale to aid them in making the best decision while maintaining their autonomy. This is a report on the do-not-resuscitate (DNR) order and, specifically, how it applies to family physicians, both office and hospital-based. I plan to discuss the history of life-saving measures such as CPR, the history of the DNR status, its evolution, barriers to effective implementation, and the consequences to providing patients with futile measures. Finally, I will discuss the role of family physicians and how it can become an important tool for patient advocacy.

Dr. Tom Cheung

Guidelines Online: A Clinical Practice Tool

Supervisor: Dr. Susan McNair

Medical Education Project

“Guidelines Online” is a clinical practice tool in the form of a website. It consolidates all of the information surrounding the most up to date guidelines for eight of the most common preventative health topics. Dyslipidemia, breast cancer, colon cancer, cervical cancer, hypertension, diabetes, and osteoporosis are all covered in depth. The goal of the website is to help primary care practitioners understand more about the guidelines we use, why we use them, their pitfalls, and their benefits. It has been designed for use in the office alongside the patient or at home as a study guide.

Dr. Allison Crombeen

Rural Family Medicine Procedural Skills: A reflection on how residents in rural training sites complete the procedural curriculum

Supervisor: Dr. John Butler

Project Type: Reflective Practice Audit

For rural family medicine residents, learning how to perform a broad number of procedures is a necessary component of their training to prepare for a future rural practice since rural family physicians tend to perform more procedures than their urban colleagues. Drawing on my experience as a rural resident in the Schulich Family Medicine program, I audited my completion of the program’s resident procedure log to determine how much procedural experience I gained throughout my residency. I also reflected on the strategies that I found useful and the barriers I encountered while trying to complete my procedure log. After finishing 88 weeks of training, I had completed 76.6% of the procedures in the procedural log. In my audit, I reflect on the similarities and differences between my experience and the factors that have been reported in the literature as positively or negatively influencing procedural skill acquisition. The audit of my procedure log reveals that I was able to complete a large number of my skills in a rural or community hospital. The strategy that I found most helpful in gaining competence in procedures was to actively and repeatedly seek out feedback. Reflecting on this, it is an important strategy for all family medicine residents and physicians to have in order to maintain and expand their scope of procedural skills.

Dr. Jason James Essue

Referred Pelvic Pain: A Diagnostic Challenge

Supervisor: Dr. John Jordan

Project Type: Case Report

This case report reviews the presentation of right hip degenerative osteoarthritis secondary to developmental dysplasia of the hip that gradually manifested itself over the course of a 6 year period in a female patient in her 30's. Arriving at the diagnosis was challenging because the expected symptoms of hip pain and limited hip range of motion presented quite late in the disease course. In addition, the patient experienced referral of pain to adjacent regions of the body further complicating the diagnosis. The patient was referred for orthopaedics consultation and is currently on a wait list for hip arthroplasty.

Dr. Marcus Gostelow

Multi-Factorial Work Absence: A Case Report

Supervisor: Dr Nancy McKeough

Project Type: Case Report

This is a case report chronicling the illness experience of Mr F, a 62 year old computer salesman, during a prolonged work absence for both psychological and physical factors, which is a common clinical scenario encountered in primary care. Within this case, there is a rich narrative of the interplay between a patient's emotional and physical health. Disparate clinical entities such as caregiver burden, mood and anxiety symptoms, and chronic lower back pain all combine to form a unique clinical picture. Although significant gain was made in improving Mr F's mental health through a collaborative care model, it was ultimately a physical ailment which precluded him from returning to his job. This report also touches on difficulties and barriers physicians might encounter when dealing with third parties involved with short and long term disability.

Dr. Dusanka Gvozdic

Sub-acute abdominal pain caused by Entamoeba species

Supervisor: Dr. Julie Copeland

Project Type: Case Report

Abdominal pain is a very common presentation in primary care setting. In Canada, we usually do not think about parasitic infection as a possible cause for abdominal discomfort. With this case report, we would like to emphasize the importance of a good clinical history including a patient's travel history. A formal consent was obtained from the case patient in order to prepare and present this case report. A 54 year old male presented with a four week history of abdominal pain associated with nausea, changes in bowel movement and weight loss. Prior to presentation at our clinic he was seen in the Emergency Department. His investigations (CBC, abdominal/pelvic US and CT) were all within normal limits. He was advised to follow up with his family physician if the pain persisted. A careful history review at our clinic revealed that he had been vacationing in Mexico approximately a month before the start of the first symptoms. Examination of the stool for ova and parasites was positive for Entamoeba species infection. After an appropriate treatment with antibiotics, the patient was reviewed and found to be asymptomatic. When suspicion for possible parasitic infection exists, physician should prompt an appropriate investigation. Timely diagnosis and treatment could prevent serious complications associated with parasitic infection like Entamoeba Histolytica which is known as amoebiasis.

Dr. Nasreen Hossain

A Case of Q Fever

Supervisor: W. E. Osmun

Project Type: Case Report

We present a case of a 62 year old female with Q fever who had no animal or farm contact. This case demonstrates the difficulty in diagnosis, particularly if there are complicating and diversionary findings. The patient presented with non specific clinical findings, complicated by laboratory and incidental radiological findings leading to delay in diagnosis and surgical interventions. Serological findings later confirmed the diagnosis. This report reviews the clinical presentation and diagnosis of Q fever. It also emphasizes the non specific and insidious nature of the presentation and the use of serology for the diagnosis of Q fever.

Dr. Kapil Kohli

Osteoporosis and Men – Clinical Primer

Supervisor: Dr. Sonny Cejic

Project Type: Medical Education Project

Objective: Build a guideline primer report based on literature review that will include male baseline risk factor characteristics (i.e. secondary causes of osteoporosis, age, height, weight, bone mineral density, smoking status, corticosteroid use, low testosterone levels). Review males 10 year probability of fracture according to the FRAX WHO Fracture Risk Assessment Tool.

Results: The 2010 Canadian osteoporosis guidelines state all patients at high risk of suffering a major osteoporotic fracture should be offered pharmacologic therapy with an appropriate first line bisphosphonate or denosumab for the prevention of osteoporotic fractures. Treatment of those at moderate risk is to be guided by the preferences of the patient. Patients at low risk do not require treatment with a bisphosphonate or denosumab. It is recommended that all patients anticipated to be on prednisone at a dose of $\geq 7.5\text{mg}$ for ≥ 3 months receive treatment with a bisphosphonate. Regardless of risk category, all patients are to take calcium and vitamin D.

Conclusion: This pamphlet summarizes current osteoarthritis management recommendations as per the Canadian and American Osteoporosis Guidelines for men. The written document includes patient education, medications and rehabilitation options within the context of chronic disease management. The goal of this project is to raise awareness of the ongoing need for measures to prevention osteoporosis and fragility fractures.

Dr. Cecilia Li

Justifications for Pacemaker Deactivation in Palliative Patients

Supervisors: Drs. A. Schumacher & G. Giddings

Project Type: Major Essay

Pacemakers have been introduced to the medical field since the late 1950s with more than 3 million devices implanted worldwide. Yet it is a relatively new device that has been raising concerns in the palliative setting. As patients approach the end of life, there is relatively little scientific data to guide clinicians in managing pacemakers. Often patients or their family members request for deactivation of cardiac implantable electrical devices as they believe the electrophysiology of the device may lead to harmful shocks, prolongation of death, or artificial sustainment of life in a brain-dead patient. In recent surveys, physicians are often found to be uncomfortable in deactivating pacemakers at end of life.

Nonetheless, the legal perspective has been consistent in honoring the rights of individuals as the most important decision factor for withdrawal of treatment, and pacemakers are not given special exemption from other life-sustaining therapies. This major essay will focus on the ethical and legal justifications for pacemaker deactivation and a discussion in regard to the current theoretical controversies. It will form the basis in which the development of a new clinical protocol on the management of cardiac devices will be introduced at Windsor Regional Hospital. A patient information brochure would also be presented along with the essay. These brochures will be distributed to patients and their family members at Hospice, on the Palliative Medicine floor, and in the Oncology department at WRH when approval is granted.

Dr. Yu Li

Kawasaki Disease – Needle in a Haystack

Supervisor: Dr. Jennifer Parr

Project Type: Case Report

Kawasaki Disease is a small vessel vasculitis that mainly occurs in kids and has the long term sequelae of inciting the development of coronary artery aneurysms if left untreated. Many missed diagnosis of the disease can result in morbidity and mortality for the patient when they reach adulthood. It's primary presenting symptoms are fever and a generalized rash. In this case report, we review the story of a 19 months old baby girl whom presents to the pediatric emergency department with symptoms suggestive of Kawasaki Disease. Making the diagnosis of KD is often difficult as the symptoms can often fit a long list of differential diagnoses. Our discussion focuses on the diagnostic criteria for KD as outlined in the most recent guidelines jointly published by the American Heart Association and American Pediatric Society. There is also a focus on the concept of Incomplete KD and how it affects our decision making in the management of such an ubiquitous presentation. Although the patient was ultimately diagnosed with Scarlet Fever, her case illustrates the need to err on the side of caution when we think about pursuing KD as a diagnosis.

Dr. Emma Love

Developing an Educational Module for Family Medicine Residents on Pediatric and Adolescent Sport-Related Concussions

Supervisor: Dr. Julie Copeland

Project Type: Medical Education Project

Concussions, also known as mild traumatic brain injuries, are a common sports injury with significant public health implications. Our clinical understanding of these injuries has been growing rapidly, with increasing focus on proper diagnosis and management of concussions to prevent complications such as post-concussion syndrome and prolonged school and work absences. Management considerations are particularly important in child and adolescent athletes, as people under the age of 18 are most likely to experience concussions. Furthermore, due to their cognitive immaturity and rapid brain development, children and adolescents require more time to recover following an injury. New consensus guidelines emphasize the importance of physician participation in assessment and management of athletes with concussion; many of these athletes will be assessed by family physicians. However, studies have demonstrated a gap in knowledge translation between sports medicine experts and other health care professionals. This module reviews the current state of knowledge about pediatric sport-related concussions, including epidemiology, diagnosis, management, and complications. It aims to increase family medicine residents' comfort level with concussions, so that they may properly manage their own patients and assist in the dissemination of accurate information about concussions to their patients, members of the sporting community, and the public at large.

Dr. Leanne McAuley

Ethical Considerations of Opioid Prescribing in Primary Care

Supervisor: Dr. Sonny Cejic

Project Type: Case Report

Background: Prescription opioid addiction is a prominent health issue in Canadian society that has been described as a national public health crisis. Currently, a significant amount of publications suggest that physicians are contributing to the rising prevalence of opioid addiction due to their prescribing habits. Conversely, other opinion has suggested that the dramatic rise in opioid prescribing is in response to the epidemic of chronic non-cancer pain, suggesting that physicians are simply responding to their professional obligation to treat pain and relieve suffering.

Objective: Through a case report of a patient living with chronic non-cancer pain, the ethical challenges that family physicians face in balancing effective chronic pain management against opioid-related harms are highlighted.

Method: Consent was obtained to review relevant information from the patient's electronic medical record detailing the clinical controversy of this case. A Pubmed search was conducted for recent literature pertaining to the topic.

The case was discussed in relation to the current research.

Conclusion: With awareness of the ethical challenges of chronic pain management and the societal implications of prescription opioid misuse, family physicians play a pivotal role in managing the current opioid health crisis. As leaders in the forefront, they can advocate for the establishment of comprehensive pain clinics with multi-disciplinary team approaches, balancing the need for chronic pain treatment with the prevention of opioid-related harms.

Dr. Lindsay McAuley

Screening for Subclinical Celiac Disease: A Primary Care Challenge

Supervisor: Dr. Laura Lyons

Project Type: Case Report

Background: Subclinical, adult-onset celiac disease has been recognized as one of the most under-diagnosed autoimmune diseases in North America, accounting for more than 50 percent of celiac cases. For family physicians, deciding which patients to screen can be very challenging, as vague symptom presentation makes this disease clinically indistinguishable from functional gastrointestinal disorders.

Objective: A case report was developed to highlight a complex clinical presentation in which a patient, previously labeled with irritable bowel syndrome based on non-specific GI symptoms, was later screened and eventually diagnosed with subclinical celiac disease. Prior to diagnosis, this patient was not known to have any risk factors for celiac disease and, therefore, had not been considered for screening.

Methods: Patient consent was obtained for chart review and a literature review was conducted to address the challenges of screening for celiac disease in the not-at-risk population.

Findings: As primary care continues to shift its focus and resources to health prevention, increased awareness of subclinical celiac disease is imperative for the physician. Recognition of the diversity of symptoms, as well as the consequential health outcomes of undiagnosed disease, such as osteoporosis or intestinal lymphoma, calls for an organized approach to screening. Consideration should be given for including patients with subclinical symptoms, who often fall outside of the at-risk group.

Dr. Jessica McPherson

Infant Sleep Management: Helping Doctors See Through the Eyes of Parents

Supervisor: Dr. Anna Pawelec-Brzychczy

Project Type: Medical Education Project

Infant and toddler sleep is frequently disruptive to the family unit and poor sleep can have longstanding deleterious effects on the development of the child involved. Primary care physicians traditionally have little formal education with regard to this issue despite its significant importance to their patients. This medical education project will provide a brief overview of normal sleep, popular sleep-training methods and related safety issues. It can be delivered to medical trainees via a one hour presentation. The project includes a broad sampling of relevant scientific evidence. Selected methods are those with which families involved would be most familiar and those who have the most evidence to support them.

Dr. Sienna McWilliams

A Healthier You: Physician tool and Patient Education Resource

Supervisor: Dr. G. Butler/Dr. J. Day

Project Type: Medical/Patient Education Project

Purpose: A large proportion of the patients seen in family medicine are overweight or obese. Unfortunately, physicians do not adequately diagnose and treat obesity due to a number of barriers. The purpose of this project was to review the current literature, guidelines and recommendations and condense the important information into a helpful resource for both patient and physician. This booklet will provide an easy means for physicians to approach weight loss and hopefully increase the percentage of patients that get weight loss counseling. In addition, this educational resource may improve success in patients making healthy lifestyle changes.

Methods: I started my search by finding relevant articles in current medical journals and using their cited references to find primary literature and review articles. I used UpToDate for summary articles and PubMed and Medline to find current guidelines. All full text documents were available through Western Libraries. The resource was developed in a way that follows the flow of current recommendations for the evaluation and management of obesity. Diet and exercise interventions are the mainstay of treatment, therefore the information and tools for the patients focused in those areas.

Discussion: Despite our efforts, there continues to be an increase in the prevalence of overweight and obesity in Canada. With time constraints in the office, lifestyle is often sub-optimally addressed. This resource will provide valuable information and streamline the approach for the physicians, removing some of the barriers to care. Hopefully this preventative, healthy lifestyle approach will help to slow, and possibly reverse, this increasing prevalence of obesity.

Dr. Brendan Peddle, Emergency Medicine

Redundant imaging of mandibular fractures in the ED: Should we start with CT?

A retrospective chart review.

Project Type: Clinical Audit

Introduction: Emergency department (ED) diagnosis of mandibular fracture is confirmed radiographically with either plain film X-ray or computed tomography (CT) scan. There is evidence that CT scans are more sensitive at detecting mandible fractures and that they are useful for pre-operative planning. The objective of this study was to assess imaging patterns for suspected mandible fracture and to determine if there are clinical criteria present which increase the likelihood of having a fracture.

Methods: This was a retrospective medical record review of adult (>17 years) patients who underwent an X-ray and/or CT scan for suspected mandibular fracture in one of two tertiary care EDs over a one year study period (Jan-Dec 2012). Patients with extensive facial trauma and suspected multiple injuries were excluded. A random sample of patients was examined for demographics, mode of imaging, clinical features on presentation, and diagnosis. Backwards stepwise multivariable logistic regression models determined predictor variables independently associated with having confirmed mandibular fracture.

Results: 92 patients were included in the analysis. Mean (SD) age was 32.2 (13.7) years and 70 (75.3%) were male. 31 (33.7%) patients were found to have a mandibular fracture and 61 (66.3%) were fracture negative. Of those who were fracture positive, 13 (41.9%) received an X-ray alone, 3 (9.7%) had CT alone, and 15 (48.4%) had both X-ray and CT scan. Of the patients that were confirmed fracture negative, 42 (68.9%) received an X-ray alone, 13 (21.3%) had CT alone, and 6 (9.8%) had both an X-ray and CT scan. Presenting with malocclusion (OR: 6.1, 95% CI: 1.6, 23.6) and presenting with gingival laceration congruent with the fracture location (OR: 24.3, 95% CI: 2.7-215.9) were independently associated with having a mandibular fracture.

Conclusions: A large proportion of patients with mandible fracture have both an X-ray and CT scan for diagnosis and/or prior to surgical management. Two clinical findings were independently associated with mandible fractures and may be useful in guiding emergency physicians towards CT initially, avoiding extra costs and unnecessary patient exposure to ionizing radiation.

Dr. Kesang Pema

Patient Information Pamphlet on Actinic Keratosis

Supervisor: Dr. Laura Lyons

Project Type: Patient Education Project

Actinic Keratosis is a common, precancerous skin condition often encountered in family practice. It is caused by chronic exposure to UV A&B radiation. If left untreated, they can develop into squamous cell carcinoma. Pubmed search was done using the key words 'actinic keratosis and treatment, 'cryotherapy for AK'. Other references were obtained from Uptodate, Canadian Dermatology Association, Skin Therapy Letter. Studies regarding treatment were chosen that compared the three most common treatment modalities used by a family physician- cryotherapy, 5-Flouracil and Imiquimod. Topical treatments are useful for eradicating clinically evident lesions and also the surrounding sub clinical lesions. This brochure provides patients with information on the topic of Actinic Keratosis related to risks factors, characteristic features, treatment options, side effects of treatment and prevention. It is also a comprehensive clinical resource for physicians that will help to initiate discussion with patients, and thus improve quality of health care.

Dr. Sylvia Pillon, Emergency Medicine

The “Do Not Hospitalize” Patient: How often do they present to the ED?

Supervisor: Dr. Marcia Edmonds

Project Type: Prospective Cohort Study

Introduction: Nursing home residents use a significant amount of health care resources when seen in the emergency department (ED). These transfers are also onerous to patients who may not want aggressive medical management. To avoid unwanted hospital transfers, many nursing home patients have do not hospitalize (DNH) advance directives. Although not standardized, most nursing homes outline these advance directives into four levels of care. Level 1 involves comfort measures only while level 2 involves treatment of acute conditions in the nursing home. Levels 3 and 4 entail transfer to hospital for acute care without CPR, and transfer to hospital with full resuscitation, respectively. The first two levels are considered DNH orders. The objective of this study was to determine the proportion of nursing home patients transferred by emergency medical services (EMS) to the ED who had a DNH directive.

Methods: This was a prospective cohort study of nursing home patients transported by EMS to one of two EDs of a tertiary care centre (annual census 125,000) over a 6-week study period. Patients from a retirement home, patients who arrived vital signs absent, patients admitted directly to a service bypassing the ED, patients transferred from other hospitals or without the appropriate advanced directive form were excluded. ED length of stay (LOS), number of investigations, type of imaging, disposition, and hospital LOS were recorded.

Results: 167 patients were identified for enrollment, of which 95 met eligibility criteria. Mean (SD) age was 85.8 (9.2) years and 28 (29.5%) were male. 35 (36.8%) patients had an advanced directive form indicating they did not wish to be transported to hospital. Median (IQR) ED length of stay was 6.6 (4.7, 8.4) hours for patients who did not wish to be transported, compared to 7.0 (4.6, 9.7) hours for patients with advanced directives indicating they wanted transfer. Of the DNH patients, 12 (63.2%) patients had laboratory investigations done while in the ED and 17 (89.5%) patients had imaging. Of those with imaging, 8 patients had X-rays, 4 had CT scans, 4 had both X-rays and CT scans, and 1 patient had an ultrasound. Of the DNH patients, 5 (26.3%) were admitted to hospital with a median (IQR) hospital LOS of 38.2 (28.3, 122.0) hours.

Conclusion: Transferring nursing home patients to the ED contrary to a DNH advance directive places a significant burden on both the patient and the health care system. Future studies could be done to assess factors that precipitate transfer to the ED despite DNH orders.

Dr. Giancarlo Pizzuti

Adolescent Sports-Related Concussion: An Education Session

Supervisor Name: Dr. John Day

Project Type: Patient Education Project

Recent media exposure of high profile athletes suffering the serious and possibly career-ending effects of sports-related concussion has brought to the forefront a subject that merely two decades ago was not being publicly discussed. Evidence suggests that sports-related concussion in the adolescent population is occurring at an alarming rate and furthermore proper education and return to activity guidelines are not being followed. While injury to professional sports athletes is not without consequence, adolescent athletes appear to be at significant risk for concussion injury and also at risk for catastrophic consequences such as second impact syndrome. While positive steps have been taken by most major league sports to curtail the epidemic of sports-related concussion, it is questionable whether enough is being done at the high school level. The Canadian Medical Association, in addition to many other high profile medical bodies, have released policy statements highlighting the importance of adolescent concussion education, appropriate management, preventative strategies and short and long term complications of concussions. The expanding and comprehensive role physicians should assume in aspects of adolescent sports-related concussion, from initial diagnosis and management to education of players, coaches and parents, should not be ignored. This project attempts to create an educational platform, through lecture, presentation and a brochure, by which adolescent athletes, coaches and parents can enhance their knowledge of sports-related concussion.

Dr. Candice Rivest, Emergency Medicine

Does the unscheduled return emergency department visit rate differ between patients treated by a resident versus a consultant?

Supervisor: Dr. Wanda Millard

Project Type: Retrospective Chart Review

Introduction: Resident supervision in the emergency department (ED) varies based on experience, program and practice of the supervising consultant. Unscheduled return visits to the ED may represent an evolution of the presenting complaint; or may reflect inadequacies in patient care at the initial visit. If the rate of unscheduled return visits is significantly different for patients treated primarily by a resident, it could suggest enhanced supervision is necessary to ensure patient safety. The objective of this study was to determine the difference in the proportion of unscheduled return visits between patients treated primarily by a resident versus a consultant.

Methods: A retrospective chart review was conducted for a random sample of adult (≥ 18 years) patients presenting to an academic tertiary care centre with two EDs (annual census 125,000) with an unscheduled return visit for a similar complaint within 7 days. Patients were excluded if they left against medical advice or before being seen and if the return visit was for an unrelated problem, direct referral, imaging or if the patient was a frequent user of the ED (>6 visits per year).

Results: Of 232 charts reviewed, 97 were included. Residents primarily treated 35 (36%) patients and consultants treated 62 (64%) patients. On an average day, 27% of total discharged patients are treated by a resident and 73% by a consultant. There was no significant difference in the rate of unscheduled return visits (fj 9%; 95% CI: -3.8%, 21.9%). Consultant notes were documented on 51% of the resident charts. Regarding the disposition of the unscheduled return visit between those treated by a resident versus a consultant, 40% versus 24% were discharged home with no change in treatment (fj 16%; 95% CI: -3.0%, 34.5%); 17% versus 18% were admitted (fj -1%; 95% CI: -15.1%, 16.7%); and 34% versus 37% were discharged home with medications changed or added (fj -3%; 95% CI: -21.1%, 17.0%). The time between the index visit and unscheduled return visit was not different between residents (2.7 days) and consultants (2.8 days).

Conclusion: Resident independence in the ED is important for developing competence and confidence. This data suggests there is no significant difference in the unscheduled return visits between patients treated by residents and consultants, suggesting current supervision respects patient safety.

Dr. Scott Seadon

Post Partum Thyroiditis: A Case Study

Supervisor: Dr. Frank DeMarco

Project Type: Case Report

Objectives: While thyroid disease is common, it is often overlooked in an acute setting. This case report discusses the presentation, workup, diagnosis, and treatment of a young woman with postpartum thyroiditis. The patient's obstetrical history was somewhat remote; however it was crucial in the final diagnosis. This case stresses the importance of keeping a broad differential diagnosis in any patient. Concurrently, we will delve into the patient's experience, thoughts, and feeling associated with the diagnosis and the disease itself.

Methods: Following informed consent, data was collected from conversations and interviews with the patient, as well as other staff present within the Family Medicine team.

Key Findings: This case demonstrated that what could have been dismissed as a typical gastroenteritis was in fact a case of post-partum thyroiditis which had long lasting and significant effects on the patient both physically and psychosocially. The course and potential sequelae of this condition can be severe and long lasting, so it is important to pick up early and continue close follow up with the patient. As these patients typically have the stresses associated with caring for a new child, close psychosocial follow-up is needed as well.

Dr. Paula Suffoletta

Newcomers in the Family Physician's office: A Practice Tool for Refugee Health

Supervisor: Dr. Bhayana

Project Type: Medical Education Project

Refugees can be a challenging population for family physicians due to language barriers, complex migration and vaccination history, and different exposures to disease than the average Canadian. In September 2011, new evidence-based guidelines on refugee and immigrant screening were published in the CMAJ (1). These guidelines can be a valuable resource for physicians faced with clinic visits from a newcomer to Canada in terms of directing investigations, screening, and management. These guidelines were the inspiration to develop a practice tool for physicians in the London area who may have this unique population in their patient roster. This tool is a user-friendly adaptation from the guidelines and can be used in the office or added to an EMR to give the family physician more guidance and ease when confronted with a complex patient. The tool is divided into an intake form, which includes a history and physical exam that is similar in format to an annual health exam, with special considerations for this population, as well as a section on management and screening decisions. Also included is a list of resources in the community and some general information on refugees. A brief section was added regarding the Bhutanese population, as this is a growing demographic in London of whom practitioners may not be aware. Newly arrived Bhutanese refugees pose all the challenges mentioned above and more. This practice tool was developed with practitioners and refugees in mind to help improve the quality of healthcare delivered to our new Canadians.

Dr. Aurelia Ona Valiulis

Family Medicine Handbook for Obstetrics Rotations

Supervisor Name: Dr. L. Kopechanski/Dr. J. Parr

Project Type: Medical Education Project

Purpose: All practicing family physicians will be exposed to obstetrics to varying degrees, thus it is important for them to have a basic knowledge of common obstetrical issues. The purpose of this project was to create a comprehensive handbook specifically for family medicine residents on obstetrics rotations, describing the approach to common antenatal/triage, labour, delivery, and postpartum scenarios. The goal was to improve resident confidence, and thus, enhance the learning experience by promoting the acquisition of knowledge and honing of technical skills.

Methods: A list of important topics was compiled based upon the experiences of family medicine residents on obstetrics rotations, as well as common knowledge gaps observed by staff physicians. Topics were researched and the most updated approaches were described in a concise, yet thorough manner. The handbook was reviewed by physicians and nurses experienced in obstetrics, and appropriate modifications made. The final booklet was distributed to residents on an obstetrical rotation at Kitchener site. Their feedback was collected via anonymous online survey.

Results: Resident feedback has thus far been very positive. Residents used the handbook frequently as a reference while on the ward and in clinic, and found the section on fetal monitoring particularly useful.

Dr. Tristan Walker, Emergency Medicine

Factors that predict pre-hospital paramedic IV cannulation success: a retrospective analysis

Project Type: Clinical Audit

Introduction: Intravenous (IV) cannulation is an enhanced paramedic skill required for the administration of IV medications and fluids in the pre-hospital setting. Despite this, IV proficiency is variable amongst providers and the factors contributing to IV success have yet to be defined. The objective of this study was to determine paramedic factors associated with successful IV cannulation in the pre-hospital environment.

Methods: This was a retrospective review of data gathered from 6 emergency medical services (Bruce, Essex, Grey, Middlesex-London, Lambton, and Perth Counties) from the Southwest Ontario Regional Base Hospital Program from April 2011 to March 2012. Paramedics not certified in IV cannulation and those who attempted less than 3 IV cannulations were excluded. IV success was defined as successfully catheterizing a patient's vein in 75% of the attempts made over the study period. Backwards stepwise multivariable logistic regression models determined predictor variables independently associated with successful IV cannulation in the pre-hospital setting.

Results: 353 paramedics performed a total of 12,728 IV attempts over the 1-year study period. 85 (24.1%) were advanced care paramedics (ACPs) and 268 (75.9%) were primary care paramedics. 271 (76.8%) were full time employees. Paramedic training level, years since IV certification, call volume, error rate, number of IV attempts, proportion of high acuity calls, proportion of older patient (≥ 75 years) calls, and the proportion of calls in an urban setting were variables included in the adjusted model. ACP certification (OR: 3.1, 95% CI: 1.7, 5.5) and IV attempts ≥ 40 the (OR: 2.0, 95% CI: 1.1, 3.4) were independently associated with IV success.

Conclusions: Two paramedic factors were independently associated with successful IV placement. These factors should be considered when developing training benchmarks for skill development and maintenance.

Contact Info:

Department of Family Medicine
Schulich School of Medicine & Dentistry
Western University
2nd Floor – Rix Clinical Skills Building
London, Ontario N6A 5C1
519.661.2037
www.schulich.uwo.ca/familymedicine