



Schulich School of Medicine & Dentistry

Department of Family Medicine

Resident Project Day

June 1, 2011

Abstract Booklet



Section A: Oral Presentations, Rm W12, Huron University College

Byron Family Medical Centre & Victoria Family Medical Centre

Time	Presenter	Presentation
8:00	View Poster Displays – Kingsmill Room, Huron University College Coffee, Refreshments, Light Breakfast Provided	
8:45	Dr. Eric Wong	Opening Remarks, Kingsmill Room
9:00	Dr. Agron Alija	Echocardiography at a Glance
9:15	Dr. Bedri Ahmed	Preclinical/Subclinical Cushing's Syndrome in Obese Type II Diabetic Patients
9:30	Dr. Amelia McCabe	Febrile neutropenia in an adolescent female, an unusual presentation of systemic lupus erythmatosus
9:45	Dr. Mark D'Souza	Resident Advanced Cardiac Life Support (ACLS) Experience and Comfort Level - a Standardized Survey at the University of Western Ontario
10:00	Break – Refreshments Provided – International Room, Huron University College	
10:15	View Poster Displays – Kingsmill Room, Huron University College	
10:45	Dr. Victor Ng	Substance Abuse: A Case Report
11:00	Dr. Jaskaren Mann	Re-evaluating Management of Chronic Non-Cancer pain
11:15	Dr. Karoush Zadhoush	Polymyalgia Rheumatica: A Case Study
11:30	Dr. Carla Silver	High Doses Opiates and Adjuvant Analgesics in the Palliation of an End-Stage Cancer patient: A Case Study
11:45	Dr. Joanna Zorzitto	Systemic Lupus Erythematosus and Subarachnoid Hemorrhage: A rare connection
12:00-12:15	Complete Evaluations & Closing Remarks – Kingsmill Room	

Note: Each presentation will be 10 minutes in length with a 5 minute question & answer period.

Echocardiography at a Glance

Dr. Agron Alija

Purpose: The purpose of this project was to develop a medical educational resource that would provide family medicine residents and family physicians a firsthand look at the most important aspects of both adult and paediatric echocardiograms. Echocardiography is one of the best non-invasive cardiac tests and Family physicians frequently refer patients for this test. Echocardiography is a sub-specialized discipline of cardiology, therefore, family medicine residents only receive minimal exposure to this test during the program. Having an independent educational module on echocardiography which can be reviewed on a personal computer or an online platform provides an excellent opportunity for family medicine residents and family physicians to gain a better understanding of this important and costly test.

Methods: I searched the literature on echocardiography particularly to find out if there is a similar independent learning module specifically designed for Family Medicine Programs. I then obtained high quality echo loops of the normal heart followed by incorporation of these images into a complete echocardiography exam. This will include real time images supported by illustrations. Finally, I created a Power Point module that is of good quality and very user-friendly.

Results: A high quality and dynamic independent learning module on echocardiography was created. This module can be stored in a CDR or a USB, and may be set up in online platforms providing easy access for the residents and students.

Implications: There is a clear trend for family physicians to enhance their existing skills as well as develop a special interest in certain sub-speciality disciplines. This educational module will help the learner to gain an extended knowledge of echocardiography. I hope that in the future there will be even more educational modules available online.

Preclinical/Subclinical Cushing's Syndrome in Obese Type II Diabetic Patients.

Dr. Bedri Ahmed

A 50-year-old obese woman who was diagnosed with hypertension, type II diabetes and dyslipidemia seven years ago came in for a follow up of diabetic neuropathy. She was also known to have diabetic nephropathy. The patient was on Novorapid 14 units ACS, Lantus 44 units hs, Amaryl (glimepiride) 4mg bid with a HBA1C of 0.076. She is allergic to metformin. She was compliant with her medications and her blood pressure was relatively well controlled. She was new to the practice and had a regular follow up with the diabetic team. During her third visit to the clinic, the patient was sent for low dose dexamethasone suppression test because of her cushingoid features (moon face, central obesity and thin extremities). The test showed nonsuppressible cortisol level with an elevated 24hr urine cortisol; therefore, the patient was sent for an adrenal MRI and found to have an adrenal adenoma measuring 2.9 cm X 3.3 cm. A literature review showed significant association between poorly controlled diabetes and a subclinical/preclinical Cushing's syndrome with subsequent resolution of the metabolic conditions (diabetes, hypertension, dyslipidemia and obesity) following adrenalectomy. The critical cut of point for an adrenalectomy based on the size of the adenoma is 4cm, which is slightly higher than our patient's result. The patient was referred to an endocrinologist as well as a surgeon for further evaluation and management.

Febrile neutropenia in an adolescent female, an unusual presentation of systemic lupus erythmatosus

Dr. Amelia McCabe

Systemic lupus erythmatosus (SLE) is an autoimmune disorder that presents in a variety of ways. It is a rare disease, but is sufficiently common that a family physician is likely to be involved in the care of patients with SLE. Among the multitude of clinical presentations hematological abnormalities are common in patients with lupus. Severe neutropenia is a rare presentation of systemic lupus.

This case report pertains to an adolescent female who presented with fever with no cause and she was discovered to be neutropenic on bloodwork. This was found to be the initial presentation of SLE. This case highlights the importance of the family physician in diagnosing and managing chronic disease and the unique illness experience of an adolescent with a serious illness.

The patient's chart was reviewed for the details of this case. Articles were selected from the literature by topic searches of OVID-medline, and the UptoDate and eMedicine databases.

Resident Advanced Cardiac Life Support (ACLS) Experience and Comfort Level – A Standardized Survey at the University of Western Ontario

Dr. Mark D'Souza

Background/Aims: A cross-sectional online survey to measure resident experience and comfort level with Advanced Cardiac Life Support (ACLS). Resident input for ACLS training tools was also solicited.

Method: One hundred and fifty-eight of 557 residents from all programs at the University of Western Ontario replied to an online survey at fluidsurveys.com, administered via the Dillman method. Chi-square analyses were performed to compare results between postgraduate years, and between residents from programs with high exposure to ACLS and those with low exposure.

Results: In the last 12 months, 66.2% have observed a code (without participating); 54.8% have helped (chest compressions, airway, or venous access); 20.5% have led cardiac arrest teams. Regarding personal sense of proficiency, 84.7% feel comfortable with chest compressions; 47.5% with airway management; 38.2% with venous access; and 20.4% with leading a cardiac arrest team. Full-scale simulation is rated as the most effective training tool (94.2%) for ACLS education.

Conclusion: Residents do not accrue much experience at leading cardiac arrest teams, and are generally not comfortable in this role, though this sentiment decrease modestly with postgraduate years of training. Residents feel that full-scale simulation is the most effective training modality. ACLS educational opportunities should be increased, and focus primarily on leading cardiac arrest teams and on the skill of airway management.

Case of Substance Abuse

Dr. Victor Ng

Substance abuse is a complicated disorder involving multiple body systems and affects the patient's biological, psychological and social health. Mr. W presented to the Family Medicine Clinic with a long history of substance abuse and multiple co-morbidities. Initially, he felt that his condition was hopeless and a full recovery would not be achievable. He was unable to find steady employment and his disease greatly impaired his functioning in even simple daily activities. The management plan for Mr. W was long and complex - requiring an assembly of a multi-disciplinary team of medical and allied health professionals. His condition slowly improved and in the end, Mr. W self-referred into a residency treatment program. Substance abuse and its related conditions are commonly seen by the family physician. Its complexity and multi-dimensional nature requires a strong physician-patient relationship and a team-based approach for most effective management.

Re-evaluating Management of Chronic Non-Cancer Pain

Dr. Jaskaren Kaur Mann

Chronic non-cancer pain (CNCP) is defined as ongoing nociceptive or neuropathic pain, lasting longer than six months or the expected time for healing to occur (Jovey et al, 2003). This condition, as one can deduce from the definition alone, is crippling to those it affects. The natural inclination of a family practitioner is to be patient centered and aid CNCP patients to the best of our ability. However, modern society has become all too dependent on the quick fix and the magic bullet. We seem to look towards a simple pill that will help to cure a complicated biopsychosocial issue such as CNCP. From my short professional experience it seems that both physicians and patients tend to rely heavily on narcotics for treatment of CNCP. Family physicians being the gatekeepers of medicine are often responsible for managing the care of CNCP patients. Although the new Canadian opioid use guidelines for CNCP endorse narcotic use, I would like to argue that perhaps this is not the best treatment for our patients (National Opioid Use Guideline Group, 2010). Studies showing narcotic efficacy are flawed, industry sponsored, and insufficient in length, narcotic use leads to hyperalgesia, dependence/tolerance, physiological side effects, increased mortality and finally no improvement in functionality has been proven.

Poly Myalgia Rheumatica: A Case Study

Dr. Kourosh Zadhoush

"If you listen to your patient, they will tell you their diagnosis." - Sir William Osler.

Background: Polymyalgia rheumatica (PMR) is a relatively common clinical syndrome of unknown etiology. It is characterized by proximal myalgia of the hip and shoulder girdles with accompanying morning stiffness that lasts for more than one hour.

Case description: This case study describes a 56 years old female who presented with muscle pain. Her symptoms were mis-attributed to discopathy and nerve impingement.

Conclusion: Taking a detailed but relevant history, plays the major role in diagnosis of many diseases in family medicine. With the wide use of investigations such as MRI, without taking a detailed history, it is more likely that if abnormal imaging findings emerge, the reported abnormality doesn't correlate with the patient's clinical symptoms and they may be misleading and generate further studies. This case showed me that such findings are valuable but not absolutely trustworthy; sometimes it still takes a physician's clinical judgment and awareness of the clinical presentation to determine if an abnormal test result helps to explain the etiology of a clinical presentation or not.

As family physicians, we encounter a variety of non-specific symptoms and complaints on a daily basis. Therefore, we must consider a broad but relevant differential diagnosis. If the patient's condition does not improve as anticipated when the treatment has been applied, the diagnosis must be reassessed.

High Dose Opiates and Adjuvant Analgesics in the Palliation of an End-Stage Cancer Patient: A Case Study

Dr. Carla Silver

Pain and its management in a primary care setting can be problematic, with issues of various different medications and modalities, as well as balancing relief of suffering with side effects and tolerance. Pain at the end-of-life, particularly in patients with advanced cancer, can be severe and difficult to manage, and can take primary care practitioners out of their comfort areas, potentially to the detriment of the patient's care and quality of life.

This case study explores a patient with severe pain, requiring high doses of opiates and multiple adjuvant medications and modalities to treat her pain. It also demonstrates how high dose opiates can be used safely and appropriately, even when far above typical doses, to control severe pain.

Given the "cradle-to-grave" care that is unique to Family Medicine, pain at end-of-life care is an issue that can be as difficult to manage as it is rewarding to manage properly. The main issues this case focuses on are 1) Appropriate opiate use; 2) Adjuvant analgesics to supplement and augment opiates for pain control; 3) That even in high doses, when used appropriately, opiates do not necessarily cause life-threatening side-effects.

Systemic Lupus Erythematosus and Subarachnoid Hemorrhage: A rare connection

Dr. Joanna Zorzitto

This is a case report of an 18-year-old female with a history of systemic lupus erythematosus (SLE) and previous subarachnoid hemorrhage (SAH). She presented to the emergency department with a new, persisting headache and the fear that this was a recurrent SAH. Although rare, there have been reports that demonstrate a connection between SLE and SAH. In addition, this patient had several psychosocial stressors, including starting her first year of college, difficulty with her classes, and trouble living with a new roommate – all of which were certainly contributing to her ongoing headache. This case report seeks to review the presentations of SLE and SAH, and explore the relationship between the two. In addition, through a detailed history, it demonstrates the importance of the patients' psychosocial history in developing an appropriate diagnosis, and management plan. Finally, it displays two key principles of family medicine. First, that the family physician is a skilled clinician. This case reveals the importance of understanding the patients' illness experience (ideas, feelings, and expectations) and of the impact of illness on their lives. Second, it proves that the patient-physician relationship is central to the role of the family physician. Specifically, this case shows the importance of continuity of care, and the use of repeated contacts with patients to build on the patient-physician relationship.

Section B: Oral Presentations, Kingsmill Room, Huron University College

Southwest Medical Health Centre & Windsor

Time	Presenter	Presentation
8:00	View Poster Displays – Kingsmill Room, Huron University College Coffee, Refreshments, Light Breakfast Provided	
8:45	Dr. Eric Wong	Opening Remarks, Kingsmill Room
9:00	Dr. Heather Baerg	Recognizing the Cannabinoid Hyperemesis Syndrome: A Canadian Case Report
9:15	Dr. Steven Joseph	Extreme Weekend Warriors: Applications for Rural/Remote Family Medicine
9:30	Dr. Matt MacDonald	First Nations of the Thames -Education Module
9:45	Dr. Jennifer MacKinnon	Balancing your role as the resident physician daughter when your parents are diagnosed with cancer
10:00	Break – Refreshments Provided – International Room, Huron University College	
10:15	View Poster Displays – Kingsmill Room, Huron University College	
10:45	Dr. Stephen Singh	Alzheimer's Disease: A Guide for Caregivers
11:00	Dr. Suzanne Taylor	A Family Physician guide to the premature child
11:15	Dr. Katie Yu	The impact of non-nutritive sweeteners on diet and hunger - does it make a difference?
11:30	TBA	TBA
11:45	TBA	TBA
12:00-12:15	Complete Evaluations & Closing Remarks – Kingsmill Room	

Note: Each presentation will be 10 minutes in length with a 5 minute question & answer period.

Recognizing the Cannabinoid Hyperemesis Syndrome: A Canadian Case Report

Dr. Heather Baerg

The Cannabinoid Hyperemesis Syndrome is characterized by cyclic vomiting, abdominal pain and compulsive washing behaviors in the context of chronic and heavy marijuana use. Despite the decriminalization of cannabis for personal medical use and the high prevalence of marijuana use among young adults in Canada, many clinicians are not aware of this syndrome's existence, as it has only recently been described in the literature. However, family physicians have a role to play in the identification of this illness, ruling out other causes of cyclic vomiting, and educating the patient about the possible association between abstinence from cannabis use and resolution of symptoms. In this case report, we will examine the clinical signs, symptoms and investigations into a patient who presented to a Canadian rural emergency department complaining of cyclic abdominal pain and vomiting in the context of marijuana abuse. A recent study of emergency department use by patients with cyclic vomiting syndrome revealed delays in diagnosis and appropriate referral, with the average patient making fifteen visits to the emergency department. Identifying this syndrome in Canadian primary care could decrease costs to our health care system by limiting repeated hospitalizations for dehydration and avoiding excessive and unnecessary investigations.

Extreme Weekend Warriors: Applications for Rural/Remote Family Medicine

Dr. Steven Joseph

The popularity and participation of extreme sports and wilderness activities is on the rise. This will inevitably result in an increase of related injuries presenting to family physician staffed rural/remote clinics and emergency rooms. Many medical students and family medicine residents do not get exposed to these unique injuries, challenges, and limited resources in the rural/remote environment. Given this an interactive, partially case-based series of lectures for medical students and first year family medicine residents has been developed. The lectures will provide an introduction to the challenges, diagnosis and management of some unique injuries in the rural/remote setting and present an approach to acute rural/remote medicine that has applications to most family medicine settings.

First Nations of the Thames - Education Module

Dr. Matt MacDonald

The health disparities between Aboriginal and non-Aboriginal populations in Canada are well-documented. Despite the ongoing need for further data collection and research, the federal and provincial government has many specialized services and programs in place to address the unique needs of Aboriginal Communities including status and non-status First Nations people both on and off-reserve, Inuit and Métis. First Nations people account for approximately 18% of the patients at Southwest Middlesex Health Center in Mt. Brydges. As frontline health care providers, it is important for trainees at Mt. Brydges to be aware of the unique health needs of these individuals and the cultural complexities inherent to a therapeutic relationship with First Nations people. This educational presentation is intended for the staff and students of Mt. Brydges and introduces them to the three first nations communities they serve. For each community there is a brief history of their people and how they came to be established in the area, current population data for each reserve and the programs and services available through their federally-funded Health Centers. Learners are reminded of how Residential Schools continue to impact the daily lives of survivors and their families. Further information is given regarding the Southwest Ontario Aboriginal Health Access Center (SOAHAC), the Nimkee solvent abuse treatment center and non-insured health benefits from Health Canada. For the benefit of all trainees working at Mt. Brydges, Cultural Safety Training is currently being arranged through SOAHAC. It is important that frontline healthcare providers be familiar with the unique health needs of Aboriginal people and the additional resources available to them.

Balancing your role as the resident physician daughter when your parents are diagnosed with cancer

Dr. Jennifer MacKinnon

During my first year of residency training in Family Medicine, both of my parents were diagnosed with cancer. I was faced with a constant struggle between stepping back and acting in the capacity as a daughter only versus becoming more involved in their medical care. I decided to write a Self Reflection on this topic in order to formalize my stance regarding the role of a physician when family members or friends seek medical advice. I had a literature search done and reviewed a number of articles including surveys and personal anecdotes. As family physicians, we possess a vast knowledge base that covers many areas of general medicine. Family and friends will constantly seek medical advice outside of the professional environment. Although difficult, it is wise to defer to your colleagues and encourage your family and friends to visit their own health care provider. In the case of my parents, I tended to keep track of the big picture and advocate for their best interests. In doing this, I was comfortable with the fact they were receiving appropriate care but allowing their respective multiple health care providers to provide that care.

Alzheimer's Disease: A Guide for Caregivers

Dr. Stephen Singh

In Canada, one in eleven people over the age of sixty-five has Alzheimer's disease (AD), a figure which increases to as many as one in two over eighty-five. As family physicians, AD is clearly a disease we will be managing in our patients with increasing frequency as the population ages.

Caregivers of these individuals are primarily adult children or elderly spouses. Studies have shown that retention of oral information is on the range of 17-26% initially, with only 14% of spoken instructions remembered. There is therefore a clear need for information to be provided in a written format to supplement oral information, but surprisingly few brochures exist that are aimed specifically at the needs of caregivers.

A literature search was therefore conducted to create a brochure with the information deemed to be very important to caregivers. The evidence behind the formatting of the brochure was also extensively researched. The finished brochure includes sections about the disease, the stages and the treatment of AD. In addition, two sections are devoted to practical tips to help those with AD and tips for caregivers to help themselves. Lastly, given both the importance and current lack of information provided about palliative care at the onset of diagnosis, a section was dedicated to issues surrounding life planning. This project therefore provides information that caregivers deem important to know at the onset of diagnosis of AD, provides a springboard for discussion about key or difficult-to-discuss topics in AD, and allows for increased information retention.

A Family Physicians guide to the premature child

Dr. Suzanne Taylor

The incidence of premature (less than 37 weeks gestation) birth is rising and is estimated to be approximately 6.5% in Canada. During residency many residents may not have the opportunity to take part in the care of a premature infant however, this is something that all physicians will do while in practice. This manual was compiled through a literature review covering the key points that must be addressed while caring for a premature infant. It reviews medical issues that arise in the neonatal intensive care unit that can have long-term consequences. It also addresses discharge criteria, car seat safety, chronic medical conditions, proper nutrition and growth and immunization schedules. Lastly, it details chronic diseases of adulthood that premature children are at a high risk of so that appropriate prevention and screening strategies can be implemented.

Impact of non-nutritive sweeteners on diet and hunger – does it make a difference to weight?

Dr. Katie Yu

Context: Questions arise about the effect of sweeteners on short-term appetite and food intake, as well as longer-term energy balance and body weight. There has also been much speculation on mechanisms by which they may exert their effects on these outcomes.

Objective: To present current evidence about sweeteners and their impact on diet and hunger to the general public in the form of a patient education brochure.

Relevance to Family Medicine: Family practice offices can use the brochure to easily educate patients. The brochure will present information in such a way that the general public can understand. It can be used as a resource for any practice population, by linking it to the personal relevance of each individual, and allows for a more holistic approach to health management.

Data Sources: A MEDLINE search related to *sweetening agents* for all English-language articles from 1946 to Present was used. Relevant publications were retrieved and their bibliographies were evaluated for additional material. A standard textbook of Biological Psychology was also examined for information on hunger and its neurobiological mechanisms.

Data Syntheses: An outline of the currently available sweeteners used in food and beverages will be provided. Then, evidence concerning their effects on weight and appetite will be summarized. Finally, the proposed mechanisms by which these sweeteners influence diet and hunger will be explained.

Conclusion: Non-nutritive sweeteners, if used as substitutes rather than additives, may have the potential to aid in weight management.

Section C: Oral Presentations, Rm W112, Huron University College

St. Joseph's Family Medical Centre, Strathroy, Hanover & Goderich

Time	Presenter	Presentation
8:00	View Poster Displays – Kingsmill Room, Huron University College Coffee, Refreshments, Light Breakfast Provided	
8:45	Dr. Eric Wong	Opening Remarks, Kingsmill Room
9:00	Dr. Vishal Bhella	The Use of Complementary and Alternative Therapies by Patients in a Family Practice Setting
9:15	Dr. Roderick Cheung	Rural Hospitals - An Indispensable Component of Rural Communities and Our Health Care System
9:30	Dr. Alex Duong	Which patients with depression benefit from collaborative care interventions in the primary care setting? A systematic review of randomized control trials and financial analyses
9:45	Dr. Divya Garg	Smoking screening and management by primary care residents and physicians
10:00	Break – Refreshments Provided – International Room, Huron University College	
10:15	View Poster Displays – Kingsmill Room, Huron University College	
10:45	Dr. Rahimali Manji	The Case of H.C., a 57 year old woman with newly diagnosed Multiple Myeloma
11:00	Dr. Mari Marinosyan	Do different generations of OC differ in the prothrombotic effect? Is any of the combined OC safer than others?
11:15	Dr. Gregory Stewart	Maintaining Procedural Skill Competence
11:30	TBA	TBA
11:45	TBA	TBA
12:00-12:15	Complete Evaluations & Closing Remarks – Kingsmill Room	

Note: Each presentation will be 10 minutes in length with a 5 minute question & answer period.

The Use of Complementary and Alternative Therapies by Patients in a Family Practice Setting

Dr. Vishal Bhella

Introduction: This study aims to assess the use of complementary and alternative therapies (CAM) by family practice patients in the academic teaching unit setting. The rates of use, types of therapies used, expectations of physicians, reporting of use to physicians and delay in seeking medical treatment due to CAM use are all aspects of interest in the context of this study.

Methodology: This descriptive study utilized survey responses obtained from patients of three academic family medicine teaching units in London, Ontario. There were 572 survey responses obtained from the three academic centres with a 44% overall response rate.

Results: The survey data indicates that 80.1% of respondents have used one or more CAM modalities. Vitamins and supplements, massage therapy, chiropractic, herbal medicines and acupuncture were amongst the most commonly used therapies. A majority of patients, regardless of prior use of CAM, would like their physician to be open to and knowledgeable about the use of CAM. Of respondents who have previously used CAM, 52% indicate not having discussed this with their physician, with approximately one third of these patients indicating reasons including not having the topic come up in clinical encounters or not realizing they should have this discussion.

Conclusions: The use of complementary and alternative therapies is common, with a majority of survey respondents acknowledging use of one or more modalities in the past. As a majority of CAM users do not discuss CAM with their physician, it can be concluded that there is area for improvement in patient-physician communication surrounding CAM, particularly with 48% of CAM users indicating concern of potential interactions of CAM with prescription medications.

Rural Hospitals – An Indispensable Component of Rural Communities and Our Health Care System

Dr. Roderick Cheung

Spending in health care continues to surpass economic growth and spending in other government programs in Canada. Solutions to cut cost are needed, otherwise, the system will not be sustainable. However, it is important to avoid short-sighted cost saving strategies that will fail to save any money in the long term and severely damage the quality of care patients receive. One such poorly thought out strategy is cutting spending in rural hospitals.

Rural hospitals serve numerous crucial functions in our society. Small communities depend on their hospitals to sustain their economies. Many rural hospitals have become educational institutions with the advent of distributed medical education. Patients are able to receive more culturally appropriate care in their local hospitals. Palliative patients are better suited to stay in their home communities. Rural hospitals assure easy accessibility of care to their local populations. These hospitals are able to provide high quality care with relatively low cost and they lessen the patient load on secondary and tertiary care centres. Rural residents view their local hospitals as an indispensable component of their communities. Rural hospital closures would significantly affect residents' view on the sustainability of their communities.

Closing rural hospitals is not an effective avenue to bring about savings in our health care system. Policy makers need to understand that rural health care functions differently than health care in urban areas. The correct way to design rural health strategies involves consultation with front line health professionals experienced at working in rural areas, along with residents in the local rural community.

Which patients with depression benefit from collaborative care interventions in the primary care setting? A systematic review of randomized control trials and financial analyses.

Dr. Alex Duong

Background: Depression is one of the most commonly seen presenting issues in the primary care setting and is predicted to constitute the second largest cause of disease burden worldwide. Treatment by primary care providers however, remains suboptimal. Collaborative care presents a new paradigm of providing depression care in the primary care system.

Objectives: To determine the impact of collaborative care vs. care as usual in the primary care practice on depression symptoms, function, antidepressant adherence and patient satisfaction. Total costs comparisons and incremental cost effectiveness ratio were also sought.

Data Sources: Electronic literature search of MEDLINE, EMBASE, Cochrane Library databases, PsycINFO and CINHALL. A citation search and "cited reference" search was also performed.

Study Selection: All randomized control trials comparing collaborative care for depression vs. care as usual within the primary care setting in the English language. Two levels of screening were used on 2114 citations.

Participants: A total of 60 articles constituting 36 trials were found, for a total of 15,340 patients. Populations included elderly, adolescent, post-partum, low income, minority, developing world patients and patients with other medical co-morbidities.

Results: Collaborative care (CC) improved depression symptoms in 23 trials. There was no significant difference in the other 13 trials. There was significantly increased medication adherence (16 in favour of CC, 3 showing no difference) and patient satisfaction (11 favoring CC, 4 showing no difference). 9 out of 13 intervention groups showed no significant outpatient cost difference between usual care and collaborative care.

Conclusions: Collaborative care, when implemented into a primary care system is an effective and affordable intervention to decrease depression symptoms, increase satisfaction and increase antidepressant adherence compared to usual primary care approaches to depression.

Smoking screening and management by primary care residents and physicians

Dr. Divya Garg

Introduction: The aim of this study is to report on Family Medicine residents' knowledge, comfort and use of pharmacotherapy in smoking cessation as well as perceived barriers to intervention.

Method: This is a descriptive study which uses self-reported questionnaire responses provided by residents studying at three urban academic Family Medicine sites at the University of Western Ontario with practicing family physicians at these centres also surveyed for comparison.

Results: A total of 69 completed surveys were collected from residents (63% response rate) and 8 completed surveys from practicing physicians (53% response rate). About 43% of first year residents and 40% of second year residents identified lack of smoking cessation counselling skills as a barrier to provision of smoking cessation services to their patients. A majority of residents who stated counselling skills being a barrier (29/69) also reported no prior training in smoking cessation during residency (24/29) and no prior training in smoking cessation during medical school (17/29). This study was limited in terms of participation of practicing physicians. However, those that participated indicated comfort and confidence in delivering smoking cessation counselling.

Conclusion: This study reinforces the need for further and consistent training of family medicine residents in smoking cessation counselling to give them the skills and confidence to participate in smoking cessation interventions with their patients earlier in the training process.

The Case of H.C, a 57 year old woman with newly diagnosed Multiple Myeloma

Dr. Rahim Manji

The following is the case of a 57 year old woman, newly diagnosed with Multiple Myeloma, who, following diagnosis and initial management, is admitted under the care of her family physician for analgesia and rehabilitation. Multiple Myeloma (MM) is a common hematologic malignancy that predominantly affects older adults. It is a disease that, while incurable, has a long clinical course and a significant quality of life impact. As is typical of MM, the non-specific nature of the presenting symptoms in this patient led to a delay in diagnosis. In the interim, the patient suffered a significant functional decline leading a loss of her livelihood and the ability to perform activities of daily living. The long duration and significant functional impact of the disease makes symptom management and functional rehabilitation fundamental to the care of the patient with MM. The family physician, with an understanding of the patient's personal goals and social circumstances is well placed to provide this supportive care.

Do different generations of OC differ in their prothrombotic effect? Is any of the combined OC safer than others?

Dr. Mari Marinosyan

The following case study describes a 23 year old patient with unremarkable past medical history, who has been on a third generation oral contraceptive for three years and presented with two brief syncopal episodes. After comprehensive physical and laboratory examinations, subtle pulmonary embolism was ascertained. The patient did not have any environmental risk factors, her thrombophilia screen was negative and her family history was negative for thrombotic events. The use of oral contraceptives has become widespread and soon after their introduction there were reports of cardiovascular disease among their users. The case report examines the multifactorial cause of thromboembolic events and emphasizes the importance of oral contraceptive use in the onset of venous thrombosis. It looks into the different generations of oral contraceptives, compares them according to their prothrombotic effect and suggests specific approaches when prescribing contraceptives to females with particular medical or family history. The lack of guidelines regarding thrombophilia testing and generally about contraception makes this topic a challenge in a busy family practice, especially when it comes to patients who have negative personal history and no other risk factors. The case study emphasizes that good counseling is extremely important and giving the patients the option of making an informed decision is an essential part of our everyday practice.

Maintaining Procedural Skill Competence

Dr. Gregory Stewart

Objective: Assemble, critically appraise and synthesize important findings from recent primary investigations addressing procedural skill training and maintenance of competence.

Methods: Reference materials were selected with an online PubMed literature search using three separate key-word phrases related to the topic of study and published within the last five years. One hundred ninety-three results were reviewed and sixteen primary research papers were selected for further discussion based on their relevance to the study.

Key Findings: Simulation based learning to proficiency in procedural skills improves performance in clinical settings and results in durable skill retention. This may be procedure specific and depend on the trainee's stage of learning as well as the perceived need for the procedure in the physicians practice.

Conclusions: Simulation based learning allows a trainee to develop essential reasoning and judgment while deliberate practice allows unfamiliar procedural skills to become more automated and efficient. Further studies should confirm that procedural skills mastered in a simulation environment transfer to the variable clinical milieu and reduce adverse patient outcomes.

Section D: Oral Presentations, Rm W116, Huron University College

PGY3 Enhanced Skills Program

Time	Presenter	Presentation
8:00	View Poster Displays – Kingsmill Room, Huron University College Coffee, Refreshments, Light Breakfast Provided	
8:45	Dr. Eric Wong	Opening Remarks, Kingsmill Room
9:00	Dr. Kevin Asem	The case of the hangman’s fracture
9:15	Dr. Clarissa Burke	Strategies for Research Using the Nightingale EMR System
9:30	Dr. Taryn Ketner	Ethylene Glycol Toxicity: A case presentation
9:45	Dr. Fahamia Koudra	Breastfeeding while on Methadone: Is it Safe for the Newborn Experiencing Neonatal Abstinence Syndrome?
10:00	Break – Refreshments Provided – International Room, Huron University College	
10:15	View Poster Displays – Kingsmill Room, Huron University College	
10:45	Dr. Deborah Norrie	Chronic Disease Management in the Elderly
11:00	Dr. Sonja Reichert	An Opportunity Missed: Undiagnosed Diabetes in Patients Admitted to Hospital with Acute Coronary Syndrome (ACS)
11:15	Dr. Krishanthu Shu	Elder Abuse in Nursing Home – A Systematic Review
11:30	Dr. T. Kyle Tabor	Lis-Franc Joint Dislocation: A Case Presentation
11:45	Dr. Darren Van Dam	Elaborative Learning in Medical School – a pilot project to provide the skills for lifelong learning
12:00-12:15	Complete Evaluations & Closing Remarks – Kingsmill Room	

Note: Each presentation will be 10 minutes in length with a 5 minute question & answer period.

The case of the hangman's fracture

Dr. Kevin Asem

Background: There has been a recent increase in attention to concussions in the media and the sporting world. At our clinic, it is not uncommon to find mild neck symptoms in patients assessed for concussion.

Observation: I present the case of a 14 year old male hockey player who sustained a hit into the boards during a hockey game. He was seen in clinic for concussive symptoms. However during the exam he was noted to have significant C spine tenderness which ultimately led to the diagnosis of a hangman's fracture.

Conclusion: A high index of suspicion for neck injuries must be kept in mind in all patients examined for concussion.

Strategies for Research Using the Nightingale EMR System

Dr. Clarissa Burke

Objective: A medical education project to create a reference outlining the data collection and analysis strategies that can be used in conjunction with the Nightingale EMR system.

Key messages: Data extraction techniques can be used to enhance chart reviews and quality assurance projects. These techniques can be useful to future users of Nightingale and for research purposes. As EMR systems such as Nightingale become the norm in family medicine offices, the enhanced ability to access and organize patient data can open new doors for research.

The process of creating this educational resource involved consultation with Nightingale's enhanced support team and the research resources of the Centre for Studies in Family Medicine. For future resident research projects, this resource will aid those who are interested in clinical research questions pertaining to their patient population.

Ethylene Glycol Toxicity: A case presentation

Dr. Taryn Ketner

Ethylene glycol toxicity is a relatively rare presentation to the emergency room, but requires prompt intervention to optimize outcomes. The case of a 19 year old male who presented to the emergency department with decreased level of consciousness, seizures, and metabolic acidosis will be used to demonstrate some of the classic features of this entity.

Ethylene glycol can be found in antifreeze, windshield wiper fluid, and other cleaners. It is usually ingested during an attempt at self-harm. Clinical presentation may range from intoxication to coma with profound metabolic acidosis secondary to the toxic metabolites glycolate, glyoxylate, and oxalate. These metabolites can cause acute tubular necrosis, inducing renal failure. This is subsequently worsened by calcium oxalate crystals precipitating in the tubules. The clinical presentation can therefore also include anuria or oliguria, hematuria, and flank pain. Laboratory investigations for suspected ethylene glycol ingestion include routine labs (CBC, electrolytes, BUN, Cr) as well as both urine and blood toxicology screen, serum levels of ethanol, ethylene glycol, methanol, and isopropyl alcohol, extended electrolytes, arterial blood gas, serum osmolality, and urinalysis for oxalate crystals. . Other laboratory or imaging investigations can be performed as needed. The initial management of ethylene glycol ingestion is focused on securing airway, breathing, and circulation. The use of fomepizole and ethanol to decrease conversion of ethylene glycol to its toxic metabolites is essential in early management, as is control of acidosis and with sodium bicarbonate. Hemodialysis may be also be required for correction of acidosis, removal of ethylene glycol, and in cases of renal failure. This project aims to provide current knowledge regarding the clinical presentation, pathophysiology, investigations, differential diagnosis, and management of this type of poisoning.

Breastfeeding while on Methadone: Is it Safe for the Newborn Experiencing Neonatal Abstinence Syndrome?

Dr. Fahamia Koudra

Ethylene glycol toxicity is a relatively rare presentation to the emergency room, but requires prompt intervention to optimize outcomes. The case of a 19 year old male who presented to the emergency department with decreased level of consciousness, seizures, and metabolic acidosis will be used to demonstrate some of the classic features of this entity.

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Chronic Disease Management in the Elderly

Dr. Deborah Norrie

Management of chronic diseases has always been a difficult aspect of family medicine care. There are challenges in motivating patients to be compliant with treatment regimes over the long term with diseases that last for a life time. Monitoring adherence to guidelines (ie periodic testing, follow up, prevention of progression) has historically been burdensome with paper-based charts and limited time schedules in family practice. Chronic disease prevalence and incidence is generally increasing as technological and pharmacological advances allow patients to survive initial insults much longer. With the aging population, obesity and sedentary lifestyles we can expect chronic diseases to become even more prevalent. Models of management for chronic diseases have been developed throughout the world and are being adopted across Canada and in Ontario. Components of these models will be discussed and limitations to applying these models to patients who are older and with co-morbidities will be explored. A projection of how chronic care management will be applied to my future patients within a Family Health Team setting will be considered.

An Opportunity Missed: Undiagnosed Diabetes in Patients Admitted to Hospital with Acute Coronary Syndrome (ACS)

Dr. Sonja Reichert

Background: In addition to the 2.7 million (7.6%) Canadians in 2010 known to have diabetes an additional 1 million Canadians are suspected to have undiagnosed diabetes. Cardiovascular disease is the leading cause of death in patients with diabetes. Furthermore, patients admitted with ACS and diabetes (both diagnosed and undiagnosed) are known to have higher short and long term mortality rates. Unfortunately, varying estimates have been reported as to the prevalence of undiagnosed diabetes among cohorts of patients with true ACS (ST elevation myocardial infarction (MI), non ST elevation MI and unstable angina). The primary purpose of this study, therefore, was to determine the prevalence of undiagnosed diabetes among a cohort of patients with ACS.

Methods: 1192 consecutive patients with true ACS were admitted to London Health Sciences Centre coronary care units between February 2009 and September 2010 and enrolled in the ACS Guidelines Applied in Practice (ACS-GAP) program. The ACS-GAP is a systematic quality improvement initiative aimed at ensuring patients receive evidence-based best practice care. Conventional sampling calculations revealed that 82 charts of patients not known to have diabetes (23% of ACS cohort were known to have diabetes) required systematic selection over the time period in question to provide a robust prevalence estimate of undiagnosed diabetes. Diabetes was suspected if Hemoglobin A1c (HgbA1c) \geq 6.5% or fasting blood glucose (FBG) \geq 7.0 mmol/L and random (RBG) \geq 11.1 mmol/L.

Results: 24 women and 58 men with ACS admissions were audited. Overall mean age was 60.4 yrs, with women (mean age = 66.9 yrs) being older than the men (mean age = 57.7 yrs). In total, 7.3% (six patients, one woman), (mean age of 58.3 yrs) were suspected to have had undiagnosed diabetes. Extrapolating this result to the remaining ACS-GAP population, an additional 59 patients may have had undiagnosed diabetes. Although five out of the six patients reported to have family physicians, need for discharge follow-up to complete diabetes diagnostic confirmation and care was documented for only three patients.

Conclusion: This study confirms that in addition to the 23% of patients known to have diabetes among an ACS cohort, 7% of patients were undiagnosed. Of further concern, it appears that instructions for confirmatory testing was lacking in these patients. Future study is required to explore the impact of systematic screening and appropriate diabetes discharge care on health outcomes in patients with ACS.

Elder Abuse in Nursing Home – A Systematic Review

Dr. Krishanthu Shu

One in 30 Canadians aged 65 and older was living in one of the Canada's 1952 homes for the aged in 2004/2005 (Statistic Canada 2007). Old age is burdened with high rates of sickness, co morbidity, as well as worsening physical fitness and independence. Despite longer life expectancy, overall health and disability continue to worsen in the elderly population (Topinkova E, Galen, 2005). Dependency on others for their care makes elderly, who are residents of nursing homes, vulnerable to abuse.

One of the first studies on elder abuse in long-term care, Pillemer and Moore (1989) found that more than one third of 577 nursing home staff in US had witnessed elder abuse, with psychological abuse cited as the most prevalent type. The authors concluded that abuse of residents in nursing homes was sufficiently extensive to merit public concern.

Nursing home care is a complex, highly regulated and dynamic process. Family Physicians often lead the interdisciplinary team that provides for the medical, functional, emotional, nutritional, social and environmental needs of the nursing home residents. The systematic review of original research will high light the information to recognize the abuse or neglect, to understand the factors that affect abuse of elders in nursing homes including nursing home characteristics and Strategies for prevention of elder abuse in Nursing homes.

Lis-Franc Joint Dislocation: A Case Presentation

Dr. T. Kyle Tabor

Lisfranc fracture-dislocation is a rare but commonly missed diagnosis presenting to emergency rooms, family medicine and walk-in clinics. The incidence of the injury is 1/55000 persons per year and it accounts for <1% of all fractures. Initially named for Jacques Lisfranc (1790-1847), a field surgeon in Napoleon's army, this injury has a high rate of misdiagnosis and can lead to chronic long-term disability.

This case report covers the presentation and management of Mr. X. This competitive snowboarder presented to the Fowler Kennedy Sport Medicine Centre at Fanshawe College in the winter of 2011. A detailed chart review was performed incorporating the clinical notes of the sport medicine physician and orthopaedic surgeon. Powerchart was used to access the operative report and post-operative follow-up notes. Picture archiving and communication system (PACS) was used to access radiological images. Finally, a literature review was conducted to review the appropriate guidelines.

The diagnosis was made because of a high index of suspicion for the injury. This was accomplished through a detailed history exploring the mechanism of injury, and a physical exam looking for characteristic signs. Initial management included immobilization of the extremity in an air-cast boot and sending the patient for immediate imaging and orthopaedic consultation. The diagnosis was confirmed using appropriate x-ray views and the patient was taken to the operating room shortly thereafter for open reduction and internal fixation. According to post-operative notes, he is recovering well.

Lisfranc joint dislocation is a commonly misdiagnosed condition with a high risk of long-term disability. For this reason, it is important for all physicians to maintain a high index of suspicion for this injury. Red flags include mid-foot swelling and pain lasting greater than five days after injury. If the diagnosis is suspected, the patient should be put non-weight bearing in a cast or air-cast boot with urgent imaging and orthopaedic consultation.

Elaborative Learning in Medical School – a pilot project to provide the skills for lifelong learning

Dr. Darren Van Dam

One of the hallmark goals in pedagogical research is to find ways to facilitate both the processes of uptake and retention of new knowledge in learners. Within the realm of medical education, an additional purpose is to help students' ability to transfer knowledge acquired from the original context in which it was learned into different contexts. Many different theories of learning have been proposed and studied, and among them is the elaborative method of learning. Research has consistently shown that students who adopt an elaborative method of study and learning are able to retain information for a longer period of time, and have more facility with knowledge transfer from one area to another. The process of 'elaborating' one's knowledge occurs when the student experiences in a real life situation something they have learned in the past, and then revisits that previously learned information, and in the process solidifying their understanding of that knowledge. While many students adopt this style of learning and study independently without specific direction or instruction, many do not.

Medical learners are constantly challenged with both the volume and breadth of knowledge they must acquire and assimilate. The process of medical education at Western does somewhat adhere to the basic tenets of elaborative learning theory – knowledge acquired in years 1 and 2 of the undergraduate medical curriculum is then observed in real clinical situations during clerkship, and is then revisited in fourth year during the return to the classroom. However, this format may be too far removed from the real life experience to fully benefit from the elaborative process. This study seeks to test the hypothesis that introducing students early in their undergraduate medical career, during year 1 and 2 of undergraduate training, to the basics of adopting an elaborative style of learning will in turn lead to better understanding and therefore use of the elaborative process of learning during clerkship and residency, and therefore to the improved knowledge retention and transfer is the goal.

Section E: Poster Presentations, Kingsmill Room, Huron University College

Presenter	Poster Display
Dr. Imran Atta	Patient Education Brochure: Advance Care Planning
Dr. Sophia Bianchi	Beyond pamphlets and posters: patient education in the office waiting room
Dr. Jacob Bukczynski	Comparison of basal-bolus versus premixed insulin therapy: a review of the literature
Dr. Abdel-Kareem Chehadi	The Value of Antihypertensive Trials in Family Medicine
Dr. Viet Dao	A Discussion of Controversies In Management of Chronic Low Back Pain
Dr. Afrooz Derakhshan	Comparison of Diabetes Management between a Multidisciplinary and Physician Only Approach
Dr. Shashank Garg	Botulinum Toxin for Post-Stroke Treatment of Upper Limb Spasticity: A systematic Review
Dr. Anne Keeler	A Computer-Based Educational Resource on Early Abortion for Family Medicine Residents
Dr. Lauren Kopechanski	Should Backyard Trampolines Be Banned?
Dr. Christina Kwan	Patient Education Project: Information Brochure for Patients who are Overweight
Dr. Courtney Mahler	Dermatology in a Family Practice
Dr. Mahnaz Mahmoodi	TBA
Dr. Rashid Malik	Case Report: A challenging case of chronic nausea and vomiting
Dr. Dragoljub Malisic	Coherent Scatter Computed Tomography for Structural and Compositional Stone Analysis: A Prospective Comparison with Infrared Spectroscopy
Dr. Leslie Mok	Case: Gait Difficulties in a 3 Year-Old Child
Dr. Ross Moncur	Making the case for a new oral anticoagulant: A clinical audit of INR management in primary care and clinical review of dabigatran
Dr. John Nguyen	Management of Acute Low Back Pain in Primary Practice
Dr. Lindsay Partridge	Non-Suicidal Self-Harm: A Case Report
Dr. Erin Reich	Depression Screening and Monitoring Tool for Primary Care
Dr. Ian Turkstra	MedicalProblemsExplained.Com: A patient education project
Dr. Nataliya Vasylevych	Handling Aberrant Behaviour of a Substance User on Opioid Therapy for Chronic Non Malignant Pain
Dr. Courtney Wickens	Communicating Canadian Missed Combined Hormonal Oral Contraceptive Guidelines to Patients: Teaching Patients to Stay on Track with a Patient Information Pamphlet
Dr. Salma Zaki	Chelation Therapy
Dr. Maribel Mendoza	An update on Pressure Ulcers for Family Physicians

Note: Poster will be available for viewing from 8:00-8:45am and from 10:15-10:45am in the Kingsmill Room.

Patient Education Brochure: Advance Care Planning

Dr. Imran Atta

Advance Care Planning (ACP) is a process that can support patient autonomy and increase patient involvement in decision making. Thereby it has a potential to decrease sufferings of the patients at end of life as well as reduce health care costs by preventing unnecessary interventions. ACP is, therefore, important for people of all ages, health conditions and not only for patients admitted to the hospital with a serious or life threatening illness or people with terminal illness. The available patient education materials are from palliative care centres and address the needs of terminally ill patients when the outcome becomes more predictable. As a result most of the focus is on cardio-pulmonary resuscitation and “Do Not Resuscitate” orders. It is difficult to predict a specific situation which might arise in majority of people who are healthy or even when they have chronic and progressive health conditions. These patients then fail to make choices which can affect the type of care they would need if an emergency arises and they are unable to express their wishes. This can lead to interventions which the person may not have wanted in the first place.

An internet search using Medline was done to find available guidelines and research about the subject. This was reviewed along with available brochures and on-line patient education materials regarding ACP. A discussion was also held with Mr Sibbald, Chief Ethicist at LHSC and Dr Jakda, Director of Palliative Care Program in Kitchener Waterloo region. A brochure is designed which would be suitable for use in family practice settings, for people of all ages and health statuses. It would introduce the patients to the idea of ACP and initiate the discussion with the family physicians. Family physicians are in the best position to hold such discussions and continue to modify the plan in the light of changing health condition of the clients. The brochure is designed to guide people step wise in making choices in certain hypothetical situations, which are most consistent with their beliefs and values. The general principles established can then be applied to any unforeseen situation later.

Beyond pamphlets and posters: patient education in the office waiting room

Dr. Sophia Bianchi

Objectives: The main objective of this project is to deliver education directly to patients in order to stimulate interest in preventative health topics and discussion with their health care provider surrounding these issues. The overall intent therefore is to increase the likelihood that patients will receive appropriate education and counseling on lifestyle choices and screening tests during the office visit, potentially leading to necessary treatment or referral.

Methods: A background literature search was performed on PubMed. Results that were from a primary care or preventative health standpoint and involved some form of patient education were included. The patient education resource was developed using information from various reputable and easily comprehensible sources of basic health information designed to target a typical Canadian patient. The patient educational presentation covers a range of topics on health promotion and disease prevention. The presentation is designed to attract attention with colourful slides and images that are easy to read and understand.

Conclusions: Patient education is fundamental to primary care, and opportunities for extending this beyond the office visit need to be explored due to physician time constraints. Advances in technology offer a plethora of choices, and waiting-room based patient education is one way of both improving patient satisfaction and patient knowledge of preventative health.

Comparison of Basal-bolus versus Pre-mixed Insulin Therapy: A Review of the Literature

Dr. Jacob Bukczynski

Diabetes mellitus Type 2 is an endocrine disorder of multiple etiology. It is characterized by target tissue insulin resistance, deficient pancreatic insulin production, and dysfunctional hepatic glucose production. Initial treatment involves lifestyle modification and oral anti-diabetic agents. As the disease progresses, however, exogenous long-acting insulin, and eventually rapid-acting insulin must be used. There are two approaches: separate mealtime injections of rapid-acting insulin with a background basal dose, or a fixed mix of intermediate-acting insulin with rapid-acting insulin. The choice of insulin regimen is a frequently encountered question in Family Medicine.

The purpose of this article is to review randomized-controlled trials in published medical literature that compare basal-bolus therapy with premixed therapy. A systematic search of Medline and EMBASE was conducted to identify randomized-controlled trials in the 2000-2011 period measuring appropriate clinical endpoints.

A total of five randomized control studies were found. Two of the studies showed basal-bolus therapy improved outcome as measured by HgA_{1c} reduction and the achievement of therapeutic targets. Three studies showed no significant difference, however two of these showed a non-significant trend of improved results with the basal-bolus approach.

In conclusion, more research is necessary to determine the best approach to optimizing therapy when basal insulin is not enough. For now, the final decision may be influenced by patient and physician preference and capabilities, therapy goals, previous treatment failure and patient convenience.

The Value of Antihypertensive Trials in Family Medicine

Dr. Abdel-Kareem Chehadi

It is estimated one in four Canadians have hypertension with less than 10 percent at or below target levels. It is commonly linked to other cardiovascular risk factors resulting in significant morbidity and mortality around the globe. The risk of cardiovascular disease begins at 115/75 mmHg and doubles with each increment of 20/10 mmHg. This paper critiques a number of landmark studies published 1995 to 2010 that compared antihypertensive drug regimens for reductions in blood pressure and prevention of primary end points, i.e. non fatal and fatal strokes, heart attacks and cardiovascular events. They were found using the following keywords "hypertension, cardiovascular diseases, nephropathy, myocardial infarction, stroke, blood pressure, arterial blood pressure, angina and diabetes" in a Pub Med search. The trials suggest thiazide diuretics be used as initial therapy but combination therapy with two first line drugs, i.e. angiotensin converting enzyme inhibitor and thiazide diuretic, must be considered if blood pressure is 20/10 mmHg above target levels. The trials illustrate prompt blood pressure control is the major determinant on cardiovascular outcomes. The management of hypertension is important to family physicians that must incorporate new drugs into therapeutic regimens and make treatment decisions based on evidence-based medicine. The most important goal in family medicine remains to diagnose hypertension and lower blood pressure quickly in hypertensive patients to prevent morbidity and mortality in the patients we serve.

A Discussion of Controversies in Management of Chronic Low Back Pain

Dr. Viet Dao

Background: Despite current advancement in modern medicine, management of chronic low back pain remains challenging and controversial.

Purpose: This paper explores the controversies associated with current management options of chronic low back pain in an attempt to raise awareness of these issues among family medicine residents. Recognizing these controversies may help a future family physician to avoid those pitfalls, minimize cost, and improve treatment.

Methods: Ideas and facts are gathered and compiled from personal experience during rotation at local pain clinic, the media, as well as scientific articles from Pubmed searches with topics in chronic low back pain, spinal injections, surgical interventions, opioids, and its controversies.

Results: Precise diagnosis of low back pain's etiology remains elusive. There is lack of evidence supporting the efficacy of diagnostic imaging studies and spinal injections, despite their increased utilization. Likewise, there is also lack of evidence supporting long-term narcotics, or interventional treatments such as spinal injections and surgeries. Yet these treatments are continually offered to patients, despite real risks of complications. Interestingly, use of allied health professionals is still minimal, despite proven to be effective in chronic low back pain. This may be a result of multiple factors involving patient's expectation, pharmaceutical marketing, the media, and physician's financial pressure.

Conclusion: Further research and more rigorous guidelines are needed in management of chronic low back pain. In the mean time, it is important for a family medicine resident to adhere to patient-centered care principles to avoid these controversies and improve patient care.

Comparison of Diabetes Management between a Multidisciplinary and Physician Only Approach

Dr. Afroz Derakhshan

Diabetes is a very serious illness which affects an increasing number of people and currently has a huge impact on healthcare system and quality of life of many people. Therefore we need to urgently develop an effective strategy to manage the disease and prevent its complications. In this study the management of diabetic patients by a physician working alone was compared with multidisciplinary team management. This study was a retrospective analysis of 40 patients with diabetes with an age range of 38 to 79 in our medical facility. The patients in our study had been managed by their physician only up to 2008 and subsequently were managed by a multidisciplinary team up to 2010. The indexes investigated included BP (blood pressure), HbA1C (glycosylated hemoglobin), LDL (low-density lipoprotein), and being treated by ACEI (angiotensin-converting enzyme inhibitor) or ARB (angiotensin receptor blocker). These four indexes were compared in two points of time (2008, before team management, and 2010, after team management). The results show that those who underwent multidisciplinary approach had better management especially for the BP control and being on ACEI /ARB. Our study suggests interdisciplinary and multidisciplinary management of diabetes has significant benefit in treatment of diabetes.

Botulinum Toxin for Post-Stroke Treatment of Upper Limb Spasticity: A Systematic Review

Dr. Shashank Garg

Purpose: Family physicians have the primary responsibility for managing and coordinating the long-term care of stroke survivors in Canada. Physicians need to be familiar with approaches to improve function and self-reliance. At present, there are a limited number of options to achieve this and Botulinum toxin is one of them. Botulinum toxin is a powerful neurotoxin that temporarily weakens muscles by inhibiting acetylcholine release at the neuromuscular junction. Botulinum toxin injections to hypertonic muscles can therefore allow patients to partially regain range of motion or experience pain relief, thereby improving function and significantly improving quality of life. This systematic review addressed the question “Does Botulinum toxin improve upper limb function in post-stroke spasticity?”

Methods: Randomized controlled trials (RCTs) studying use of Botulinum toxin for upper limb spasticity in stroke patients were eligible. A number of electronic databases as well as references in key articles were searched.

Results: Ten RCTs were identified (n=524). All randomized less than 70 patients per trial arm. One studied Botulinum toxin with Functional Electrical Stimulation (FES), and eight were placebo controlled. A number of different outcome measures were used. Modified Ashworth Score (MAS) was the most commonly used outcome measure, and it decreased significantly with Botulinum toxin use in most studies. Range of motion (ROM) was also shown to improve with Botulinum toxin use. However, the effect of Botulinum toxin on upper limb function was not as clear.

Conclusions: Limited data is available regarding Botulinum toxin use to improve upper limb function in stroke patients. Botulinum toxin appears to be effective in reducing spasticity, as measured by MAS. Results regarding effect of botulinum toxin on upper limb function were mixed. Further research in this area is a priority with outcome measures tailored to assess specific activities which are compromised with post-stroke upper limb spasticity.

A Computer-Based Educational Resource on Early Abortion for Family Medicine Residents

Dr. Annie Keeler

Background: Therapeutic abortion (TA) is one of the most common procedures in medicine. The number of abortions reported in Canada in 2008 was 94,010. Canada is a country where the majority of citizens believe that women should have the right to choose abortion when raising a child or adoption are not desirable options. Despite this, medical education around the topic of TA is scarce.

Objective: To create an online educational module regarding the topic of both medical and surgical TA.

Method: Literature review was completed using MESH and key word searches on PubMed. Relevant textbooks, previously published curricula, and websites of well-established public-interest groups were used in the preparation of the module. Adobe Captivate and PowerPoint 2010 were used to create the educational module.

Outcome: This educational resource will provide family medicine residents with the basic knowledge and the skills required for providing appropriate care for patients presenting with an unwanted pregnancy. The concept of full reproductive healthcare can only be taught when TA is included in the curriculum. With this knowledge, Family Medicine residents can enter their practices and lead the way in expanding accessibility in Canada.

Should Backyard Trampolines be banned? A Review of the Literature.

Dr. Lauren Kopechanski

In 2007, the Canadian Pediatric Society, along with the Canadian Academy of Sports Medicine recommended a ban on the use of recreational trampolines. Despite this, trampoline sales continue to rise, and there seems to be little knowledge of this proposed ban among family physicians. This paper sets out to review the current literature which supports and/or opposes this position statement and the various recommendations in regards to the use of recreational trampolines.

Methods: A literature search was performed on PubMed using the search terms “trampoline related injuries”, “pediatric trampoline injuries” and “trampoline recommendations” from 1990 onwards. Articles which focused on the use of trampolines for therapeutic or competitive purposes were excluded.

Findings: Thirty-three articles were included for review. There were 18 retrospective observational studies included. A total of 871,827 trampoline related injuries were included in these studies. Injuries were most common in the 8-11 year old age group. Injuries most commonly involved the extremities. Fractures and soft-tissue injuries were most commonly reported. Most studies reported the mechanism of injury as occurring on the trampoline mat. Percentage of injuries requiring hospital admission ranged from 1.9 to 41%.

Conclusions: Many of the common recommendations made by authors to prevent trampoline injuries have been determined to be ineffective at doing so. This literature review supports the CPS recommendation that backyard trampolines should be banned from recreational use and that family physicians should routinely warn parents of their dangers.

Patient Education Project: Information Brochure for Patients who are Overweight

Dr. Christina Yee Kwan

Obesity is an increasingly common and important condition for family doctors to manage. Co-morbidities linked with obesity like coronary artery disease and diabetes are associated with significant morbidity and mortality. Management and prevention of obesity is critical in primary prevention of these diseases. Family doctors unfortunately may not feel well equipped in weight loss management. Tools that help family doctors address weight loss management is an important first line step to curbing the obesity epidemic. Review of recent literature published since the year 2000 indicates weight loss management approaches are varied but a common concept is caloric restriction and exercise. An information pamphlet based on caloric restriction was developed and is aimed to facilitate family doctors in counselling their overweight and obese patients to adopt healthier lifestyles and lose weight.

Dermatology in a Family Practice

Dr. Courtney Mahler

After reviewing the curriculum of McMaster Medical School and University of Western Ontario Medical School and Family Medicine Residency, it is evident that dermatology is poorly taught throughout medical school and family medicine residency. Many resources available for dermatology are meant for quick on the spot diagnoses and often do not describe management in detail. Unfortunately, the tips and tricks to common diagnoses and thorough management are often passed down through the dermatology community and not learned by many family medicine residents or practising physicians. This booklet was created as an easy to read manual for family medicine residents and practising physicians on how to describe a lesion, common dermatologic diagnoses, how and when to biopsy a lesion, and a guide to topical steroids. The information was gathered through several articles in Skin Therapy Letter, an important dermatological resource for the family physician, as well as resources for the dermatologist including the Journal of the American Academy of Dermatology, DermQuest, and personal communications with dermatologists themselves. Although components of this booklet can be used as a quick reference, such as the guide to topical steroids section, the booklet is primarily to be used as a quick read before entering the exam room and not necessarily as an on the spot diagnosis reference. By the end of this booklet, the reader should feel more comfortable with their approach to the patient presenting to their office with a skin problem.

Mahnaz Mahmoodi

Heavy menstrual bleeding (HMB) defined as greater than or equal to 80 ml of blood loss per menstrual cycle, is an important cause of ill health in women and it accounts for 12% of all gynecology referrals. Hysterectomy is often used to treat women with this complaint but medical therapy may be a successful alternative. The intrauterine coil device (IUDs) was originally developed as a contraceptive but the addition of uterine relaxing hormones, progestogens, to these devices resulted in a large reduction in menstrual blood loss. IUDs provide highly effective, long-term, safe, reversible contraception, and are the most widely used reversible contraceptive method worldwide. The levonorgestrel-releasing intrauterine system (LNG-IUS) is a T-shaped IUD with a steroid reservoir containing 52 mg of levonorgestrel that is released at an initial rate of 20 µg daily. It is highly effective, with a typical-use first year pregnancy rate of 0.1% – similar to surgical tubal occlusion. It is approved for 5 years of contraceptive use, and there is evidence that it can be effective for up to 7 years of continuous use. After removal, there is rapid return to fertility, with 1-year life-table pregnancy rates of 89 per 100 for women less than 30 years of age. Most users experience a dramatic reduction in menstrual bleeding, and about 15% to 20% of women become amenorrheic 1 year after insertion. The device's strong local effects on the endometrium benefit women with various benign gynecological conditions such as menorrhagia, dysmenorrhea, leiomyomata, adenomyosis, and endometriosis.

Objectives

1. To determine the effectiveness and acceptability of progesterone or progestogen-releasing intrauterine devices in achieving a reduction in heavy menstrual bleeding.
2. To emphasize on importance of Family physicians in managing patients with menorrhagia.

Case Report: A challenging case of chronic nausea and vomiting.

Dr. Rashid Malik

Background: Nausea and vomiting are common presentations in primary care and carry a broad differential. It is important for the primary care physician to be able to sort out life threatening causes from benign ones and to be aware of the different treatment modalities for symptomatic relief of nausea and vomiting.

Case description: A 25 year old female with intractable nausea and vomiting secondary to methadone use for complex regional pain syndrome.

Discussion: A wide variety of treatments are available for nausea and vomiting but equally important is identifying and eliminating, or at least mitigating, the underlying cause. While seemingly a straightforward problem, both treatment and investigation of nausea and vomiting are influenced and sometimes complicated by resources available, financial restrictions, patient's wishes, side effects and co morbid illnesses - both organic and psychological.

Conclusion: Chronic diseases can have a profound effect on patients' lives and as family physicians we are in a unique position to be able to help them and their families manage the medical, psychological and social aspects of both the disease and its treatment.

Coherent Scatter Computed Tomography for Structural and Compositional Stone Analysis: A Prospective Comparison with Infrared Spectroscopy

Dr. Dragoljub Malisic

The purpose of the present study is to prospectively evaluate Coherent Scatter Computed Tomography (CSCT) for the structural and compositional analysis of human urinary calculi ex-vivo and to compare the results of this method with Infrared Spectroscopy (IRS), the standard used for stone analysis today. Institutional review board approval was obtained for urinary stone analysis. We analysed 75 calculi with both CSCT and IRS and found that CSCT and IRS agreed on the primary component 87 % of the time, but CSCT detected additional components that IRS did not detect. CSCT also provided structural information crucial to determining the core component which IRS is not capable of doing. We show that CSCT provides accurate compositional analysis and is superior to IRS for evaluating mixed stones thanks to the structural information it provides. Accurate stone analysis would aid in providing effective stone prophylactic measures which is cost effective and reduces patient suffering. Primary care practice would be a suitable avenue to implement stone prophylaxis management effectively with the proper follow-up required.

Case: Gait Difficulties in a 3 Year-Old Child

Dr. Lesley Mok

Gait problems in children are a common presenting complaint to the family physician's office. Well baby visits provide an opportunity to screen for these problems and to intervene without delay. While many problems resolve with time, occasionally there is a serious underlying cause. The following report outlines the case of a three year-old boy with gait coordination problems who presented to the family physician. Unfortunately he was diagnosed with Duchenne Muscular Dystrophy (DMD), a genetic disorder resulting in progressive muscle damage, disability and ultimately early mortality. This case report is an example of the usefulness of well baby visits and the effectiveness of screening for developmental milestones and red flags. The purpose of this report is to demonstrate the importance of screening in primary care and making referrals that will lead to early diagnosis and intervention. This case also illustrates how the family physician embodies the four principles of family medicine, endorsed by the College of Family Physicians of Canada. The principles include: 1) the family physician is a skilled clinician; 2) family medicine is a community-based discipline; 3) the family physician is a resource to a defined practice population; and 4) the patient-physician relationship is central to the role of the family physician.

Making the case for a new oral anticoagulant: A clinical audit of INR management in primary care and clinical review of dabigatran

Dr. Ross Moncur

Warfarin has long been used for prophylaxis against stroke and systemic embolism in high-risk patients with atrial fibrillation. The narrow therapeutic window and complex pharmacokinetics of warfarin requires that its dose be followed with regular INR blood testing. This clinical audit examined the patients of one family physician and found that among all high-risk patients with atrial fibrillation undergoing anticoagulation with warfarin, only 57.8 percent were treated within the recommended therapeutic window. When compared to warfarin, the newer oral anticoagulant, dabigatran, appears to represent a useful alternative for stroke and systemic embolism prophylaxis due to ease of use and evidence of equivalent or improved safety and efficacy.

Management of Acute Low Back Pain in Primary Practice

Dr. John Nguyen

Patients today are taking more initiative in their own health care and learning about their own diseases. With the rising popularity of the Internet as a medium for self-education, it is important that patients have online resources to aide with decision-making. Low back pain is one of the most common presenting complaints in primary care, therefore it makes sense to provide patients with relevant online evidence based information from a source both physician and patient can trust.

A patient focused educational website that uses evidence based information from consensus guidelines was created. Similar projects have been enacted in Europe with success and a similar model can be adopted for primary care. A literature search was conducted on Ovid Medline combining the search terms 'low back pain' and 'guidelines'. A similar search was conducted using the CMA website's clinical practice guidelines section. After limiting the search to English review articles, five articles were used to create a comparison table that comprises the majority of patient care information on the website.

The website was then designed using Microsoft Frontpage and Notepad. For ease of navigation, the website is divided into the following sections: 1) Introduction 2) What to Expect 3) Investigation 4) Treatments 5) Contact 6) Links 7) References. The address is <http://lowbackpain.hostoi.com>.

In everyday practice, the website model can be advertised through posters in the office or solicited during low back pain specific visits. Bookmarks with the web address can also be handed out to patients.

Non-Suicidal Self-Harm: A Case Report

Dr. Lindsay Partridge

Non-suicidal self-injury is an evolving phenomenon. In the DSM-IV, non-suicidal self-injury appears only once, as a symptom of Borderline Personality disorder. However rates of non-suicidal self-injury among adolescents and young adults appear to be rising in recent years, without concurrent rises in those meeting diagnostic criteria for Borderline Personality Disorder. There also appears to be considerable diagnostic heterogeneity among those who engage in self-harm behaviours and some researchers suggest that non-suicidal self-injury is an important and clinically distinct phenomenon in its own right. Physicians in family medicine are becoming the first point of contact for an increasing number of patients presenting with self-injury. Therefore having a good understanding of why people engage in non-suicidal self-injury will help enhance prevention and treatment. The following case report demonstrates some of the complexities and assessment difficulties that clinicians may face when encountering a patient demonstrating self-injury behaviour. It also helps to highlight the lack of proven treatments for this behaviour and point out areas for future research.

Depression Screening and Monitoring Tool for Primary Care

Dr. Erin Reich

The majority of patients with depression in Canada are managed by family physicians. Depression is a common, detrimental and chronic disorder; however, it remains under-recognized and under-treated. Screening for depression is recommended by national guidelines as part of a comprehensive depression management strategy and has been shown to improve outcomes.

A tool was created to aid family physicians in screening, diagnosing and monitoring depression in adults based on evidence from a literature review on depression screening tools. It involves a 2 step patient self-report depression screening strategy. A brief initial screen (Patient Health Questionnaire-2 plus a 'help' question) is followed by a more extensive depression screen (PHQ-9) in those who screen positive. The score generated can be used to assess depression severity and guide treatment decisions. A flow sheet helps physicians assess depressive symptoms, rule out other diagnoses and monitor treatment response. The flow sheet also helps physicians document and bill the encounter.

This tool can be used to screen for depression during a new intake visit or as part of a periodic health examination. It can be targeted at high risk patients and used when there is a high suspicion of depression. Ideally, it should be part of an overall depression management strategy that involves a team approach to depression care. This tool may be helpful to facilitate communication between team members by using a common and standardized measure of the patients' current status.

MedicalProblemsExplained.com: A patient education project

Dr. Ian Turkstra

Family medicine clinics are full of patients who have questions about their medical illnesses. As busy family doctors we do not always do justice to these patients' need for detailed answers. Some people turn to the search engines on the internet to find basic descriptions of the illnesses they suffer from, but the websites they find are not always reputable sources of medical information. MedicalProblemsExplained.com was developed to be a website that will be filled with quality details about commonly encountered diseases. Written by an actual health care worker and not just someone out to profit off of people's concerns, it will have real answers to the questions people ask every day. By providing thoroughly researched details about common illnesses, this website will be able to be a resource that my patients can turn to for information they can trust. Starting with descriptions of asthma and diabetes, more topics will be added on a regular basis over the coming months and years, slowly building up a repository of facts for patients to use to educate themselves.

Handling Aberrant Behaviour of a Substance User on Opioid Therapy for Chronic Non Malignant Pain

Dr. Vasylevych Nataliya

Background: Any primary care practice has patients with chronic non-malignant pain. Treatment of chronic pain can be a challenge for a family physician, especially if patients are substance users exhibiting aberrant behaviours and requiring opioid therapy.

One of many barriers to the effective treatment of chronic pain in this group of patients is the addictive nature of opioids. Therefore, very often their pain is under treated, and patients may demonstrate pain behaviours similar to drug seeking.

Objectives: The current case report is aimed at addressing the differential diagnosis of aberrant drug seeking behaviours, and reviewing the best clinical practices of dealing with aberrant behaviours in high risk patients on opioid therapy in the setting of primary care.

Methods: This project consists of case description and conventional literature review including current guidelines.

Conclusions: A structured opioid therapy in the light of patient-centredness is a way of delivering compassionate and competent care for high risk patients in primary care practice.

Communicating Canadian Missed Combined Hormonal Oral Contraceptive Guidelines to Patients: Teaching Patients to Stay On Track with a Patient Information Pamphlet

Dr. Courtney Wickens

Objectives: 1) Examine the current literature and evidence pertaining to combined hormonal oral contraception (CHOC) compliance; 2) evaluate web-based resources available to patients seeking information on missed pill guidelines; and 3) develop an evidence-based and easy-to-understand patient information handout to aid Canadian women in their compliance through communication of missed CHOC guidelines.

Methods: A literature search was performed using computerized databases Cochrane Central Register of Controlled Trials, EMBASE and PUBMED using the key terms: “combined hormonal contraception”, “oral contraceptives” and “adherence” during the years 2000-2010 in the English language. References of these articles were also reviewed. Development of the patient information handout was based on these results. To evaluate web-based information that patients may be accessing, the first ten results of a Google search, using the search phrase “missed birth control pill,” were compared to the Canadian guidelines.

Key Findings: CHOC compliance is poor, contributing to unintended pregnancy rates. There are certain risk factors that may influence women’s pill-taking abilities. Women also may have difficulties self-identifying problems with their pill compliance, making the family physician essential. There is poor access to evidence-based guideline-appropriate resources, particularly through the Internet.

Conclusions: Family physicians play key roles in contraceptive counselling. In particular, explaining the gap between ideal and typical use, identifying high-risk patients for poor compliance, and discussing guidelines may help reduce unintended pregnancies and its associated complications. With all the easily accessible misleading information available, a guideline-appropriate patient information resource certainly has its place in primary health care.

Chelation Therapy

Dr. Salma Zaki

More and more individuals are looking outside the borders of conventional medicine for at least part of their health care needs. The scientific community can no longer ignore the worldwide exponential surge in public enthusiasm for complementary and alternative medicine (CAM) therapies. The use of chelation therapy using intravenous Ethylenediaminetetraacetic Acid (EDTA) in cardiovascular and atherosclerotic disease is just one example. Although currently not endorsed by modern medicine, users of this therapy are generally highly convinced of its benefits. There is an emerging need to know more about this increasingly popular therapy among patients, in order to guide them appropriately.

There is an ongoing debate about the benefits and risks of this complementary treatment modality, the main argument being the lack of high quality randomized controlled trials (RCTs) to support its use and effectiveness. Skeptics cite a placebo effect and the role of concurrent life style changes as a plausible explanation of benefits. However, there is evidence in the medical literature that EDTA may have a preventive effect on blood clot formation. Currently, a large multicentre RCT, Trial to Assess Chelation Therapy (TACT) is underway across USA and Canada to examine its effects, and results are expected to be analyzed in 2012. Until then we, as family physicians, need to gain more knowledge about this CAM therapy and ask patients whether they are using this modality, in order to determine their concerns, expectations, misconceptions, and personal health goals, in order to provide the best possible patient focused care.

An Update on Pressure Ulcers for Family Physicians

Dr. Maribel Mendoza

Objective: To provide a comprehensive “best practice” update on recognition, prevention and management of pressure ulcers using the latest clinical practice guidelines for family physicians.

Methods: Studies pertaining to pressure ulcer prevention and management were selected using MEDLINE, PubMed, Cochrane Database of systematic Reviews, and JAMA. Guidelines and recommendations were reviewed electronically from National Pressure Ulcer Advisory Panel (NPUAP) European Pressure Ulcer Advisory Panel (EPUAP), Pressure Ulcer Awareness Prevention (PUAP), Agency for Healthcare Research and Quality (AHRQ) and Canadian Association of Wound Care (CAWC). Relevant abstracts published between 2003 and July 2009, in the English language, were reviewed.

Key Findings: Knowledge of factors contributing to the pathogenesis of pressure ulcers allows the identification of patients at risk for ulcer development. Preventive and treatment interventions may then be targeted to those specific patients. There is a need to increase awareness on the part of the patient and physicians need to advise the patients and caregivers of the best medical practice based on evidence and guidelines.

Conclusions: The estimated overall prevalence of pressure ulcers in institutionalized patients in Canada is 26 per cent. Pressure Ulcers are a significant problem in a variety of patient settings causing pain, decreasing quality of life, and leading to significant morbidity and prolonged hospital stays. They are associated with adverse health outcomes and high treatment costs. Awareness is the first step in prevention. It is important to implement care that is consistent with best practice and the standard of care. Prevention and early intervention are critical so be proactive with skin assessment and risk assessment. Implementation of interventions in the plan of care should be specific to the patient and his/her clinical condition(s). Ulcer prevention and treatment are cost-effective approaches to improving health status. Family physicians can play a key role in ensuring the best medical practice by educating the clinical staff, patients and caregivers to reduce the development of pressure ulcers.