2009 Trillium

Primary Care Research Forum

Friday June 26, 2009

An ongoing collaboration between...
McMaster University
University of Toronto
The University of Western Ontario

Table of Contents

Agenda 2

Martin Bass Lecture 3

History of Trillium 3

Paper Presentation Schedule (Session I & II) 4

Paper Presentations (Session I) 6

Paper Presentations (Session II) 14

Poster Presentations 22

Workshops 36

Presenter Index 38

Royal Botanical Gardens Information 39

Notes 40

Agenda 2009

8:00	**Registration and Continental Breakfast in Foyer**
8:30-8:45	**Opening Remarks in Auditorium B** *Lisa Dolovich,* Research Director, Department of Family Medicine, McMaster University *David Price,* Chair, Department of Family Medicine, McMaster University *Eva Grunfeld,* Giblon Professor and Director of Research, Department of Family and Community Medicine, University of Toronto
8:45-9:15	**The CMAJ: trends in publishing/ publishing primary care research** *Paul Hebert/ Diane Kelsall*
9:15-10:30	**Concurrent Paper Sessions I** (see schedule pages 4 & 5)
10:30-11:15	**Poster Session and Nutrition Break in Atrium**
11:15-12:30	**Concurrent Paper Sessions II** (see schedule pages 4 &5)
12:30-14:00	**Lunch in Auditorium B** **Martin Bass Lecture- Introduction:** *Moira Stewart*, The University of Western Ontario **Keynote speaker-** *Dr. Geoff Norman,* McMaster University **"The Role of Experience in Clinical Expertise"**
14:00-15:30	**Concurrent Workshops:** **Social Networking Analysis** in Auditorium A *Kalpana Nair and Stephanie Laryea* **Reducing Bias in Research: What and How?** in Auditorium B *John Cairney* **Optimizing the Role of the Nurse in Primary Care** in Café Annex *Melanie Hammond, Lesley Gotlib Conn, Anna Gallinaro*
15:30	**Conference Adjourns**

Martin Bass Lecture

Keynote Speaker: Geoff Norman, McMaster University
The Role of Experience in Clinical Expertise

Geoff Norman, PhD, is Professor of Clinical Epidemiology and Biostatistics, McMaster University. He received a B.Sc. in physics from the University of Manitoba in 1965 and a Ph.D. in nuclear physics from McMaster University in 1971, and subsequently a M.A. in educational psychology from Michigan State University in 1977. He is the author of 10 books in education, measurement and statistics, and over 200 journal articles. He has won numerous awards, including the Hubbard Award from the National Board of Medical Examiners, the Outstanding Achievement Award of the Medical Council of Canada, the Distinguished Scholar Award of the American Educational Research Association, and the Karolinska Prize for Lifetime Achievement in Medical Education. He presently holds a Canada Research Chair. He was elected to the Royal Society of Canada in 2007.

When asked how long after graduation from their chosen professional program before they felt competent in their job, most health professionals report 5-10 years. When asked to choose a family physician from two candidates, one who is a recent graduate and a second who has been in practice 10 years, virtually everyone chooses the latter. Paradoxically, studies of recertification and relicensure performance based on written examinations uniformly show a linear drop with years from graduation. Evidently, practical experience is contributing substantially to our perception of competence, but its effects are not detectable by formal examinations.

In this talk, I explore the nature of diagnosis from a cognitive psychology perspective, using an exemplar theory of categorization. I argue from evidence that a major role of experience is to provide the expert with a vast mental storehouse of clinical examples, and the act of routine diagnosis, just like everyday categorization of objects like dogs or trees, proceeds primarily by an unconscious mental similarity matching against a previous example in memory. The careful, systematic, deliberate application of diagnostic rules is a secondary process used for confirmation or when the correct diagnosis is not evident. I discuss strategies for measurement and implications for the training and practice of primary care clinicians.

History of Trillium

Trillium Research Day began in the mid-nineties as an evolution of the University of Western Ontario's Research Day. Western's Day was well attended by family practice researchers from McMaster and University of Toronto; so all three Departments decided to rotate the hosting and to explicitly give the Day more of a province-wide flavour – hence the name Trillium Research Day.

The University of Western Ontario's Research Day began in the late eighties, led by Dr. John Sangster who was inspired by the Michigan State annual family practice research day. The principles of the Michigan State research day were, (1) to be regional and (2) to nurture inexperienced researchers and were emulated by Dr. Sangster.

For at least the past decade, the Trillium FM Research Day/Forum has rotated among Western, McMaster and U of T. Residents, faculty, graduate students and community-based clinicians enjoy presenting and sharing findings.

After the untimely death of Western's research director, Dr. Martin Bass in 1996, the Keynote Speech at Trillium has been named the Bass Memorial Lecture to honour his generosity, curiosity and support of young researchers.

Session I Paper Presentation Schedule

	9:15 am	9:30 am	9:45 am	10:00 am	10:15 am
Auditorium A	Important mentoring activities for family medicine residents and "new" physicians *Cathy Thorpe*	Project IMPACT: An innovative interprofessional training model for chronic disease management in primary care *Jason Xin Nie, Jocelyn Anderson*	Palliative care curriculum for post-graduate education programs in family medicine: a systematic review *Michelle Howard*	The mentoring experiences of new family physicians *Judith B. Brown*	The refinement of the Quality in Family Practice Tool using a Delphi Panel *Kalpana Nair*
Auditorium B	Flying below the radar: a Family Health Team-nurse practitioner pilot project finds many seniors at risk *Kim Hoskin*	The educational role of nurse practitioners with family medicine residents *Anne Barber*	Primary health care providers' views about electronic medical records post-implementation and adoption *Amanda Terry*	Elements of team functioning that influence electronic medical records use post-implementation and adoption *Louisa Bestard Denomme*	What are wait times to see a specialist? An EMR based analysis of 16115 referrals in south-western Ontario to ascertain equity *Amardeep Thind*
Café Annex	Self-reflected health status of refugees: a reflection of the health immigrant effect *Benjamin Kaasa, Hashini Bandaranayake*	Challenges to the provision of diabetes care in aboriginal communities *Irit R. Rasooly*	Clinical management of diabetes and quality improvement interventions in Aboriginal communities: a systematic review *Elizabeth Estey*	Recommendations on bringing a cardiovascular health awareness program to Aboriginal communities in Ontario *Kennedy Riemersma*	Conceptual framework for intercultural and primary health care training; an international experience *Yves Talbot, Monica Riutort*

Session II Paper Presentation Schedule

11:15 am	11:30 am	11:45 am	12:00 pm	12:15 pm	
Characterizing private colonoscopy screening services in Toronto *Noah Ivers, Michael Schwandt*	Informal palliative caregivers' perceptions of service delivery and reasons for not using in-home and community-based services *Shahla Oskooei*	Extending Care to Seniors with Hypertension through Community Pharmacies linked by E-health to Family Physicians *Stephanie Laryea*	A multicentre randomized controlled trial evaluating cancer survivorship care plans *Eva Grunfeld*	Medication paradox: 10 year trends in medication prescribing for seniors living in Ontario--a population cohort study *Li Wang*	**Auditorium A**
Access to cervical cancer screening across body mass index categories in a dedicated women's clinic *Mallory Owen, Janice Owen*	Hormone therapy and mortality in younger menopausal women: a synthesis of the evidence using Bayesian meta-analysis *Ji (Emmy) Cheng*	Temporal and regional trends in IUD insertion: a population based study in Ontario *Sheila Dunn*	Parenting matters-a randomized clinical trial of a distance-based treatment for preschool age children with sleep and discipline problems seen in primary care *Graham J. Reid*	The relationship between intrapartum intravenous therapy and newborn weight loss *Kim Sheehan*	**Auditorium B**
Congestive heart failure (CHF): Electronic medical record (EMR) operationalization of Ontario Ministry of Health and Long-Term Care (MOHLTC) guidelines *Neil Marshall*	Effectiveness of a community-based diabetes program to increase awareness and detection of diabetes *Gina Agarwal*	Comparing the efficiency of different statistical methods in the analysis of binary outcomes from cluster randomized controlled trials: a simulation study *Jinhui Ma*	Predictors of non-adherence to medical appointments amongst diabetic patients in primary care practices using EMR *Hani Abushomar*	The effectiveness of web-based patient self-management programs for hypertension: a systematic overview *Christine Rodriguez*	**Café Annex**

Paper Presentation - I

9:15am

Auditorium A

Important mentoring activities for family medicine residents and "new" physicians

Presenter: Cathy Thorpe
Coauthors: Moira Stewart, Judith Belle Brown, Chris McKee, Andrea Burt, Janet M. Kasperski

Objective: This study investigated important mentoring activities, and sought to identify specific factors to measure this construct.
Methods: Quantitative study using mailed surveys. All family medicine residents (n=742) and "new" family physicians (n=423) in Ontario in 2007 formed the sampling frame.
Participants: The final sample consisted of 551 family medicine residents (response rate of 74%) and 273 (response rate of 64%) "new" family physicians.
Outcome Measures: Eighteen items measuring important mentoring activities (5-point Likert scale). Exploratory factor analysis of the indicators yielded a 4-factor solution; the four dimensions of important mentoring activities were labelled as: Health System Issues; Cultural Differences; Clinical/Procedural skills; Other Professional skills.
Results: Four regression models were employed to assess the impact of key variables, including type of physician (residents, "new" physicians), country of graduation (International Medical Graduates (IMGs), Canadian), and gender (male, female) on each scale. The findings indicated that IMGs rate a mentor's help with both health systems issues and cultural differences as more important than Canadian graduates, even in the presence of type of physician and gender. The findings also suggested that females and IMGs rate mentoring activities in the areas of both Clinical/Procedural Skills and Other Professional Skills as more important than males and Canadian graduates (controlling for type of physician).
Conclusions: In terms of important mentoring activities, four factors were identified. These factors, along with country of graduation and gender, should be considered when designing mentoring programs to support family medicine residents and "new' family physicians.

9:15am

Auditorium B

Flying below the radar: A Family Health Team - nurse practitioner pilot project finds many seniors at risk

Presenter: Kim Hoskin
Coauthors: Kim Hoskin, Graham Swanson, Adam Grzeslo, Dennis Brodie

Context: Community seniors, often not seen by their family physician (poor access, not wanting to be seen, no transportation, poor ambulation) are the patients who often most need care. A capitated practice has funds for nurse practitioners. A NP joined our team to assess seniors at home.
Objective: to explore the health burden and needs of high risk seniors in the community; to intervene when necessary.
Design: case series.
Setting: Caroline FHT, Burlington Ontario Canada.
Participants: a nurse practitioner, family health team population.
Intervention: patients over 75 identified by office staff as suspect high risk (concerns raised through phone contact, missed appointments) were assessed at home by the nurse practitioner.
Main outcome measures: illness burden, medications, mental status, time for assessment.
Results: 23 patients age 75-96. Assessment took 90 minute sessions. Average 7 medications three newly diagnosed dementia, (2 had just renewed their drivers license), 5 had significant medication issues, 1 was depressed had a gun in the home, 1 psychotic was a risk to self and others, numerous informal family support, frail elderly were primary care givers for other frail elderly, 86% had CVD, 52% cognitive dysfunction, 35% renal impairment.
Conclusion: Community residing seniors not attending their family physician regularly are at risk. A NP with time to home visit is essential for safe effective care. Further review of the needs of seniors is necessary. Driver renewal assessment can miss dementia.

Paper Presentation - I

9:15am

Café Annex

Self-reflected health status of refugees: A reflection of the health immigrant effect

Presenters: Benjamin Kaasa and Hashini Bandaranayake
Coauthors: Benjamin Kaasa, Hashini Bandaranayake, Meb Rashid

"The healthy immigrant effect" (HIE) refers to the observation that immigrants are often in better health to the native-born population when they first arrive in a new country, but lose this health advantage over time. Although current research has correlated HIE with multiple health related risks including cardiovascular risk factors, peri-natal morbidity, body morphology and self-reported health status and brought forward plausible explanations for the trend, little attention has been given to the unique population of refugee immigrants. Our study aims to determine if the self reported health of refugees follows a similar trend. Because refugee immigrants often come from very difficult situations, it is our hypothesis that their health status on arrival would be less than the average Canadian born and would improve over time, in contrast to the HIE.
A cross-sectional survey was administered to clients at Access Alliance Multicultural Community health centre in Toronto, ON consisting of questions relating to demographic information, length of stay in Canada and self-reported health status. The survey was administered in conjunction with further questions on individual's determinants of health. Preliminary data have demonstrated that refugee immigrants rate their self-reported health initially lower than other immigrants and the average Canadian born, and self-reported health deteriorates with time in Canada, following the HIE. Further correlation with other determinants of health is currently underway. Exploring the relationship between health decline, health behaviours and determinants of health in a refugee population, interventions can be focused to improve the health of refugees in Canada**.**

9:30am

Auditorium A

Project IMPACT: An innovative interprofessional training model for chronic disease management in primary care

Presenter: Jason Xin Nie and Jocelyn Anderson
Coauthors: Leslie Nickell, Jason Xin Nie, Shawn Tracy, Jana Bajcar, and Ross Upshur, on Behalf of the IMPACT Team

Chronic disease care is complex and it is unknown how to optimally manage individuals with multiple chronic conditions. Information exchange and collaboration among health care professionals is essential for optimum care to be provided. This project aims to enhance the communication and collaboration of health care professionals via the development of a comprehensive team-based model of care for chronic disease management, and to evaluate the feasibility, effectiveness, and sustainability of the model from multiple stakeholder perspectives. The team is comprised of family physicians, nurses, pharmacist, community social worker, occupational therapist, physiotherapist, diabetic nurse educator, and dietician. The expected outcomes of this project are: 1) enhanced patient health and well-being by developing an innovative patient-centered model of care; 2) improved patient safety and fewer drug errors; 3) health care providers will be providing more effective and efficient care; 4) improved functional status and increased capacity to live independently in the community; 5) trainees will be exposed to a more collaborative and satisfying clinical learning environment, resulting in increased interest primary care and elder care as career choices. The implications of these findings will be discussed in light of the current trends in care of complex diseases.

Paper Presentation - I

9:30am

Auditorium B

The educational role of nurse practitioners with family medicine residents

Presenter: Anne Barber
Coauthors: Allyn Walsh, Anne Barber, Ainsley Moore

The educational role of nurse practitioners in family medicine training is considered to be important and valuable to our department, however role definition and evaluation within a teaching context have been limited to date.
The literature on the subject of teaching of trainee physicians by nurses is scant and the nuances of post-graduate training of physicians by nurse practitioners (RNECs) remain elusive not only within the Department of Family Medicine, McMaster University but also the broader post-graduate medical education system. As the education of health care professionals increasingly moves to community based interprofessional settings, such as Family Health Teams, understanding relative merits and limitations of this type of interprofessional education is important.
Our pilot project consists of 4 steps:

1) Definition of the teaching roles of RNECs within one of our academic units
2) Focus groups of residents to elicit their perceptions of their teaching by RNECs
3) Focus groups of RNECs to explore their teaching role with residents
4) Eventual extension to other health professionals and those in community teaching practices

This project has completed step 1 and is presently exploring funding opportunities and development of interview tools. This presentation will present the results of the literature review, and the results from the definition of RNEC teaching roles.
Discussion will focus on development of the interview tool, and eliciting perspectives and ideas from attendees.

9:30am

Café Annex

Challenges to the provision of diabetes care in aboriginal communities

Presenter: Irit Rasooly
Coauthors: Stewart Harris, Mariam Naqshbandi, Jim Esler, Irit Rasooly, Anthony Hanley, Bernard Zinman, Onil K. Bhattacharyya

Context: Canada's First Nations experience a high burden of type 2 diabetes. Healthcare providers are challenged to manage this high burden of disease while overcoming barriers to care.
Objective: Determine perceived barriers to diabetes care in Aboriginal practice settings.
Design: A survey of healthcare providers was conducted as part of the Canadian First Nations Diabetes Clinical Management Evaluation (CIRCLE) Study. The questionnaire, developed and based on qualitative interviews, examined the relative importance of challenges to providing diabetes care.
Setting: 16 First Nations (peri-urban, rural and remote) communities.
Participants: 229 Family physicians, nurses, nutrition/dieticians, diabetes educators, community health representatives, and clinic managers.
Results: Barriers related to patient behavior - lack of motivation to adopt healthy lifestyles (74%), seeking care for acute conditions (72%), poor adherence to medication (70%) - were most frequently cited as having a large impact on diabetes care. Least often identified were structural issues including staff time in the community (28%), access to post-clinical services (36%), and relevance of diabetes clinical practice guidelines (38%).
Conclusions: Providers ranked patient motivation factors as having the greatest impact on diabetes care. These factors have been mentioned in other contexts, yet identifying patient related factors (which providers have less control of) as key constraints may limit interest in modifying organization of care. Though developing culturally relevant, community-based self-management programs for First Nations is generally regarded as being important, there appears to be little recognition by health care providers that organizational approaches would impact diabetes care in these communities

Paper Presentation - I

9:45am

Auditorium A

Palliative care curriculum for post-graduate education programs in family medicine: a systematic review

Presenter: Michelle Howard
Coauthors: Elizabeth Shaw, Denise Marshall, Alan Taniguchi, Samantha Winemaker, Sheri Burns, Kevin Brazil

Purpose: Palliative care is part of comprehensive family practice; however, many physicians do not feel confident in the multiple biomedical and psychosocial realms. Incorporating training into residency programs is necessary; however, there is little consensus on the best education methods. We conducted a systematic review of postgraduate curricula in palliative care to incorporate the most effective components into an education program for family medicine.
Methods: Systematic review of published literature 1980-2009. Studies conducted in postgraduate medical training programs were included. Outcomes included knowledge, attitudes, comfort level, post-graduate practice, or sustainable interest in palliative care. Pairs of investigators independently examined abstracts, applied standard criteria for paper selection, and used a data collection form to extract information. Discrepancies resolved by discussion and consensus.
Results: 174 abstracts were reviewed, and 27 studies were included. Many studies examined self-perceived symptom management and communication as core objectives and knowledge and skills as the main outcomes. Many teaching strategies showed promise including seminars and small group sessions, 'pocket cards' containing guidelines, web-based modules, workshops, rounds, interactions with simulated patients, self-reflective diaries, clinical rotations, role-playing, and vignettes. Many of these methods, even those delivered in a short time frame, were shown to be effective for improving knowledge, skills, attitudes, and comfort or perception of readiness to practice.
Conclusions: An effective palliative care curriculum will ideally incorporate a variety of teaching and learning strategies to address the multiple competencies required. There is a need for more rigorous evaluation of palliative care curricula to guide this process.

9:45am

Auditorium B

Primary health care providers' views about electronic medical records post-implementation and adoption

Presenter: Amanada L. Terry
Coauthors: Amanda L. Terry, Judith Belle Brown, Louisa Bestard Denomme, Moira Stewart, Amardeep Thind

Context: Building on a prior study with Deliver Primary Healthcare Information (DELPHI) project participants regarding their experiences of early electronic medical record (EMR) implementation, we sought to explore their views during the post-adoption phase of EMR use.
Objective: To explore the views of DELPHI participants, who as part of the research had used EMRs for a period of two or more years. Specifically, to examine: their experiences of EMR implementation; current use of the EMR; and on-going issues in their use of the EMR.
Methods: This descriptive qualitative study used individual interviews to explore the experiences of DELPHI participants, located in Southwestern Ontario. From the original group of thirty participants, nineteen were available for this study. They included family physicians, allied health professionals, and administrative staff.
Results: Data analysis revealed barriers and facilitators to ongoing EMR use. Barriers centered on technical issues, including: information technology challenges; computer skills; electronic connectivity with other providers; and scanning. Additional barriers revolved around provider and teams, such as: time; use of paper records; and team members not utilizing the EMR in the same way. Two primary facilitators emerged: first, providers recognized the benefits of the EMR, for example in patient care and measuring quality of care; and second, providers' computer proficiency played an important role in their advanced EMR use.
Conclusions: Experiences of participants revealed important factors which may inform not only the uptake of EMRs among providers but also the ongoing challenges during the post-adoption phase of EMR use.

Paper Presentation - I

9:45am

Café Annex

Clinical management of diabetes and quality improvement interventions in Aboriginal communities: a systematic review

Presenter: Elizabeth A. Estey
Coauthors: Onil K. Bhattacharyya and Elizabeth A. Estey

Context: Aboriginal populations of industrialized countries have high rates of diabetes and related complications. Understanding current quality of diabetes care and how it can be improved is crucial to stem the rising burden of disease.
Methods: A systematic review was conducted on MEDLINE to identify articles on diabetes quality of care and quality improvement between 1966 and 2009. The search yielded 1624 articles from Canada, the United States, Australia, and New Zealand; 175 were selected for full text review.
Results: The United States' Indian Health Service (IHS) has an exemplary system for surveillance of diabetes care at a national level. Canada has one good regional system (the James Bay Cree audit). Studies from Australia and New Zealand show that despite having comparable process measures of quality of care, Aboriginal people have poorer health outcomes than the general population. There are few quality improvement (QI) studies in the Aboriginal population, and these have used a wide variety of interventions. While the effectiveness of these interventions is hard to evaluate, positive results have been found for interventions involving nurse case managers, specialist outreach, and self-management support groups.
Conclusions: Canada has much to learn from international experience. The IHS' positive trend data demonstrates the benefits of a well-developed national clinical information system. The high risk profile of Aboriginal people indicates a potential for large absolute benefit from QI, but more rigorous evaluations of interventions in Canada and around the globe are needed to better understand the mechanisms for improving quality in this group.

10:00am

Auditorium A

The mentoring experiences of new family physicians

Presenter: Judith B. Brown
Coauthors: Judith B. Brown, C. Thorpe, J. Paquette-Warren, M.J. Kasperski

Context: Recent family medicine graduates may choose to establish a mentoring relationship to assist them when beginning a family practice.
Objective: The purpose of the study was to examine the mentoring needs and experiences of "new" family physicians, those who had been in practice for less than four years.
Methods: A qualitative descriptive study using individual in-depth interviews with sixteen new family physicians (5 men and 11 women) who had graduated within the last four years in Ontario. The analysis of the verbatim transcripts was both iterative and interpretive.
Results: Many of the participants had established relationships with colleagues in their family practice group who served various mentoring roles. Mentoring was also sought out from specialist colleagues. The key elements in choosing a mentor were openness, approachability, and the mentor's willingness to provide feedback on clinical dilemmas. Upon beginning practice, the participants described feeling ill prepared with regard to financial and practice management issues. Hence, they relied on their mentors to provide direction and expertise. These non-clinical matters were often viewed as the most daunting aspects of starting a practice. Also, participants received guidance from their mentors on how to balance personal and professional responsibilities. This was achieved by observing and learning from their mentor(s) in the context of providing comprehensive family medicine.
Conclusions: This study strongly endorses the concept of providing mentoring opportunities for new family physicians. This mentoring support and guidance may assist in both recruitment and retention strategies during the on-going health human resource crisis.

Paper Presentation - I

10:00am

Auditorium B

Elements of team functioning that influence electronic medical records use post-implementation and adoption

Presenter: Louisa Bestard Denomme
Coauthors: Louisa Bestard Denomme, Amanda L. Terry, Judith Belle Brown, Moira Stewart, Amardeep Thind

Context: Little is known about the role of teams in the electronic medical record (EMR) post-adoption phase. Therefore, we set out to better understand this occurrence.
Objective: To explore the views of members of six primary health care teams who as part of the Deliver Primary Healthcare Information (DELPHI) project had been using EMRs in their practices for a period of two years or more. The current study sought to understand the elements of team functioning that influence post-implementation and adoption of the EMR.
Methods: This descriptive qualitative study used individual interviews to explore the experiences of DELPHI participants located in Southwestern Ontario. Nineteen participants including family physicians, allied health professionals, and administrative staff took part.
Results: Analysis of the data revealed six interwoven elements of team functioning when using the EMR. First, learning styles varied both within and between teams. EMR utilization was facilitated by consistent data use and entry while recognizing that different provider and staff roles make use of different EMR functions. Communication and EMR usage was further enhanced by employing a common messaging system. Team members commonly sought out a team champion/problem solver to help them overcome obstacles which in turn encouraged them to learn additional features and advance the adoption process.
Conclusions: Findings illuminate important elements of team functioning that promote EMR adoption and provide guidance for primary health care providers moving through the continuum of initial to advanced EMR adoption.

10:00am

Café Annex

Recommendations on bringing a cardiovascular health awareness program to Aboriginal communities in Ontario

Presenter: Kennedy Riemersma
Author: Kennedy Riemersma

The prevalence of cardiovascular disease and diabetes in the Canadian Aboriginal population is significantly higher than the national prevalence. Hypertension is a modifiable risk factor for cardiovascular disease, diabetic complications, and associated morbidity and mortality. The Cardiovascular Health Awareness Program + Action Plan (CHAP+AP) is the sustainable extension of a community-oriented collaborative initiative to introduce blood pressure monitoring and risk reduction activities in 20 mid-sized communities. The effectiveness of CHAP is currently under study; however, initial program evaluation indicates that the program helps improve identification and monitoring of high blood pressure. CHAP+AP may therefore be an effective intervention to address the high incidence of cardiovascular disease and diabetes in Aboriginal communities. This purpose of this presentation is to present the results of a narrative literature review on health promotion in Aboriginal communities to inform the future expansion of CHAP+AP to Aboriginal communities. Several concepts in Aboriginal health promotion emerged in the literature review and these converged to four themes: (1) Aboriginal self-determination and ownership, (2) encouraging awareness and understanding, (3) cultural relevance, and (4) facilitating accessibility and sustainability. CHAP+AP, as a model for health promotion, provides an appropriate framework to bring needed cardiovascular health awareness programs to Aboriginal communities in Ontario. Recommendations are made on the components of CHAP+AP operations and activities that need to be strengthened or modified in consideration of the four emerging themes in Aboriginal health promotion.

Paper Presentation - I

10:15am

Auditorium A

The refinement of the Quality in Family Practice Tool using a Delphi panel

Presenter: Kalpana Nair
Coauthors: Cheryl Levitt, Lisa Dolovich, David Price, Kalpana Nair, Linda Hilts

Context: The Quality in Family Practice Tool was developed to capture the multidimensional and complex nature of family practice and consists of 80 indicators and 335 criteria. Pilot testing of the Quality Tool has suggested that refinement of the tool could promote uptake of its use in family practice.
Objective: To determine an updated set of indicators and indicator categories that can be used by primary care offices to assess quality of care.
Design: Descriptive study using an expert Delphi Panel.
Setting: Primary care.
Participants: Twenty-three experts from Ontario with knowledge or experience with quality assessment in primary care. Some participants had previous experience using the Quality in Family Practice Tool.
Intervention: First, a validation exercise was completed by comparing the Quality in Family Practice Tool with other similar national (CIHI Pan-Canadian Primary Care Indicators) and international tools (Quality and Outcomes Framework (UK); European Practice Assessment (EPA). All indicators included in the Quality Tool but not other tools and vice versa (n=63) were brought to the Delphi Panel. Two electronic rounds of the Delphi panel were convened and participants rated each indicator on whether it was: value-added; measurable; a standard; and important, and also indicated whether the indicator should be included in a revised tool.
Results: After 2 rounds, consensus had not been reached for 17/63 indicators. A final face-to-face meeting with participants resulted in all remaining indicators achieving consensus regarding inclusion or exclusion. A revised set of 10 categories was also developed with input from Delphi participants and all indicators were grouped into the appropriate category. The new categorization has a more explicit focus on chronic disease management and prevention.
Conclusions: The updated Quality Tool consists of indicators that are aligned with national and international tools, while reflecting Canada's unique medical landscape.

10:15am

Auditorium B

What are wait times to see a specialist? An EMR based analysis of 16115 referrals in south-western Ontario to ascertain equity

Presenter: Amardeep Thind
Coauthors: Amardeep Thind, Moira Stewart, Doug Manuel, Tom Freeman, Amanda Terry

Context/Objective: Reducing wait times has become a key goal of Canadian health planners and policymakers. Using clinical data from the electronic medical records (EMRs) of 25 family physicians across Southwestern Ontario, we present data on wait times to see a specialist. This is the first study in Canada that presents such extensive data on specialist wait times, and to assess equity in these waits.
Design: Cross-sectional analysis of EMR derived database containing de-identified data for 33,544 patients, and 305,824 encounters from the period October 2005 to March 2008; data were linked by postal code to census data to obtain socio-demographic characteristics.
Main outcome measure: Wait time was calculated as the difference between the specialist appointment date and the date of family physician referral.
Results: The mean wait was 74 days, with female patients having a slightly longer mean wait than males (76 vs. 73 days), and younger patients having the shortest mean wait. Differences were noted among practices, with a range of 56 days (Practice 9) to 93 days (Practice 7). By specialty, the longest waits were for gastroenterology (129 days) and orthopaedics (125 days), with the shortest being for referrals to paediatricians (39 days). The waits were equitable with respect to socio-economic status.
Conclusions: This is the first study to present data on actual specialist wait times. Although waits were equitable, there exist significant variations between specialities and by practice. Future work should model the patient, physician and contextual level factors that determine specialist wait times.

Paper Presentation - I

10:15am

Café Annex

Conceptual framework for intercultural and primary health care training; an international experience

Presenters: Yves Talbot and Monica Riutort
Coauthors: Yves Talbot and Monica Riutort

The International Programs of the Department of Family and Community medicine are developing an intercultural training program in primary health care to work with teams of professionals in Bolivia and Chile. This is a timely project because in the American Hemisphere there are more than 400 hundred ethnic groups and indigenous peoples are the fastest growing demographic groups in many countries and they are as well among the most vulnerable.
In this presentation we will describe selected dimensions included in the intercultural training conceptual framework. First, we will describe the distal, intermediate and proximal social determinants of health and the distinct impact they have in the health of aboriginal and non aboriginal people. How the social determinants of health interact with one and other to create vulnerabilities and capacities in health. Secondly, we will focus in the different aspects of health: physical, emotional, spiritual and mental. How the different spheres of health affects the others in temporally and contextually dynamic and integrated ways. Thirdly, we will introduce the main dimensions of intercultural communication in educational projects. We will discuss questions such as: what are the practical implication of intercultural knowledge and attitudes for the practice of health professions?; how are social determinants of health integrated into clinical practices?
We will finalize discussing the impact of this type of training in the health outcomes of the population.

Paper Presentation - II

11:15am

Auditorium A

Characterizing private colonoscopy screening services in Toronto

Presenters: Noah Ivers and Michael Schwandt
Coauthors: N. Ivers, M. Schwandt, J. Tinmouth, D. Martin, N. Pimlott

Introduction: In 2007, 7800 Ontarians were diagnosed with colorectal cancer (CRC). Rates of screening remain low, while significant resources have been directed to improve this. Over 35% of colonoscopies performed in Toronto are delivered through private models, although recent evidence suggests that privately delivered screening colonoscopies may be less likely to detect cancers than publicly delivered procedures, and that private-for-profit clinics may provide lower quality of care. There is a need to improve understanding of privately delivered CRC screening, an area which has been a paucity of study.
Objective: To characterize and compare the delivery of colonoscopy for CRC screening, as provided in private and public delivery models in Toronto.
Methodology: Cross-sectional postal survey administered to 1,850 patients aged 50-70 years, randomly sampled from patient roster of an urban academic family practice centre.
Results: 71.6% of participants had a history of colonoscopy, of whom 17.9% had experience of privately delivered colonoscopy. Statistical analysis comparing private and public models with respect to demographic characteristics of participants and service delivery characteristics (wait times, patient fees, frequency of follow-up) will be presented, with comparison between private facilities and public hospitals.
Discussion: Results of this study will be examined in the context of existing evidence that better adherence to guidelines for CRC screening is required, and that differences in these deficiencies may exist between private and public delivery models. Furthermore, our findings will provide important and novel information to health policy makers so that overall health care resource utilization can be optimized in Ontario.

11:15am

Auditorium B

Access to cervical cancer screening across body mass index categories in a dedicated women's clinic

Presenters: Mallory Owen and Janice Owen
Coauthors: Mallory Owen, Elizabeth Smith, Janice Owen

Recent studies have indicated overweight and obese women are less likely to receive cervical cancer screening than women of normal weight. The aim of this study was to determine whether a dedicated women’s clinic is able to provide equal access to cervical cancer screening for all women, regardless of weight. We investigated the cervical cancer screening rates across BMI categories at a women’s clinic in London, Ontario, Canada. The results indicated a higher rate of cervical cancer screening for overweight and obese women compared to normal weight women. It is evident that patients at the clinic who are overweight or obese are not at a disadvantage with respect to receiving cervical cancer screening. Further research is necessary to determine why a significant increase in cervical cancer screening rates was observed for overweight and obese patients compared to their normal-weight counterparts.

Paper Presentation - II

11:15am

Café Annex

Congestive heart failure (CHF): Electronic medical record (EMR) operationalization of Ontario Ministry of Health and Long-Term Care (MOHLTC) guidelines

Presenter: Neil Marshall
Coauthors: J. Neil Marshall, Heather Maddocks, Moira Stewart, Amardeep Thind, Amanda L. Terry, Sonny Cejic, Vijaya Chevendra, Louisa Bestard Denomme

Context: The MOHLTC provides a monetary incentive to physicians to document all required elements of care from The Heart Failure Patient Care Flow Sheet (MOHLTC Flow Sheet) as part of a Chronic Disease Management strategy. MOHLTC Flow Sheet items reflect the latest guidelines for CHF patient management.
Objective: To assess the operationalization and measurement of the MOHLTC Flow Sheet items for CHF patient care using EMR data from the Deliver Primary Healthcare Information (DELPHI) database.
Methods: The DELPHI database contains the de-identified records of over 30,000 patients, from 10 primary health care practices in Southwestern Ontario. Four hundred eighty-eight CHF patients were identified using 428x billing codes, problem list, and/or ICPC K77 'Heart Failure' codes. The MOHLTC Flow Sheet items were operationalized for measurement in the EMR, and the percentage of CHF patients who had these items documented in their EMR were found.
Results: 24.4% had an echocardiogram; 45.5% a chest x-ray; 10.2% an electrocardiogram; 31.6% were prescribed an angiotensin-converting enzyme inhibitor or an angiotensin II receptor blocker; 21.9% prescribed a beta blocker; 8.4% had potassium levels tested and 6.1% had serum creatinine levels tested since their date of diagnosis.
Conclusions: The low frequency of CHF care documented in EMRs needs to be investigated further. Interpretations include inaccessible documentation that has not been coded and structured in the EMR, lack of a primary care focus in the guidelines and implementation, and differences in diagnosis and management between primary care and specialists.

11:30am

Auditorium A

Informal palliative caregivers' perceptions of service delivery and reasons for not using in-home and community-based services

Presenter: Shahla Oskooei
Coauthors: Shahla Oskooei, Kevin Brazil, Paul Krueger

Introduction: In-home and Community Services (HCSs) are organized to support palliative patients and their family caregivers. Increase in utilization of these services can reduce the demand on institutionalization.
Purposes: To explore perceptions of HCS delivery among informal caregivers of terminally ill patients and reasons for not using the services.
Methods: A computer-assisted telephone system was used to interview 372 informal caregivers who were recruited through Community Care Access Centers. Perception of service delivery was measured by four factors. Clients' reasons for not using the services were measured by ten closed and one open ended options. A typology of caregivers' non-use of services consisted of five categories was developed by literature review and qualitative analysis of open ended comments.
Results: The most utilized service was in-home nursing care. Approximately one in six caregivers were dissatisfied with at least one of the HCSs. The least utilized services were home delivered meals, speech therapy, chiropractic, and respite care. The most common category of reasons for not using the services was participants' perception that they did not need the services. Insufficient information and caregivers' condition were two categories of service non-use. These reasons were more frequently reported for three caregivers' support services: counseling, support group, and respite care.
Discussion: Most part of the care at home is provided by informal caregivers. If support services can not adequately respond to the psychosocial needs of informal caregivers, the cost effectiveness of the care at home is at the expenses of burden of care on the informal caregivers.

Paper Presentation - II

11:30am

Auditorium B

Hormone therapy and mortality in younger menopausal women: A synthesis of the evidence using Bayesian meta-analysis

Presenter: Ji Cheng
Coauthors: Shelley R. Salpeter, Ji Cheng, Lehana Thabane, Nicholas S. Buckley, Edwin E. Salpeter

Background: There has been much uncertainty over the risks and benefits of hormone therapy (HT). We performed a Bayesian meta-analysis to evaluate the effect of HT on total mortality in younger postmenopausal women. We focused on mortality because the available evidence from different sources seems unclear.
Methods: A comprehensive search from 1966 through January 2008 identified randomized trials of at least 6 month's duration that compared HT to placebo or no treatment in women with mean age less than 60 years, and prospective observational cohort studies that evaluated relative risk of total mortality associated with HT after adjustment for confounding variables. Outcomes measured were total deaths in trials and adjusted mortality relative risk in observational studies.
Findings: The results were synthesized using a hierarchical random-effects Bayesian meta-analysis. The pooled results from 19 randomized trials, with 16,000 women (mean age 55 years) followed for 83,000 patient-years, showed a mortality relative risk (RR) of 0.73 (95% credible interval [CrI], 0.52 to 0.96). When data from 8 observational studies were added to the analysis, the resultant RR was 0.72 (CrI, 0.62 to 0.82). The posterior probability that HT reduces total mortality in younger women is almost 1.
Interpretation: The synthesis of data using Bayesian meta-analysis indicates a reduction in mortality in younger postmenopausal women taking HT compared to placebo. This finding should be interpreted taking into account the potential benefits and harms of HT. This Bayesian analysis attempts to synthesize evidence from different sources taking into account varying views on the issue.

11:30am

Café Annex

Effectiveness of a community-based diabetes program to increase awareness and detection of diabetes

Presenter: Gina Agarwal
Coauthors: Gina Agarwal, Janusz Kaczorowski, Hertzel Gerstein, Steve Hanna

Context: The prevalence of type 2 diabetes (T2DM) in Canada and worldwide is growing at a much faster rate during the last two decades than originally forecast. Targeted pre-screening of high-risk subgroups may increase the detection rate without significant increase in the workload of family physicians.
Objective: To increase community diabetes awareness, encourage attendance for risk assessment, and to increase detection of T2DM.
Design: Retrospective observational chart audit comparing incidence rates of patients diagnosed with diabetes one year before and after the introduction of the CHAD program.
Intervention: Community residents were invited by family doctors to attend diabetes risk assessment sessions run by trained community peers and held in local pharmacies. Diabetes risk was assessed using the Finnish Diabetes Risk Score, the Cambridge diabetes risk score, fasting capillary blood glucose and a glycosylated hemoglobin level. Family doctors were notified of assessment results.
Setting: Communities of Grimsby, Beamsville, Smithville, Vineland; Ontario.
Participants: Community members/ patients of family physicians; 40 years of age and older.
Results: A total of 1030 charts were audited; 387 from CHAD program-attendees; and 643 from non-attendees. CHAD-attendees were more likely to be female, retired and older. The diabetes incidence rate ratio in those who attended vs. those who did not was 1.65(0.028/0.017), [95% CI = 0.04 - 61.6].
Conclusions: Those attending CHAD sessions differed from primary care patients. The CHAD program appears to have impacted diabetes diagnosis but due to the small number of cases detected, the effect was not statistically significant.

Paper Presentation - II

11:45am

Auditorium A

Extending care to seniors with hypertension through community pharmacies linked by e-health to family physicians

Presenter: Stephanie Laryea
Coauthors: Janusz Kaczorowski, Larry W. Chambers, Lisa Dolovich, Stephanie Laryea, Andrea Miville, Jocelyn Contant, Francine Marzanek, Tina Karwalajtys, Rolf Sebaldt

The Cardiovascular Health Awareness Program plus Action Plan (CHAP+AP) is an ongoing, community-based cardiovascular disease (CVD) and stroke disease prevention program targeting high risk populations. This study describes program activities and outcomes based on ongoing delivery of the program in 13 communities across Ontario.
Methods: Regular assessment sessions are promoted using community-wide advertising, referrals and/or personalized letters from family physicians to older adult high risk patients. Sessions are delivered with support from pharmacists, community nurses, and local organizations. At the sessions, volunteer peer health educators assist participants in using a BpTRU™ automated device to record blood pressure and other risk factors on a standardized form. With permission from the participant, summary risk profile forms are sent to the participant's family physician and pharmacist. Each participant receives a copy of the assessment, along with risk factor-specific cardiovascular health education materials and a list of local resources.
Results: In 13 Ontario communities there were 4579 assessments completed in 2008. CHAP+AP is run by a local coordinator and a total of 137 peer health volunteers in 13 communities assist with the program delivery. CHAP+AP sessions took place in 107 pharmacies or other community settings during 2008. Attendees' average age was 68.9 (SD=12.9) years and 62% were female. 26% (99 of 383) of family physicians are currently participating in CHAP in these communities. A community nurse was alerted to a participant with high blood pressure 159 times and 28 participants were recommended to see the pharmacist during the CHAP+AP sessions.
Conclusions: Hypertension represents a significant primary health care problem, and its under-detection and under-treatment leads to an economic burden in health care expenditures and potential years of life lost. Using e-health CHAP+AP offers a viable, sustainable, community-based, low-cost program by which to potentially reduce the older adult population risk for CVD and stroke.

11:45am

Auditorium B

Temporal and regional trends in IUD insertion: a population based study in Ontario

Presenter: Sheila Dunn
Coauthors: Sheila Dunn, Geoffrey Anderson, Arlene Bierman

Background: Although it is an effective contraceptive, intrauterine device (IUD) use is lower in Canada than many other countries and declined between 1985 and 1995. A new hormonal IUD was introduced in 2001. This study examines temporal and regional trends in IUD insertion rates in Ontario from 1996-2006, and the types of physicians inserting IUDs.
Study Design: We used physician billing data to determine annual age-adjusted IUD insertion rates for women aged 15 -55 years, and proportions inserted by gynecologists and family physicians. We analysed age-adjusted insertion rates in each of the 14 provincial Local Health Integration Networks (LHIN) using small area variation statistics.
Results: Annual insertion rates followed a U-shaped distribution, and were lowest in 2001 and highest in 2006. The proportion inserted by family physicians declined from 38.23% to 31.64% ($p < 0.0001$) and the number of family physicians who inserted IUDs fell. There was significant variation in insertion rates throughout the province ($p<0.001$). In 2006, women in regions with the highest insertion rates were twice as likely to have an IUD inserted as those in the lowest rate areas.
Conclusions: IUD insertion rates began to increase in 2001, the year of introduction of the levonorgestrel-releasing intrauterine system. Regional variation in rates suggests access is not equal across the province and that strategies to support family physicians to insert IUDs may be important to ensure adequate access.

Paper Presentation - II

11:45am

Café Annex

Comparing the efficiency of different statistical methods in the analysis of binary outcomes from cluster randomized controlled trials: A simulation study

Presenter: Jinhui Ma
Coauthors: Jinhui Ma, Lehana Thabane, the CHAT working group

Cluster randomized trials (CRTs) are increasingly used in the assessment of the effectiveness of interventions to improve health outcomes or prevent diseases. The units of randomization for such trials are groups or clusters such as family practices, families, hospitals, or entire communities rather than individuals themselves to minimize the potential contaminations. CRTs may lead to substantially reduced statistical efficiency compared to trials that randomize the same number of individuals. We will discuss several cluster and individual level statistical methods to analyze binary outcomes from CRTs and compare their efficiency based on the simulation study.

12:00pm

Auditorium A

A multicentre randomized controlled trial evaluating cancer survivorship care plans

Presenter: Eva Grunfeld
Coauthors: Eva Grunfeld and Amy Folkes, for the FUPII Trial investigator group

The majority of women with breast cancer are now diagnosed at an early stage and over 80% will be long-term survivors. This raises clinical and health service questions about how best to provide routine follow-up for breast cancer survivors. Our previous research has shown that follow-up provided by the patient's family physician (FP) is a safe alternative to follow-up provided in cancer specialist clinics. There is a growing acceptance of this alternative to specialist follow-up in many cancer centers in Canada. However, there is wide variation in practice across the country. Cancer survivorship care plans are potentially a tool that can facilitate the transfer of follow-up care from cancer clinic to FP. We are conducting a pragmatic multi-centre randomized controlled trial with patients who have completed treatment for breast cancer and are ready for transition from specialist care to routine follow-up in primary care. The study involves centres throughout Canada including three centres in Ontario and two French-speaking centres in Quebec. Patients are randomized to receive usual care or to receive a survivorship care plan. Almost 400 patients have been enrolled in the trial. Patients are stratified into 2 groups: (1) diagnosed <24 months previously and (2) diagnosed ≥ 24 months previously. This presentation will give an overview of cancer survivorship care plans, explain the rationale for the trial, describe the methodology and procedures, and provide an update of current status of the trial.

Paper Presentation - II

12:00pm

Auditorium B

Parenting matters- a randomized clinical trial of a distance-based treatment for preschool age children with sleep and discipline problems seen in primary care

Presenter: Graham J. Reid
Coauthors: Graham J. Reid, Moira Stewart, Evelyn Vingilis, David J.A. Dozois, Stephen Wetmore, John Jordan, Gordon Dickie, Ted Osmun, Terrance Wade, Judith B. Brown, Gregory Zaric

Context: Many parents of preschool-age children are worried about their children's sleep and discipline problems, but few receive treatment.
Objective: Test the efficacy of the Parenting Matters program in reducing sleep- and discipline-specific problems.
Design: Randomized clinical trial.
Setting: 24 family medicine practices in Southwestern Ontario.
Participants: Parents (N = 183; 99% birth mothers) of 2-to-5 year olds who were equally concerned about both their child's sleep and discipline were recruited when they visited their family physician for a routine appointment.
Intervention: Families were randomly assigned to Parenting Matters sleep-problems treatment, Parenting Matters discipline-problems treatment, or usual care alone groups. The Parenting Matters program combines a self-help booklet with two calls from a telephone coach during a 6-week treatment period.
Main Outcome: Parent ratings on the Child Sleep Habits Questionnaire (CSHQ) for the sleep-treatment group and Eyberg Child Behavior Inventory (ECBI) for the discipline-treatment group, completed at baseline and 12-weeks post-randomization, and 3- and 6-month follow-ups.
Results: Based on growth curve modeling and using intent-to-treat analyses, child sleep problems (CSHQ scores) decreased significantly more for parents in the sleep-problems treatment group compared to usual care ($p < .001$), while child behavior problems (ECBI scores) decreased significantly more for parents in the discipline-problems treatment group compared to usual care ($p < .05$).
Conclusions: A brief treatment combining a self-help booklet and telephone coaching may be a practical and effective way to treat the large number of young children who have both sleep and discipline problems seen in primary health care.

12:00pm

Café Annex

Predictors of non-adherence to medical appointments amongst diabetic patients in primary care practices using EMR

Presenter: Hani Abushomar
Coauthors: Hani Abushomar, Mitch Levine, Lehana Thabane, Anne Holbrook

Background: Failing to keep medical appointments has negative influences on diabetes outcome and the quality of care for diabetic patients. Identifying the predictors of non-adherence to medical appointments can help in identifying the intervention. In previous studies the role of primary care practice as a predictor has never been analyzed properly.
Objectives: To examine the association between non-adherence to medical appointments amongst patients with type II diabetes and important predictors that are available in the electronic medical records of primary care clinics.
Methods: The electronic medical records that were used were obtained through the COMPETE I project, which included electronic medical information from 32 primary care practices in the Hamilton-Brantford-Niagara region during the period from 1998 to 2001. The predictors included primary care practice and all the available patients' characteristics. Four different methods were used to adjust for intra-individual correlation in the multivariate analysis.
Results: The study included 1454 patients with type II diabetes. The average adherence proportion was 89.6%. Primary care practice was the main predictor of adherence to appointments. Females, patients from higher SES areas, patients with higher comorbidities were more likely to attend. These results were consistent among the four methods used to adjust for clustering.
Conclusions: Primary health care characteristics rather than patients' characteristics are the main predictors of adherence to scheduled medical visits. Methods adapted by practices to maintain high attendance such as reminder systems or general health motivation techniques could be the main factors explaining the large variation in attendance among practices.

Paper Presentation - II

12:15pm

Auditorium A

Medication paradox: 10 year trends in medication prescribing for seniors living in Ontario - A population cohort study

Presenter: Li Wang
Coauthors: Li Wang, Jana Bajcar, Jason Xin Nie, Shawn Tracy, Rahim Moineddin, Ross Upshur

Introduction: The purpose of the study is to examine the prescribing trends of primary care physicians in 12 main therapeutic categories, which accounts for 80% of total drugs prescribed, over a 10 year period. The 12 drug categories include: lipid lowering, diabetes, gastrointestinal, cardiovascular, psychotropics, COPD/Asthma, antibiotics, thyroid, osteoporosis, corticosteroids, narcotics, and non-steroidal anti-inflammatory drugs.
Methods: A population-based retrospective cohort study was conducted of medications prescribed by primary care physicians (pharmacy claims) over a 10 year period (1997- 2006). All Ontario residents aged 65 and older who were eligible for provincial health insurance and made at least one Ontario Drug Benefit (ODB) claim during the study period were included in the analysis.
Results: Our findings show that for the top 12 categories, total drug claims increased from 13,794,276 to 43,348,670 over the 10 year period, representing a 3 fold increase. Specifically, the findings show medication claims per person increase by 21 fold in osteoporosis, 7 fold in lipid lowering, 3 fold in gastrointestinal, 3 fold in cardiovascular, 3 fold in diabetes, 3 fold in psychotropic, and a 3 fold increase in thyroid drugs. No difference or only minor changes were observed for the following categories: corticosteroids, non-steroidal anti-inflammatory, COPD/Asthma, narcotics, and antibiotics. Gender differences were also observed for certain therapeutic categories.
Conclusions: There has been a dramatic increase in medication claims per person over a 10 year period for medications prescribed by primary care physicians for seniors, with some categories of medications increasing to a greater extent than others.

12:15pm

Auditorium B

The relationship between intrapartum intravenous therapy and newborn weight loss

Presenter: Kim Sheehan
Author: Kim Sheehan

It is common practice to initiate intravenous therapy once a woman is admitted to give birth. However, little is know about the relationship between intrapartum intravenous therapy and the phenomena of weight loss in the newborn. Existing evidence is dated and in need of re-examination to determine that the most up to date evidence-based practice is being utilized.
A retrospective chart review of 100 mother baby dyads was conducted examining properties of delivery that have the potential to impact weight loss in the newborn. Such properties included method of delivery, parity, duration of labour, volume of intravenous therapy, and birth attendant.
The preliminary results of the study will be presented indicating relationships between delivery variables, most specifically the relationship between intrapartum intravenous therapy and weight loss in the newborn in the first few days of life. Implications for practice in intrapartum and postnatal settings especially surrounding the use of intravenous therapy, early supplementation practices, breastfeeding support and further research direction will also be addressed.

Paper Presentation - II

12:15pm

Café Annex

The effectiveness of web-based patient self-management programs for hypertension: A systematic overview

Presenter: Christine Rodriguez
Coauthors: Lisa Dolovich, Christine Rodriguez, Ann McKibbon, Janusz Kaczorowski, Lisa McCarthy, Tsz-Lung Cheung, Tina Karwalajtys, David Chan

Web-based resources have the potential to help overcome barriers to optimal management and deliver health information and support around lifestyle modifications and adherence to therapies.
Objective: To determine the effectiveness of web-based patient self-management programs for hypertension; to identify the components of effective interventions; and identify how components work together as a system of care to assist design of future programs.
Methods: A systematic overview was conducted; MEDLINE, EMBASE, and CINAHL were searched (1998 to 2008) for studies on web-based self-management programs for patients with hypertension. Data were abstracted using structured forms by two independent reviewers. Disagreements were resolved by a third reviewer. The primary outcome was blood pressure (BP); secondary outcomes included HRQL, patient satisfaction, ER visits, primary care visits, specialist visits, mortality, system use (eg, messages/uploads), and patient perspectives.
Results: Of the 2484 articles identified, 7 articles met the predefined selection criteria; all were RCTs. All trials had intervention group participants taking part in self-monitoring of BP and provided individualized recommendations. Only one trial measured more than 2 of the predefined outcomes of interest; five trials measured only BP. Web-based self-management for BP was associated with significant decreases in mean systolic BP (SBP) in five studies. The decreases in SBP ranged from 2.86 mmHg to 14.2 mmHg.
Conclusions: Web-based self-management of hypertension appears to an effective strategy for reducing SBP. The main components of interventions across the 7 trials included: creation of personal actions plans; provision of patient-specific recommendations; and self-measurement and entry of BP status over time.

Posters

Poster #1

Identifying patterns and predictors of adherence to refill amongst diabetic patients using multiple longitudinal measurements of adherence

Presenter: Hani Abushomar
Coauthors: Hani Abushomar, Mitch Levine, Lehana Thabane, Anne Holbrook

Background: Most studies rely on calculating a single average of adherence throughout the follow-up period. This assumes a consistent level of adherence during that period, an assumption that has never been proven. Such a method focuses on inter-individual variability and ignores intra-individual variability. Studies exploring medication intake adherence revealed varying trends and patterns over the course of the treatment which suggests similar variability in refill adherence. The advantage of using multiple longitudinal measurements of adherence has never been tested.
Objectives: 1) To describe trends and patterns in adherence to refill for antidiabetic medications over the course of the treatment. 2) To determine the predictors of refill- adherence that are available in pharmacy records. 3) To test the sensitivity of using multiple measurements by comparing the results to the single average method.
Methods: A cohort of new users of antidiabetic medications was identified from the Canadian IMS data. Age, gender, number of daily doses and co-medications will be examined as predictors. Two methods of analysis were used: 1) Using a single average of adherence. 2) Using multiple longitudinal measurements. For the latter method cluster analysis will be applied.
Preliminary results: Preliminary results are available for the central Ontario region. We identified 5844 new users of antidiabetic medications. From which, 8% had consistent adherence throughout the study period, 33% had a declining adherence, while 39% had increasing adherence. 20% had unpredictable (varying) patterns of adherence over time. The complete analysis for Ontario and the other Canadian provinces will be forthcoming.

Poster #2

A Stonechurch Family Health Centre (SFHC) Chart Audit: Diabetes Management

Presenter: Augustine Marchie
Coauthors: Adib Ali, Stuart Bothwell, Danielle Derrington-Fraser, Natale Desrochers, Linda Hilts, Michelle Howard, Rownak Jesmin, Augustine Marchie, Rizwanali Momin, Anca Patroi, Pradeep Saxena, Ingeborg Schabort, David Sollazzo, Grace Sa, Anjali Sharma, David Wan, Garway Wong

Research Question: In the past year (2008) have we provided appropriate management of Type 2 Diabetes Mellitus (DM) to SFHC patients?
Rationale: Quality Improvement & Innovation Partnership (QIIP) is an initiative developed by the Ontario government to assess primary care management in family health teams.
The QIIP parameters were used to assess diabetes management at the SFHC. Parameters included: Body Mass Index (BMI), Waist Circumference (WC), Blood Pressure (BP), HbA1C, LDL levels, Medications, Retinopathy, Neuropathy, Nephropathy.
Methods: 732 patients were identified from the SFHC Diabetes Disease registry and were put in a randomized list. In the time allotted from chart analysis, 316 charts were reviewed.
Results and Discussion: There were 17000 patients registered at the SFHC and 732 in the DM disease registry.
The mean age was 63.6 yrs (Range 32.2 – 88.6 yrs). At SFHC 66% had a HbA1C done with in 6 months and 41% had a HbA1c meeting target. At SFHC 50% were at BP target in the last year, 67% were on an ACEI or ARB or both (11%). 27% of patients were meeting LDL targets in the last 6 months and 49% had a retinopathy screening in the last 24 months. At SFHC 48% of diabetics had a foot exam in the last year and 40% of diabetics had an ACR screening in the past 12 months.

Posters

Poster #3

Self-reported practices of hand hygiene among the trainees of a teaching hospital in a resource limited country

Presenters: Muhammad Ali Anwar and Sana Rabbi
Coauthors: Muhammad Ali Anwar, Sana Rabbi, Muhammad Masroor, Fouad Majeed, Marie Andrades, Shehla Baqi

Background: Rate of nosocomial infections varies between 6 to 30% in various hospitals around the world. These rates tend to be as high as 39% in hospitals located in developing countries. Hand-hygiene is considered to be the single best measure for infection control. Despite this fact, physician adherence to hand-hygiene remains poor.
Objective: To determine the self-reported compliance of hand-hygiene among the trainees of a teaching hospital. And, to identify the physicians' opinion regarding various factors associated with inadequate adherence to hand-hygiene.
Method: Self-administered questionnaire survey was conducted among House Officers and Post-graduate students of a 1700 beds tertiary care teaching hospital. Subjects were consented and selected through non probability convenient sampling. Questionnaire was developed using hand-hygiene guidelines laid down by the World Health Organization (WHO).
Results: A total of 211 questionnaires were completed. Only 4.7% of the physicians reported to decontaminate their hands before having direct contact with their patients. Only 17% claimed to be aware of the WHO recommendations on hand hygiene. Physicians who were familiar with the hand-hygiene guidelines were more likely to disinfect their hands before having any direct contact with their patients and before doing any non-surgical invasive procedure. Majority of subjects considered "lack of sinks, soap, water and disposable towel" as a major barrier towards hand hygiene adherence. Overall compliance of hand hygiene was found to be 38.8%.
Conclusions: Hand hygiene practices among trainee physicians were not in line with WHO recommendations. To make a difference, interventions taken to improve awareness alone, won't be sufficient; they have to be supported with improving facilities for hand hygiene.

Poster #4

Clinical Characteristics and predictors of positive stool culture in adult patients with acute gastroenteritis

Presenter: Muhammad Ali Anwar
Coauthors: Muhammad Ali Anwar, Mehmood Riaz, Junaid Patel, Muhammad Shoaib Khan, Harith Hilal, Shahzad Razi

Impact of stool culture investigation on the management of patients with acute diarrhea is minimal mainly because patients usually recover by the time the test results are obtained and low yield of this investigation. This study aims to identify the clinical features and spectrum of pathogen in adult patients with acute diarrhea and to determine the predictors of stool culture positivity. A descriptive study was conducted in a tertiary care hospital. Medical records of all consecutive adult patients with short history of diarrhea were reviewed for clinical characteristics and laboratory. Statistical tests were run to identify the features associated with positive stool culture. 455 patients were admitted with the diagnosis of acute gastroenteritis during study period. Stool culture was performed in 234 (51.4%) patients out of which 97 (41.5%) got positive results. Patients with positive stool culture as compared to negative stool culture results were found to have a younger mean age (42.5 vs. 52.9), greater number of unformed stools per day (15.7 vs. 10.5) and low serum Bicarbonate level (15.9 vs. 20.1). Mean duration of diarrhea and abdominal pain were shorter in culture positive patients. Pathogens identified were V. Cholera (85.6%), Salmonella (6.2%), Campylobacter (5.2%), Shigella (2.1%) and E. Coli (1.1%). 96.9% of patients were managed with first line treatment/antibiotics (Ciprofloxacin). 78.4% of cases were resistant to quinolones. Majority of patients recovered regardless of their stool culture reports. Though 78.4% of cases were resistant to quinolones, they responded to the first line treatment. Our main emphasis in patients with acute diarrhea must be on fluid therapy rather than on antibiotics. Improved selection of the patients with respect to their clinical and laboratory criteria can help to reduce unnecessary ordering of this investigation.

Posters

Poster #5

Screening for depression in patients with diabetes: when a screen is positive, what happens next?

Presenter: Leslie Born
Coauthors: Leslie Born, Barbara Cantwell, Tracy Hussey

In 2008, about 24% of 11,000 patients seen by HFHT Registered Dietitians had a diagnosis of diabetes. Type 1 or II Diabetes with comorbid Depression, with an estimated prevalence of 20%-30% in adults (Anderson et al 2001), can result in reduced metabolic control, higher complication rates and greater disability, as well as poorer self-care and missed medical appointments (Gonzalez et al 2008; Richardson et al 2008). As part of an enhanced care of Depression initiative, family health teams have begun to implement screening for Depression, linked to an individualized treatment algorithm, beginning with patients with Diabetes. Our dietitians' initial assessment for diabetes patients routinely includes the 2-Question screening for Depression. Follow-up care, though, for those identified by a positive Depression screen has not been consistently documented in the medical records. To improve this process, a small quality improvement initiative to track the follow-up of one patient for each HFHT Registered Dietitian (n=20) was undertaken using Plan-Do-Study-Act [PDSA] method. Of N=18 positive screens, 6 patients were receiving mental health care, 6 patients indicated interest in further assessment and made an appointment with the family physician, and 6 patients declined further assessment. We report on clinical practice implications and modifications of these results.

Poster #6

Developmental coordination disorder and obesity in children: Implications for primary care

Presenter: John Cairney
Coauthor: John Cairney, David Price, Christine Rodriguez

Childhood obesity is a significant, public health problem in Canada. Physical activity is one of the preferred interventions for addressing this problem; however, not all children who are obese have the ability to be physically active. One such group is children with developmental coordination disorder (DCD).

Methods: We used a sample of children (n=335) randomly selected from a pool of children attending 75 schools in the Niagara Region to examine motor coordination using two standardized tests (the Movement ABC and the Bruininks-Oseretsky Test of Motor Proficiency) and assess anthropometry (height and weight). Children were assessed while attending regular classes.

Results: Relative to typically developing children, those who scored below the clinical cut-point on both tests, indicating probable DCD, had the highest prevalence of overweight and obesity (22% vs. 50%, respectively). Children who scored low on one test but not the other (suspect DCD), were also at greater risk for overweight and obesity (30%). Among all children who were overweight or obese (n=85, 25%), 40% were at risk for DCD.

Discussion: DCD, like obesity, is a common problem affecting 5-6% of children aged 4 to 11 years. In our sample, more than one-third of the children who were overweight or obese were also at risk for significant motor coordination difficulties. When evaluating an obese child in a primary care setting, it is important to screen for DCD before prescriptions for physical activity are made. Strategies for identification and management are described.

Posters

Poster #7

Demonstrating efficacy in promoting lifestyle change and improving lipid profiles in primary care

Presenter: Barbara Cantwell
Coauthor: Z Barnett, B Cantwell, J Fowler, T Hussey. Hamilton Family Health Team Nutrition Program

The impact of Registered Dietitians (RDs) counselling on cholesterol levels and lifestyle factors among patients with dyslipidemia in primary care was studied. Records of 905 patients seen between 2000 and 2005 (44% of all patients referred to RDs for dyslipidemia) were analyzed for self-reported lifestyle change, changes in total cholesterol (TC), triglycerides (TG), low-density lipoprotein cholesterol (LDL-C) and total cholesterol to high-density lipoprotein cholesterol ratio (TC:HDL-C), pre- and post-counselling saturated and trans fatty acid intake (SFA/TFA), fibre intake and level of physical activity. Participants received an average of 2.77 RD counselling visits (SD=1.43; range:1-27 visits) in the offices of Hamilton Family Health Team physicians. 251 patients (27.7%) reached TC goal. Average TC fell from 6.45 mmol/L (SD=0.96) to 5.79 mmol/L (SD=1.09); statistically significant changes were found over the RD counselling period for TC, TG, LDL-C and TC:HDL-C. After RD counselling, 82.6% had diets with <10% SFA/TFA, compared to 30% pre-counselling. Reported dietary intake with ≥ 15 grams of fibre jumped from 32.4% pre-counselling to 78.9% post-RD counselling. 43% of patients reported moderate or high physical activity levels before RD counselling compared with 56.7% after RD counselling. Statistically significant reductions in cholesterol and lifestyle factors can be achieved after an RD intervention outside of a controlled research environment. In over half of patients RDs are able to effectively promote lifestyle changes, such as decreasing SFA and TFA intake and increasing fibre intake.

Poster #8

Project IMPACT: Interprofessional model of practice for aging and complex treatments

Presenter: Jason X Nie and Jocelyn Anderson
Coauthors: Leslie A. Nickell, Ross EG Upshur, Shawn Tracy, Jana Bajcar, Jason Nie, on behalf of the IMPACT team

Background: Chronic disease represents a complex and growing challenge to primary care. One in three Canadian adults reports having a chronic condition, and one-third of these cases are considered complex (i.e., more than one co-existing chronic disease). To meet the challenge of the chronic disease epidemic, significant reform to our health care system is required, including more emphasis on a team approach and enhanced communication and collaboration between the hospital sector and community-based providers.
Method: Project IMPACT aims to develop and evaluate a comprehensive team-based model of chronic disease management. The IMPACT team comprises family physicians, a visiting nurse, a pharmacist, a community social worker, an occupational therapist, a physiotherapist, a dietitian, and health care trainees. The trainees are exposed to a more collaborative and satisfying clinical learning environment, which may increase interest in primary care and elder care as career choices. Indicators of effectiveness include: 1) improved patient health/well-being; 2) enhanced functional status and increased independence; 3) greater patient, family, and provider satisfaction; 4) fewer drug errors and adverse events; and 5) higher evaluations by trainees.
Results & Discussion: The IMPACT clinic is a work-in-progress as the practice model continues to evolve over time. We will report our experience to date, with an emphasis on lessons learned and implications for other similar initiatives. Preliminary evaluation data will also be reported.
Funding: Project IMPACT is funded by HealthForceOntario (a joint venture of the Ontario Ministry of Health and Long-Term Care and the Ontario Ministry of Training, Colleges, and Universities).

Posters

Poster #9

Initial evaluation of a web-based patient self-management e-health strategy intervention for hypertension

Presenter: Maria Chacon
Coauthors: Lisa Dolovich, David Chan, Christine Rodriguez, Maria Chacon, Janusz Kaczorowski, Ann McKibbon, Lisa McCarthy, Tina Karwalajtys

Rationale: Self-management interventions for patients with hypertension have produced clinically important reductions in SBP. Web-based resources have the potential to help overcome barriers to optimal management and deliver health information and support around lifestyle modifications for patients with hypertension.
Objective: To determine the potential value and feasibility of an evidence-based patient self management e-health strategy for hypertension in primary care.
Design: Pilot randomized controlled trial.
Setting: Primary care
Methods: Patients with hypertension, aged 40 to 79 years, who had an elevated office BP reading in the past year and regular access to email were randomly assigned to the intervention group (n=28) or to usual care (n=26). Patients in the intervention group had access to a secure personal health record (MyOSCAR) that allowed: (1) self-measurement and entry of BP readings; (2) secure messaging to allied healthcare providers; and (3) creation of personal action plans.
Preliminary results: At baseline, patients were 63.9 (SD 8.7) years of age, 53.7% were women, and the mean SBP 129.34 mmHg (SD14.9). Only 28.3% of patients had elevated SBP readings at baseline. Of the 26 patients currently using the program, 96% are measuring their BP readings at home, 26% at the pharmacy and 23% at the physician office. 76% have created a personalized action plan. Only 32% have sent a message to the allied healthcare providers. The results and conclusions of this pilot project are pending.
Application: This pilot study will contribute to planning for large-scale implementation and evaluation of an e-health management intervention for hypertension and other chronic diseases.

Poster #10

Symptom - Diagnosis correlation clusters in primary care from the DELPHI Project

Presenter: Moira Stewart
Coauthors: Moira Stewart, Amardeep Thind, Amanda L. Terry, J. Neil Marshall, Sonny Cejic, Vijaya Chevendra, Louisa Bestard Denomme, Heather Maddocks

Purpose: To describe the frequency of symptoms occurring either singly or in association with others within family practice.
Methods: Quantitative, cross sectional study of symptoms using the DELPHI (Deliver Primary Health Care Information) electronic medical record (EMR) database. Twenty-five family physicians from ten practice sites entered patients' reasons for encounter (RFE) using the International Classification of Primary Care (ICPC-2-R) on a subsample of patients between March 2006 and February 2008. The most frequent sex-stratified symptoms and the most recurrent co-existent complaints in the same encounter were analyzed. The percentage of encounters with the same end of visit diagnosis as initial symptom (presumptive diagnosis) was also examined.
Results: Among females, cough was the most frequently reported symptom, occurring in isolation 59% of the time. The most common symptom accompanying cough was throat symptom occurring in 6% of encounters. Other top symptoms for females included: back; knee; foot complaints; and weakness/tiredness. Among males, 'back symptom/complaint' was the most frequent, occurring in isolation 71% of the time. 'Neck symptom/complaint' was the most frequent accompanying symptom, in 2% of encounters. The remaining top symptoms for males were: cough; shoulder; knee; and foot/toe symptoms. The presumptive diagnosis range was larger for men (7-40%) than for women (10-29%).
Conclusions: There is no common or clear duo of symptoms in men or women. Most symptoms are reported in isolation, without an accompanying complaint. Coexisting symptoms vary with each one reported in a small number of encounters. EMRs using ICPC-2-R codes permit studies of patterns of symptom presentation.

Posters

Poster #11

Advanced access and the academic clinic: A viable dream?

Presenters: Marc Lebeau
Coauthors: P. Yee-Ling Chang and Marc Lebeau

Background: In a recent poll conducted by the Ontario College of Family Physicians, over 800,000 Ontarians lack a primary care provider (1). Although several projects address these deficiencies including government incentives for increasing panel size, the efficiency of existing practices remain unevaluated. Open-access or advanced access refers to an innovative approach in optimizing practice management. This booking method aims to provide patient access to their provider of choice when they wish. Through improved access to one's provider, increased continuity of care has been demonstrated in several communities along with subsequent decrease demand for the provider (2).
Objective: Currently, St. Michael's Family Medicine department is an active academic centre. With increasing patient demands and growing academic responsibilities, providers continue to struggle with balancing schedules. This project aims to explore the feasibility of advanced access at our academic clinic.
Method: Through guidance from Institute of Healthcare Improvement (IHI), our multi-disciplinary team collected data on a focused group of physicians. These markers included third next available appointment, patient demand for each provider and provider supply of appointment times.
Results: Initial longitudinal data collection revealed significant variability between providers, workdays, and work weeks. Time to third next available appointment times ranged from 2 days to 60 days. Several factors were identified including size of patient population, years in practice and academic commitments. Improving access to a patient's preferred provider at an academic centre poses unique challenges that require further analysis with creative solutions.

Poster #12

Organizational attributes of primary care associated with team functioning in Family Health Teams

Presenter: Michelle Howard
Coauthors: Michelle Howard, Kevin Brazil, Noori Akhtar-Danesh, Gina Agarwal

Statement of Purpose: Family Health Teams (FHTs) represent one model of interprofessional primary care in Canada. This study examined whether organizational culture, leadership and other practice factors predict team functioning in FHTs.
Methods: A survey was mailed to staff of 21 FHTs in Ontario in fall 2008. The survey was comprised of previously validated instruments to assess team functioning, 4 organizational culture types, leadership, use of electronic health record (EHR), and the FHT's organization and composition. The outcome was team functioning as measured by a 14-item instrument with 4 sub-scales, based on 5-point likert-type questions.
Results: The response rate was 66.7% (433/649); 45.2% for physicians, and 70.8% for other staff. There was a median of 4 physicians, 11 other health professionals, and 4 management and clerical staff per FHT. Most (61.9%; 13/21) began operating in 2006 to 2007. The mean of the overall team functioning instrument was 3.8 of a possible maximum of 5 (standard deviation=0.6). All but one FHT characterized its culture as one which emphasizes affiliation, teamwork, coordination and participation. In multiple variable regression analysis, only the leadership scale was significantly positively associated, and one culture type (emphasizing efficiency and achievement) was significantly negatively associated with the outcome. Features and perception of the EHR, number of staff, number of different roles, and frequency of full practice team meetings were not significantly associated with the outcome.
Conclusions: Organizational culture and leadership appear to be the most important factors in predicting team functioning in primary care interprofessional teams.

Posters

Poster #13

Validation of a team climate inventory in family health teams in Canada

Presenter: Michelle Howard
Coauthors: Emma Tucker, Michelle Howard, Gina Agarwal

Statement of Purpose: Teamwork in primary care has been linked to quality of care. This study investigated the usefulness and validity of the Team Climate Inventory (TCI) in interprofessional primary care.
Methods: A descriptive analysis of data from 3 studies that administered cross-sectional surveys among seven Family Health Teams (FHTs) (166 health professionals and staff, and 703 patients) in Ontario was conducted. Analyses examined associations between demographic characteristics and roles of staff, and the TCI; 2) relationship between the TCI and patient satisfaction; 3) correlation between the TCI and the Quality of Work Life Survey (QWLS), a survey with some similar domains.
Results: Administrative staff reported significantly higher mean TCI scores (of a possible 20) compared to physicians (19.2 versus 17.0, p=0.03) but not compared to allied health staff. Age, education level, years with the clinic and gender were not significantly associated with TCI scores. Interestingly, the practices with higher TCI and QWLS scores were not the same practices with highest patient satisfaction. There were strong positive correlations between 'support for new ideas' and 'task orientation on the TCI, and 'teamwork and communication' on the QWLS (r=0.61 and 0.63 respectively, p<0.001).
Conclusions: The strong correlations between the two surveys lend support to convergent validity of the TCI. This instrument may be useful to measure team functioning in primary health care teams. The results warrant further exploration into what influences team functioning in interprofessional primary care settings.

Poster #14

A patient education session on atrial fibrillation and pulse self-examination

Presenter: Natalie Lovesey
Author: Natalie Lovesey

Atrial fibrillation (AF) is the most common sustained arrhythmia and causes significant morbidity and mortality by conferring an increased risk of ischemic stroke, independent of other cardiovascular disease [1]. Atrial fibrillation may be asymptomatic as well as paroxysmal, rendering detection of the condition difficult. Several studies have investigated screening of target populations for atrial fibrillation. Methods studied include pulse palpation by nurses, electrocardiogram, and patient self-examination of pulse.
The purpose of this project was to determine whether a session using the validated educational materials "Take Your Pulse for Life™" would result in monthly pulse self-examination in individuals aged 60 and over.
The study sample demonstrated interest in participating in such a session, with a 39% response rate to the initial invitation. Of those who responded to the invitation, 78.9% attended the session. Of the 44.4% of eligible participants reached for three month telephone follow-up, 70% retained the key session points and 95% reported pulse-taking at least monthly.
This study revealed retention of pulse self-examination behaviour in individuals aged 60 and over, with the goal of detection of asymptomatic atrial fibrillation. Limitations include a single center, non-representative sample and high loss of follow-up. Whether pulse self-examination screening would result in a clinically relevant increase in diagnosis of atrial fibrillation or stroke prevention remains to be determined.

Reference: 1. Wolf PA, Abbott RD, and Kannel WB. Atrial Fibrillation as an Independent Risk Factor for Stroke: The Framingham Study. Stroke 1991;22:983-988.

Posters

Poster #15

Canadian best practices for stroke care 2008: Secondary prevention of stroke at the Stonechurch FHT

Presenters: Barbara Kuziora, Garway Wong, Michael Lim
Coauthors: Marium Ahmad, Shannon Hilsden, Juzar Jafferjee, Barbara Kuziora, Michael Lim, Anne Mannethu, Grace Sa, Susan Scovil, Ivan Shcherbatykh, Ruby Singh, Henry Siu, John Sollazzo, Shanta Varma, Garway Wong, Inge Schabort

Background: With new guidelines released in CMAJ in 2008, this chart audit measures the performance of one primary care clinic to the "Prevention of Stroke Recurrence (Secondary Prevention)" aspect of the guidelines.
Methods: A retrospective chart review was conducted of suspected or documented strokes. Search was by OHIP billing code and disease registry (ICD9 430-438). Systematically sampled data included terms "stroke", "CVA", "TIA", and "RIND" in patients' medical history. Medication optimization (antiplatelet, statins and hypertension medications) and lifestyle interventions were examined. The frequency of blood pressure, lipid and glucose monitoring was reviewed.
Results: 93 patients were analyzed based on the OHIP billing number and disease registry strategy. The search by past medical history yielded 189 patients (excluding duplicates), 57 of which were analyzed using a systematic random sample. Combined, 150 charts were reviewed. 80 of these patients were found to have documented strokes. 65% of patients met target blood pressures, 33% met a target LDL < 2.0. Detailed results will be discussed later.
Conclusions: Despite short uptake-time since guideline release and the inherent shortcomings of a retrospective chart reviews, key areas for improvement were determined in optimizing the care of our patients. More extensive discussion will be available at the poster session.

Poster #16

Feedback and training tool to improve provision of preventive care by physicians using EMRs: A randomized control trial with outcomes

Presenter: Heather Maddocks
Coauthors: Heather Maddocks, Moira Stewart, Amardeep Thind, Amanda L. Terry, Vijaya Chevendra, J. Neil Marshall, Louisa Bestard Denomme

Context: Electronic medical records (EMRs) can be used to provide feedback to family physicians (FPs) on their provision of preventive care. Provincial governments are tying FP remuneration to achieving specific preventive care provision targets.
Objective: Evaluate the effect of a feedback tool and educational intervention to improve provision of preventive care. Monthly rates of Mammography, Pap Tests, Fecal Occult Blood (FOBT), and Albumin Creatinine Ratio's (ACR) one year pre and post-intervention are compared.
Design: The DELPHI database contains the de-identified records of over 30,000 patients, from 8 primary health care practices in Southwestern Ontario. Only patients meeting the age, sex, and other eligibility requirements for preventive care testing were included. For the RCT, practices were paired by size and experience of FPs. The FPs from the four intervention practices received a two hour feedback session comparing their current level of preventive care provision to average Ministry targets, and to other intervention practices. Hands on training (and written instructions) were provided to enable FPs to generate eligible patient lists for preventive services from their EMR database.
Results: Comparison of 6 month pre-intervention and post-intervention provision of FOBT, pap smears, mammograms, and ACR tests for diabetic patients did not provide evidence of a change in clinical practice and the provision of preventive care. The non significant difference may be due to the co-intervention of a Ministry health program. Analyses using the 1 year pre and post-intervention results will be presented to disentangle the potential influence of the Ministry co-intervention on the outcomes.

Posters

Poster #17

Transcending traditional boundaries: interdisciplinary inter rater reliability in primary care research

Presenter: Colleen McMillan
Author: Colleen McMillan

This qualitative research stepped outside of disciplinary boundaries to attain rigor by involving multiple health care providers to analyze segments of collected data on disordered eating. Through the lens of medicine, nursing, dietary and social work, transcriptions of adolescents describing the meanings associated with disordered eating were coded by each discipline. The different epistemological lens represented a multi dimensional effort to understand complex data rooted in biophysicial and socio-cultural causes. While inter rater reliability is not new within qualitative research, inter disciplinary collaboration regarding reliability represents a push toward innovation.

While the expectation when using inter rater reliability between disciplines is that outcomes will be variations of each other, using a range of disciplines to open code data is not so much to reach concensus but to explore differences. Emerging themes extracted by the different raters spoke to the complexity in which disordered eating transversed disciplinary boundaries, opening up opportunities for knowledge exchange and dissemination. The different approaches to the data generated the possibility of elevating working relationships to a transdisciplinary level toward tackling a challenging health issue in new and hopeful ways.

Poster #18

Child & youth mental health in primary care - An innovative team approach

Presenters: Brenda Mills and Carrie McAiney
Coauthors: Catherine Mcpherson-Doe

Primary care (PC) is highly accessible and a universal point of contact for children and youth (C&Y) at risk for mental health problems. While 10% of children present with a primary complaint related to mental health, the detection rate of mental health concerns is only 2%. Many family physicians report detection barriers including time constraints and lack of knowledge and comfort in addressing mental health concerns. The purpose of the study was to evaluate the implementation and impact of the C&Y Mental Health Initiative on primary care physicians, providers, patients, and family members. Mixed methods (quantitative and qualitative) design. Six primary care practices within the Hamilton FHT. 1) C&Y(0 to 18 yrs) and their families who were referred to the program; 2) all healthcare providers working within the C&Y pilot practices (32 family physicians, 17 mental health counselors, 8 nurse practitioners, 19 nurses, 8 dietitians, and 5 pharmacists). C&Y counselors work within the primary care practices to provide direct care to C&Y with emotional, behavioural and psychosocial issues and their families, and indirect consultation to family physicians and other health professionals regarding C&Y mental health issues. The Measures: 1) number of C&Y assessed for mental health issues; 2) knowledge of and comfort with the assessment and management of C&Y mental health issues among family physicians and other providers; and 3) facilitators and barriers associated with implementing this initiative. This study is in progress. Anticipated results include an increased number of C&Y seen for mental health issues and self-reported increases in comfort and knowledge regarding C&Y mental health issues. Findings will provide insights into the feasibility and potential impact of this initiative in improving access and care to C&Y with mental health issues.

Posters

Poster #19

The effects of (one year's) treatment with doxycycline and rifampicin on neurotransmitter levels in cerebrospinal fluid and their association with cognition, mood, behavior and function in Alzheimer's disease

Presenter: Ainsley Moore
Coauthors: Moore Ainsley, Molloy DW, Rosenfield JM, Marchese M.

Objective: To investigate the effects of the antibiotics doxycycline and rifampicin on behaviour, mood and cognition in relation to neurotransmitter levels in patients with Alzheimer's disease.
Design: Sub analysis of a multi-centre, double blind, randomized clinical trial, Doxycycline and Rifampicin in Alzheimers Disease (DARAD)
Setting: Outpatient clinic St Peter's Hospital, Hamilton Health Sciences.
Participants: 84 patients enrolled in the DARAD trial, St. Peter's Hospital site, consenting to CSF collection.
Interventions: Patients were treated for 12 months with doxycycline 100 mg twice per day and or rifampicin 300 mg once a day
Main Outcomes: Cognition, mood, behaviour and activities of daily living were measured at 0, 3, 6 and 12 months. Indoleamines and catecholamines were measured in cerebrospinal fluid collected before and after treatment.
Measures: Paired T-tests will be used to measure change in clinical and biochemical outcomes before and after treatment.
Results: It is anticipated that antibiotic treatment will be associated with change in neurotransmitter levels and clinical improvement.
Conclusions: Doxycycline and rifampicin may provide a treatment for Alzheimer's disease through effects on neurotransmitters.

Poster #20

Overview of methods used in a systematic review of Canadian-based interventions to optimize drug therapy in chronic disease

Presenters: Gladys Osien and Sarah McCombe
Coauthors: Lisa Dolovich, Sheri Burns, Kalpana Nair, Onalea Agnew, Kennedy Riemersma, Gladys Osien, Sarah McCombe

Background: Medications are integral in the management of chronic disease in primary care but are often not used optimally. This systematic review will determine the predictors of sustainability of interventions in primary care that improve drug prescribing and use, as well as patient and health system outcomes. Additionally, this review will examine studies for the presence of attributes related to successful interventions (based on Greenhalgh's typology).
Methods: Bibliographic databases and grey literature were searched. Canadian randomized controlled trials or prospective cohorts with concurrent controls were included. Consensus was used to determine final inclusion, and an adjudicator was used if consensus could not be reached. Full texts will be assessed for quality of methodology. Where possible meta-analytic techniques will be used to combine the data. Included citations will be examined for the presence of attributes related to successful interventions. Policy makers will be sent a summary of each intervention and a short survey to rate the practicality of implementation and potential benefit of the intervention.
Preliminary Results: The Medline and EMBASE searches have yielded 2457 and 2797 citations, respectively. A team of 6 reviewers initially screened 100 citation titles in order to refine the inclusion and exclusion criteria. Following this, teams of 2 are reviewing each title, abstract, and potential paper.
Conclusions: This study will identify interventions in primary care that optimize medication use in Canada and those that contain the attributes of a successful intervention. This information will be useful for primary care providers, researchers, and policy makers.

Posters

Poster #21

Refugee and refugee claimant mothers: What they do when their preschooler is sick

Presenter: Olive Wahoush
Author: Olive Wahoush

Study objectives were to describe refugee and refugee claimant mothers' experiences when their preschool child had an acute, minor episodic illness and to explore primary care provider perspectives. This qualitative study used a mixed methods approach. Information was collected and analyzed from three perspectives; first, published information from large data sets; the viewpoint of the full range of service providers working with this population (n=24) and finally the view of refugee and refugee claimant mothers (n=55). Mothers were recruited using a network approach to include mothers who did not use the health care system. These three perspectives provided a comprehensive description of health behaviours, enablers and barriers experienced by this population.
Results: Mothers reported low income and food insecurity, accessed health information from a wide range of sources and used electronic sources more than reported for Canadians. Delays in accessing health care services related to fear about child services, possible negative effects on migration status and costs. Almost all mothers identified a public heath nurse or a nurse practitioner at a community health centre and stated that the nurse was a key contact for them. Primary care providers rarely know who among their clients is a refugee or asylum seeker and have very little if any preparation for working with ethno-racially diverse populations.
Conclusions: Mother managed their child's illnesses quite well but faced challenges. Primary health care staff need better preparation for working with diverse populations and they need to use new information channels to reach out to all families.

Poster #22

Relationships between a case-leveling framework of medication assessment complexity and primary care practice related factors: A cross sectional study (post hoc analysis)

Presenter: Mark Pasetka
Coauthors: Mark Pasetka, Lisa Dolovich, Natalie Kennie, Christine Rodriguez

Purpose: Pharmacists participating in a trial studying their integration into family physician offices used a case-levelling framework to assign a level of complexity to patients' initial medication assessments. This study further analyzed patient data to determine whether this subjective case-levelling tool developed for the trial was a predictor of the number of recommendations made by pharmacists and, alternatively, if there were practice related factors predictive of case-level assignment.
Methods: Data were collected for 969 patients from the IMPACT trial running from June 2004 to June 2006 and included patients' age, gender, number of medications, number of medical conditions, quality of life scores, number of recommendations, case-level assigned, and initial time of assessment. Case-level assignment by pharmacists ranged from one to three and has previously been shown to be valid and reliable. Analyses were conducted using descriptive, analysis of variance (ANOVA), and analysis of covariance (ANCOVA) statistical procedures.
Results: Patients' ages ranged from 14-98 [mean: 72. 8 (± 10.84)] years; prescription medications per patient ranged from 0-14 [mean: 6.98 (± 3.84)] and non-prescription medications ranged from 0-35 [mean: 3.42 (± 3.18)]. The number of recommendations made by a pharmacist per patient over the course of the study ranged from 0-36 [mean: 6.49 (± 4.54)]. Case-levelling was shown to predict the number of recommendations made (case-level 1 vs. 2, case-level 1 vs. 3, and case-level 2 vs. 3; $P<0.001$ for all comparisons), while number of medications [prescription ($P<0.001$), non-prescription ($P=0.030$)], quality of life scores [PCS12 ($P<0.001$), MCS12 ($P<0.001$)], and time of initial assessment ($P=0.003$) were predictive of case-level assignment by pharmacists.
Conclusions: Relationships between a case-levelling framework of medication assessment complexity in primary care patients and practice related factors were discovered. Future work using these results should be done to help assess pharmacist workload and define reimbursement policy.

Posters

Poster #23

Chronic disease prevention and management initiatives in southwestern Ontario: Evaluation of the partnerships for health project

Presenter: Sharon E. Roberts
Coauthors: Stewart Harris, Sharon E. Roberts, Jann Paquette-Warren, Meghan Fournie, Cathy Thorpe, Susan Webster-Bogaert, Judith Belle Brown, Leslie Meredith, Amanda Terry, Amardeep Thind, Moira Stewart

Purpose: The Partnerships for Health (PFH) utilizes Ontario's Chronic Disease Prevention and Management (CDPM) framework to facilitate changes in allied diabetes care by implementing the Plan/Do/Study/Act (PDSA) improvement model. The purpose of this study is to conduct a comprehensive external evaluation of the PFH initiatives to effect change in participating Southwestern Ontario practices. We examine whether participation in the PFH i) results in change in the delivery of chronic illness care and ii) improves care processes and outcomes for patients.
Methodology: The evaluation consists of a mixed method (qualitative/quantitative), multi-measure, pre-post design. We evaluate the PFH project management team (e.g., participant observation, project process documentation, qualitative interviews), healthcare provider teams (pre-post quantitative surveys, individual and follow-up interviews), and patient outcomes (chart reviews of diabetes clinical outcomes, surveys, and focus group interviews). Participants include collaborative teams from practices (e.g., family physicians, nurses, administrators, dieticians), external providers (e.g., CCAC caseworkers), patients, and the project management team. At submission (waves 1 and 2) 46 physicians, 121 allied providers, 87 administrators, and 490 patients (estimated to reach 1200) are included in the evaluation. The project has three waves and is three years in length (2008-2010).
Results: The evaluation framework/logic model is presented.
Conclusions: This evaluation provides a comprehensive, multi-method/level example of systematically evaluating new strategies to develop allied healthcare practices, which focus on diabetes care. Further study will determine the extent to which the CDPM framework and PDSAs are effective strategies for changing chronic disease management.

Poster #24

Describing pharmacist relationships with other health care professionals in Ontario Family Health Teams

Presenter: Alina Varghese
Coauthors: Alina Varghese, Lisa Dolovich, Christine Rodriguez, Barb Farrell

Background: Over the past few years pharmacists across Ontario have begun to work along side other healthcare providers in a new setting, the Family Health Team (FHT). The objective of this study was to conduct a survey in order to collect data that describes the relationships pharmacists have in FHTs from their own perspective.
Methods: This was a cross-sectional study utilizing a self administered internet-based survey. All pharmacists who are members of the Ontario FHT Pharmacist Network maintained by the Quality Improvement and Innovation Partnership (QIIP) Pharmacy offices were invited to participate. The survey was designed with 40 questions intending to assess 4 separate domains related to the pharmacist's role, relationship with other health care professionals, and support systems within practice. The survey was pre-tested for face and content validity prior to administration. Results were analyzed using descriptive statistics on Excel.
Results: The mean age of the 35 responding pharmacists was 37 years, and the majority have been in practice for <2 years (77%). For these pharmacists, the number of physician made patient-referrals has more than tripled since pharmacists began working in FHTs (from 7 to 23 referrals). Fifty-five percent of responding pharmacists (18/33) collaborate with 51-100% of physicians in their FHT. More pharmacists collaborate between 0-10 times/week with the physicians (i.e. regarding drug therapy problems). Sixty-three percent of pharmacists in this sample agreed that they play an integral role on their interdisciplinary team.
Conclusions: The majority of FHT pharmacists that responded to the survey have a collaborative relationship with at least 50% of the physicians they work with, however the interaction is usually limited to ≤ 10 times/week. Majority of pharmacists perceive themselves as a part of the interdisciplinary team. These results represent a small sample of younger pharmacists working in FHTs and additional results or future work is required.

Posters

Poster #25

An evaluation of a community pharmacist led patient centred program to improve cardiovascular health: a pilot study of the Passport to Health program

Presenter: Lisa Dolovich
Coauthors: Lisa Dolovich, Melani Sung, Richard Tytus, Iris Krawchenko, Antony Gagnon, Tom Smiley, Carrie McAiney, Nick Kates

Background: The benefits of community pharmacist initiatives on cardiovascular outcomes are well-documented in the literature. These primarily centre on medication management and provision of patient education by the pharmacist. This pilot study examines the effects of a community pharmacy/family physician integrated primary care initiative that includes components of prearranged physician collaboration with difficult to treat patients and an ongoing pharmacist-patient-physician intervention.
Methods: This pilot study involved 5 volunteer community pharmacists and 6 family physicians in Hamilton, Ontario. Passport to Health (PTH) program is a goal-oriented intervention focusing on hypertension management and timely medication information transference in a diabetic population with uncontrolled blood pressure (BP) or lipids. Patients were seen in regular pharmacist consultations for medication assessment and follow-up. Clinical issues identified and recommendations were communicated to the assigned physician partner and recorded in a program paper binder. Patients carried their paper workbook, containing up-to-date information, to all appointments. Outcomes studied include BP changes, program feasibility, medication recommendations, accuracy of medication list and pharmacists' workload. Interviews with stakeholders were conducted at study end.
Results: Forty-five patients were approached and 28 patients were enrolled in this study with a median follow-up of 141 days. Mean age was 68.2 years, 53.6% male and were receiving on average 9 prescription medications. Mean baseline systolic/diastolic BP was 146/81mmHg; 2 (9.5%) were at the predefined target (< 130/80mmHg) in 21 patients whose data were available. At 6 months, systolic and diastolic BP had mean reductions of 15 and 10mmHg respectively among the 18 patients with available data; 7 (38.9%) achieved target BP. Pharmacists identified a mean of 4.2 drug and nondrug-related problems per patient; 63.9% of recommendations were implemented. Mean time spent in initial and subsequent visits were 85 minutes (minimum 27.5 min and maximum 125 min) and 51 minutes (minimum 30 min and maximum 86.4 min) respectively. Participating physicians and pharmacists felt positive about the intervention and that patient outcomes and compliance improved. Staffing and technological challenges were identified by pharmacists as barriers in program implementation.
Conclusions and implications for pharmacy practice: Regular, ongoing, intensive pharmacist intervention with predetermined physician collaboration was associated with improvement in BP control in a group of diabetic patients with hypertension. Given the variable lengths in pharmacist consultations, the drivers of perceived benefit and cost-effectiveness from the program need to be elucidated. Results from this pilot can be used to further explore interprofessional opportunities like PTH in the community practice.

Posters

Poster #26

Screening for faecal-occult-blood: A community practice experience

Presenter: Graham Swanson
Coauthors: Hanan Sokar-Todd and Graham Swanson

Background: In Canada, colorectal cancer (CRC) the third most commonly diagnosed cancer is the second leading cause of cancer deaths. With early detection CRC can be cured. Despite these facts, screening rates using Faecal Occult Blood Testing (FOBT) remain low in Canada.
Goal: To enhance screening through our clinic.
Objective: To identify whether computerised reminders are effective to improve the delivery of CRC screening in our clinic.
Method: "Chartstar" EMR indicates which patients need screening. All patients eligible for screening were identified with FOBT status. A random 10% sample was reviewed. A telephone follow-up of patients with no test results was undertaken.
Results: 860 patients were eligible for FOBT, 86 were randomly selected for further analysis: 44/86 (51%) had FOBT or scope completed. Of the 42/86 with no result recorded, 35 (83%) had a visit in the last 2 years, (supporting that family practice is an ideal place for screening). Phone calls to patients whose FOBT status appears as "Not done" revealed that 75% had received a requisition for testing and have plans in place for testing. A total of 65% of patients eligible for screening have already been given a requisition or had the test completed.
Conclusions: Computerised reminders are useful tool for screening in our practice, allowed our screening for FOB to reach over 60%.

Poster #27

Development of best practices for implementation of information technology systems in healthcare sector in Canada

Presenter: Jagdeep Kaur
Author: Jagdeep Kaur

The importance of best practices to facilitate implementation of information technology (IT) systems in the healthcare sector in Canada is signified in this research study through a review of relevant literature. The primary objective of this study was to conduct a survey of available information about the current best practices for development, implementation and acceptance of Electronic Health Records (EHR), Electronic Medical Records (EMR) and Personal Health Records (PHR) in Canadian healthcare system. The evidence generated from the information in this review would provide an effective resource for refinement and evolution of best practices as they become applicable for IT systems implementation in healthcare.
Several gaps exist in the current best practices and there is an urgent need for formulating comprehensive policies and guidelines to bring the different stakeholders together in working towards common goals of improving quality of healthcare provided, reduce medical errors, and provide sustainable technology solutions to support healthcare initiatives. The significance of developing specific best practices, for implementation of IT solutions, within the Canadian Healthcare Scenario, through comparison and customization of international best practices, is the primary focus of this paper.

Workshops

Auditorium A

Social Network Analysis in Primary Health Care

Presenters: Kalpana Nair and Stephanie Laryea
Coauthors: Kalpana Nair and Stephanie Laryea

Background: With the recent popularity of online social networks, interest in social network analysis (SNA) has become widespread. SNA is a unique approach that is used to describe and explore relationships among individuals. SNA has been increasingly used within primary health care to understand and improve the partnerships and collaborations required to deliver exemplary care within the community.
Purpose and context: The objective of this workshop is to introduce participants to key concepts related to SNA by using data from a community-level, cluster randomized trial related to hypertension, the Cardiovascular Health Awareness Program (CHAP). CHAP uses local lead organizations to provide blood pressure assessments in pharmacies or other community-based venues. Currently, 15 communities in Ontario have implemented CHAP; two of which have participated in an SNA survey. The initial list of survey participants was provided by Local Lead Coordinators. Snowball sampling was used to identify and survey other participants. The SNA survey was completed electronically and asked about key partners, relationships, and individuals who provide ideas to improve the program. Analysis was conducted using Smart Network Analyzer.

Participants in this workshop will: 1) develop an understanding of how SNA can be used in primary health care research; 2) learn about the main steps used to conduct SNA; 3) explore concepts of SNA, such as cohesion, centrality, and integration; and 4) discuss some of the challenges and benefits of SNA.

Auditorium B

Reducing Bias in Research: What and How?

Presenter: John Cairney

One of the single biggest challenges for researchers is to reduce bias in their work. Bias can come in many forms and affect each stage of the research process. In this workshop, we will review the major sources of bias known to influence research, discuss how each source threatens the validity of the research findings, and identify strategies for reducing the impact of bias in medical research. While bias is a significant problem for all research, the primary care research context will be specifically explored in relation to this topic.

Workshops

Café Annex

Optimizing the role of the family practice registered nurse: A research study in progress

Presenter: Melanie Hammond, Lesley Gotlib Conn, Anna Gallinaro
Coauthors: Melanie Hammond

In order to deliver optimal primary care, it is imperative to recognize the importance of role understanding and clarity. The communication of clear role definitions creates positive interprofessional relationships and working environments, ultimately resulting in increased patient access to quality care. The Department of Family and Community Medicine at the University Health Network is currently undertaking a study that explores the role of the family practice registered nurse (FP-RN). At the present time, family practice nursing is not recognized as a specialized practice in Ontario. The roles and tasks of the FP-RN vary widely from nurse-to-nurse, and from practice-to-practice; subsequently, the expertise of the FP-RN often go unrecognized. This project aims to uncover, from a patient-centred focus, the multiple ways in which the FP-RN contributes to family practice health care in Ontario – by exploring the unique ways in which the skills of the FP-RN merge with and complement the work of other health care professionals in the family practice setting – ultimately contributing to enhanced health care. In addition to interviews conducted with FP-RNs who have been identified by peers and colleagues as exemplary, focus groups have been conducted with interprofessional family health teams in an effort to glean the behaviours and processes employed to achieve an optimal scope of practice for FP-RNs. The ultimate use of research findings will be to develop a role description and framework for optimizing the role of FP-RNs. This workshop will include a presentation of our research findings, and a discussion and debate on the recommendations for optimizing the FP-RN role.

Participants in this workshop will:
1) Gain an understanding of the current state of knowledge around the role of the family practice registered nurse (FP-RN); 2) Gain recognition of the value of qualitative research methodologies in family medicine research; 3) Gain an understanding of how the FP-RN role is being optimized in various family practice settings across Ontario.

Presenter Index

Abushomar, Hani 19
Abushomar, Hani 22
Agarwal, Gina 16
Anderson, Jocelyn 7
Anderson, Jocelyn 25
Anwar, Muhammad Ali 23
Anwar, Muhammad Ali 23
Bandaranayake, Hashini 7
Barber, Anne 8
Born, Leslie 24
Brown, Judith B 10
Cairney, John 24
Cairney, John 36
Cantwell, Barbara 25
Chacon, Maria 26
Cheng, Ji 16
Conn, Lesley Gotlib 37
Denomme, Louisa Bestard 11
Dolovich, Lisa 34
Dunn, Sheila 17
Estey, Elizabeth 10
Gallinaro, Anna 37
Grunfeld, Eva 18
Hammond, Melanie 37
Hoskin, Kim 6
Howard, Michelle 9
Howard, Michelle 27
Howard, Michelle 28
Ivers, Noah 14
Kaasa, Benjamin 7
Kaur, Jagdeep 35
Kuziora, Barbara 29
Laryea, Stephanie 17
Laryea, Stephanie 36
Lebeau, Marc 27
Lovesey, Natalie 28
Lim, Michael 29
Ma, Jinhui 18
Maddocks, Heather 29
Marchie, Augustine 22
Marshall, Neil 15
McAiney, Carrie 30
McCombe, Sarah 31
McMillan, Colleen 30
Mills, Brenda 30
Moore, Ainsley 31
Nair, Kalpana 12
Nair, Kalpana 36
Nie, Jason Xin 7
Nie, Jason Xin 25
Osien, Gladys 31
Oskooei, Shahla 15
Owen, Mallory 14
Owen, Janice 14
Pasetka, Mark 32
Rabbi, Sana 23
Rasooly, Irit, R. 8
Reid, Graham, J. 19
Riemersma, Kennedy 11
Riutort, Monica 13
Roberts, Sharon, E. 33
Rodriguez, Christine 21
Schwandt, Michael 14
Sheehan, Kim 20
Stewart, Moira 26
Swanson, Graham 35
Talbot, Yves 13
Terry, Amanda 9
Thind, Amardeep 12
Thorpe, Cathy 6
Varghese, Alina 33
Wahoush, Olive 32
Wang, Li 20
Wong, Garway 29

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