



Canadian Agency for
Drugs and Technologies
in Health

Evidence to Practice:

**MAXIMIZING
OUR INVESTMENT
IN HEALTH CARE**

2011 CADTH SYMPOSIUM

APRIL 3-5, 2011

VANCOUVER, BRITISH COLUMBIA

The Institute of Health Economics (IHE)

Welcomes CADTH to Western Canada.

An Alberta-based research organization the IHE conducts studies in health economics, health technology assessment and comparative effectiveness research as well as knowledge transfer and dissemination activities to support evidence-informed health policy and practice.



Health Technology Assessment international

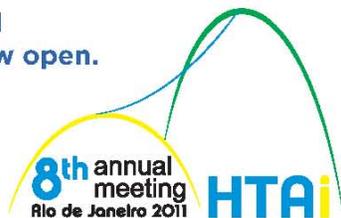
An international society for the promotion of health technology assessment



www.htai.org

HTAi 2011: HTA for Health System Sustainability

June 25-29, 2011
Rio de Janeiro, Brazil
Early registration now open.



Other Major Activities

HTAi Policy Forum

Policy dialogues for senior leaders

International Journal of Technology Assessment in Health Care

The society's official journal

7 Interest Sub-Groups

Patient Involvement, Ethics, and more

Scholarships, Travel Grants, and more*

Promoting HTA For Informed Decision-Making On Health Technology Use and Innovation



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We gratefully acknowledge the contribution of our sponsors to the success of the 2011 CADTH Symposium. This event could not continue to grow and improve without you!

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We would also like to acknowledge the support of our funders. CADTH's activities, programs, and services, including the CADTH Symposium, are made possible through financial contributions from Health Canada and the governments of:

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Welcome Message

Welcome

Welcome to the 2011 CADTH Symposium, the seventh national forum the Canadian Agency for Drugs and Technologies in Health has organized for producers and users of evidence-based information on drugs and other health technologies in Canada and the first to be held in British Columbia.

I would like to offer special thanks to the British Columbia Ministry of Health Services, the province's health authorities and the city of Vancouver for providing a warm welcome and strong support in developing the program.

This year's theme is Evidence to Practice: Maximizing Our Investment in Health Care. Highlighting the connection between evidence, health care delivery and health system sustainability, the theme sets the stage for lively discussion about the implementation and impact of evidence-based decision-making and practice.

Our three plenary sessions will explore different aspects of the theme. During the Opening Plenary, you will hear directly from a panel of Deputy Ministers of Health about the opportunities and challenges they face as they work to improve the health of the citizens in their respective jurisdictions. Tuesday morning will begin with a discussion of the relationship between health technology assessment and clinical practice guidelines. The Symposium will wrap up on Tuesday afternoon with a distinguished international panel that will review global trends in health technology assessment.

The Symposium also offers 32 concurrent sessions on topics ranging from surrogate markers to public engagement to multi-criteria decision analysis to priority setting and resource allocation. An exhibition of more than 60 scientific posters rounds out the program and demonstrates the quality and range of research related to managing health technologies.

The unprecedented strength and depth of this year's Symposium is a direct reflection of the contributions from all sectors – government, regulatory bodies, health authorities, health care providers, patient groups, industry, HTA and drug review agencies. Thank you for your interest and participation.

I hope that you find the discussions and networking productive and rewarding.



Dr. Brian O'Rourke
President and CEO
Canadian Agency for Drugs and Technologies in Health

Program at a Glance

Sunday, April 3, 2011

Time	Event	Speakers
0800 – 1900	Symposium Registration Desk Open	
0800 – 0900	Morning Workshop Registration	
0900 – 1200	Workshop 1: Methodology of Meta-Synthesis: Overviews of Systematic Reviews	<ul style="list-style-type: none"> • Ms. Julia Worswick • Ms. Carolyn Wayne
	Workshop 2: Clinical Guidelines: Bringing Evidence to Practice	<ul style="list-style-type: none"> • Dr. Martin Reed
	Workshop 3: Literature Search 101: Essential Skills for the Health Technology Assessment Producer	<ul style="list-style-type: none"> • Mr. David Kaunelis • Ms. Kelly Farrah
	Workshop 4: Applying the CONSORT Extension for N-of-1 Trials (CENT) Guidelines	<ul style="list-style-type: none"> • Dr. Sunita Vohra • Ms. Salima Punja
	Workshop 5: Introducing Budget Impact Analyses: Can We Afford Not To?	<ul style="list-style-type: none"> • Ms. Karen Lee • Mr. Bruce Brady • Mr. Chris Cameron • Ms. Ann Vosilla
1200 – 1300	Afternoon Workshop Registration	
1300 – 1600	Workshop 6: Value of Information Analysis: High Popularity Comes with Low Intimidation	<ul style="list-style-type: none"> • Dr. Feng Xie • Dr. Nick Bansback • Dr. Mohsen Sadatsafavi
	Workshop 7: An Introduction to Proposed Approaches for Quantitative Benefit-Risk Evaluation	<ul style="list-style-type: none"> • Dr. Larry Lynd
	Workshop 8: Contextualization of Health Technology Assessments: Is There a “Science”?	<ul style="list-style-type: none"> • Dr. Stephen Bornstein • Dr. Janet Martin • Dr. Iga Lipska • Dr. Don Juzwishin • Dr. Davy Cheng
	Workshop 9: Overview, Method, and Appraisal for Adaptive Design Trials	<ul style="list-style-type: none"> • Dr. George Wells • Dr. Vijay Shukla • Mr. Robert Li • Mrs. Karen Lee
1700 – 1900	Welcome Reception and Scientific Poster Exhibition in Regency A/B	

Program at a Glance

Monday, April 4, 2011

Time	Event	Speakers	Location
0730 – 1700	Registration Desk Open		3 rd Floor Foyer
0730 – 0830	Breakfast		Regency Ballroom
0830 – 0900	Official Opening		Regency Ballroom
0900 – 1030	Opening Plenary Session: Evidence to Practice: Maximizing Our Investment in Health Care	<ul style="list-style-type: none"> • Mr. Kevin McNamara • Ms. Paddy Meade • Mr. Saïd Rafi • Dr. Terrence Sullivan 	Regency Ballroom
1030 – 1100	Refreshment Break		Foyer
1100 – 1230	Concurrent Session A1: Evidence, Ethics, and Quality: Issues in Health Technology Assessment Methodology	<ul style="list-style-type: none"> • Mr. Ken Bond • Ms. Katherine Duthie • Dr. Maurice McGregor • Dr. Aaron Tejani • Dr. Ken Bassett • Mr. Ciprian Jauca • Dr. Martin Reed 	Regency A
	Concurrent Session A2: Evidence-Based Policy-Making: What Works?	<ul style="list-style-type: none"> • Dr. Kelly Grindrod • Dr. Tyler Smith • Dr. John Embil 	Plaza A
	Concurrent Session A3: HTA in Hospitals: Reflections and Perceptions	<ul style="list-style-type: none"> • Dr. Paule Poulin • Ms. Carmen Thompson • Dr. Sue Ross • Ms. Natasha Burke 	Plaza B
	Concurrent Session A4: Behavioural Change	<ul style="list-style-type: none"> • Dr. Terryn Naumann • Ms. Tara Gomes • Dr. Suzanne Taylor 	Regency B
	Concurrent Session A5: Health Economics	<ul style="list-style-type: none"> • Dr. Jennifer Davis • Dr. Nick Bansback • Ms. Wei Zhang 	Georgia B
	Concurrent Session A6: Moving from Evidence to Practice	<ul style="list-style-type: none"> • Dr. Sarah Jennings • Mr. Alan Cassels • Dr. Bing Guo 	Balmoral
	Concurrent Session A7: Health Technology Assessment and Oncology	<ul style="list-style-type: none"> • Dr. Wendong Chen • Ms. Zahra Musa • Mr. Mike Paulden • Dr. Paulos Teckle 	Georgia A
1230 – 1330	Lunch		Regency Ballroom

2011 CADTH Symposium

Evidence to Practice: Maximizing Our Investment in Health Care

Monday, April 4, 2011 (cont'd)

Time	Event	Speakers	Location
1330 – 1500	Concurrent Session B1: PANEL DISCUSSION: Greater Than the Sum of Its Parts: Melding and Adapting Seven Guidelines	<ul style="list-style-type: none"> Ms. Christa Harstall Dr. Carmen Moga Dr. Ann Scott Dr. Werner Becker 	Plaza A
	Concurrent Session B2: PANEL DISCUSSION: Health Technology Assessment for Health System Sustainability: Opportunities and Challenges	<ul style="list-style-type: none"> Dr. Arminee Kazanjian Dr. John Embil Dr. Donald Juzwishin Mr. Petr Kresta Ms. Denise Dunton 	Regency B
	Concurrent Session B3: PANEL DISCUSSION: Health Technology Assessment and Comparative Effectiveness Topic Development and Priority Setting: Overview of Canadian and International Processes	<ul style="list-style-type: none"> Mr. Michel Boucher Ms. Sandy Pagotto Ms. Pam Curtis Dr. Sarah Garner Ms. Nina Buscemi Dr. Reiner Banken 	Plaza B
	Concurrent Session B4: PANEL DISCUSSION: Improving Health Outcomes and Health Care System Sustainability, and Encouraging Innovation by Collaborating with Industry	<ul style="list-style-type: none"> Ms. Leah Clark Mr. Mark Ferdinand Mr. Dennis Dougharty 	Georgia B
	Concurrent Session B5: PANEL DISCUSSION: Critical Thresholds in the Use of Scientific Data for Decisions About Health Products	<ul style="list-style-type: none"> Dr. David Clapin Dr. Robert Peterson Ms. Hélène Quesnel Dr. Stanislav Glezer Dr. Holger Schuenemann 	Balmoral
	Concurrent Session B6: PANEL DISCUSSION: How Can Decision-Makers Consider Other Factors in Decision-Making: Multi-Criteria to Maximize Opportunities to Bring Evidence into Practice?	<ul style="list-style-type: none"> Dr. Mireille Goetghebeur Mr. Ron Goeree Dr. Janet Martin Dr. Paule Poulin Dr. Tammy Clifford 	Georgia A
	Concurrent Session B7: PANEL DISCUSSION: Openness in Health Technology Assessments	<ul style="list-style-type: none"> Mr. Adrian Griffin Ms. Lynn Buchanan Dr. Andreas Laupacis Ms. Karen Philp Dr. Martin Zagari 	Regency A
1500 – 1530	Refreshment Break		Foyer
1530 – 1700	Concurrent Session C1: Decision-Maker Support	<ul style="list-style-type: none"> Mr. Pavel Roshanov Dr. Ava John-Baptiste Ms. Kristen Moulton 	Plaza A

Program at a Glance

Monday, April 4, 2011 (cont'd)

Time	Event	Speakers	Location
	Concurrent Session C2: Pharmaceutical Issues	<ul style="list-style-type: none"> • Dr. Barbara Mintzes • Mr. Shawn Bugden • Dr. Bohdan Nosyk 	Regency B
	Concurrent Session C3: Emerging Technologies/Innovation	<ul style="list-style-type: none"> • Dr. Stirling Bryan • Dr. Michael Law • Ms. Colleen Cunningham 	Regency A
	Concurrent Session C4: Priority Setting and Resource Allocation	<ul style="list-style-type: none"> • Dr. George Browman • Dr. David Kocerginski • Dr. Craig Mitton 	Georgia B
	Concurrent Session C5: Evidence to Practice	<ul style="list-style-type: none"> • Ms. Ann Vosilla • Dr. Alison Hoens • Ms. Kira Leeb • Dr. Donna Manca 	Georgia A
	Concurrent Session C6: Informing Clinical Practice	<ul style="list-style-type: none"> • Ms. Barbara Hill-Taylor • Dr. Frank Xiaoqing Liu • Dr. Robin Turpin • Dr. Mehdi Najafzadeh 	Balmoral
	Concurrent Session C7: Evidence-Based Cost Savings	<ul style="list-style-type: none"> • Dr. Larry Lynd • Dr. Moshen Sadatsafavi • Ms. Sara Khor • Dr. Jeffrey Hoch • Ms. Dianne Trudeau 	Plaza B
1715 – 2130	Symposium Dinner		Regency Ballroom

2011 CADTH Symposium

Evidence to Practice: Maximizing Our Investment in Health Care

Tuesday, April 5, 2011

Time	Event	Speakers	Location
0730 – 1630	Registration Desk Open		3rd Floor Foyer
0730 – 0830	Breakfast		Regency Ballroom
0830 – 0945	Plenary Session: Maximizing Our Investment in Clinical Practice Guidelines	<ul style="list-style-type: none"> • Dr. Stirling Bryan • Dr. Norman Campbell • Dr. Scott Klarenbach • Dr. Valerie Palda • Dr. Martin Reed 	Regency Ballroom
0945 – 1015	Refreshment Break		Foyer
1015 – 1145	Concurrent Session D1: PANEL DISCUSSION: Value-Based Drug Reimbursement: Do We Want It? Do We Already Have It?	<ul style="list-style-type: none"> • Mr. Scott Gavura • Dr. David Shum • Dr. Jeffrey Hoch • Mr. Kevin Wilson 	Regency A
	Concurrent Session D2: PANEL DISCUSSION: The Drug Safety and Effectiveness Network (DSEN): Evidence for Informed Decisions	<ul style="list-style-type: none"> • Dr. Robert Peterson • Mr. Bob Nakagawa • Dr. Diane Forbes • Dr. Christian Brochu • Dr. Chris Turner • Dr. Colin Dormuth 	Regency B
	Concurrent Session D3: PANEL DISCUSSION: Using CADTH Recommendations for Self-Monitoring of Blood Glucose in Nova Scotia: Go Fast Alone or Go Far Together	<ul style="list-style-type: none"> • Dr. Michael Allen • Ms. Peggy Dunbar • Ms. Isobel Fleming • Ms. Corinne Tobin • Ms. Pam McLean-Veysey 	Georgia A
	Concurrent Session D4: PANEL DISCUSSION: Alberta Health Services and Advancing the Uptake of Health Technology Assessment and Innovation: An Update on Alberta's Experience	<ul style="list-style-type: none"> • Ms. Rosmin Esmail • Dr. Donald Juzwishin • Dr. Paule Poulin • Dr. Lea Austen • Mr. Jitendra Prasad 	Georgia B
	Concurrent Session D5: PANEL DISCUSSION: CSI: A Café Scientifique Investigation — Using Café to Demystify Recommendations, Engage Audiences, and Address Barriers	<ul style="list-style-type: none"> • Ms. Kristen Chelak • Dr. Adil Virani • Dr. Suzanne Taylor 	Plaza B
1145 – 1315	Awards Luncheon		Regency Ballroom
1315 – 1445	Concurrent Session E1: PANEL DISCUSSION: Building Bridges: Regulatory Science and Reimbursement Decision-Making	<ul style="list-style-type: none"> • Dr. Judith Glennie • Dr. Robert Peterson • Dr. Jesse Berlin • Dr. Stuart MacLeod • Dr. David Mendelsohn 	Regency A

Program at a Glance

Tuesday, April 5, 2011 (cont'd)

Time	Event	Speakers	Location
	Concurrent Session E2: PANEL DISCUSSION: Guideline Development: Overcoming Challenges of Limited Evidence and Implementation at a National Level	<ul style="list-style-type: none"> • Ms. Rhoda Reardon • Mr. Clarence Weppler • Ms. Emma Irvin • Dr. Michael Allen • Dr. Norman Buckley 	Georgia B
	Concurrent Session E3: PANEL DISCUSSION: Eyes Wide Open: Using Evidence to Rethink the Treatment Model for Type 2 Diabetes in Canada	<ul style="list-style-type: none"> • Mr. Chris Cameron • Dr. Ehud Ur • Dr. Scott Klarenbach 	Georgia A
	Concurrent Session E4: PANEL DISCUSSION: Surrogate Markers in Health Technology Assessment: To Use or Not To Use Is the Question	<ul style="list-style-type: none"> • Dr. Charles Piwko • Mr. Bob Nakagawa • Dr. Jeffery Hoch • Ms. Laurene Redding • Dr. Muhammad Mamdani • Dr. Vijay Shukla • Dr. Phil McFarland 	Plaza B
	Concurrent Session E5: Public Engagement	<ul style="list-style-type: none"> • Mme Lucie Robitaille • Ms. Dorina Simeonov • Ms. Elaine MacPhail • Mr. Harlon Davey 	Balmoral
	Concurrent Session E6: Policy Issues Across Canada	<ul style="list-style-type: none"> • Dr. Aaron Tejani • Mr. Sean Hardiman • Ms. Laura Fitzgerald • Mr. John Abbott • Dr. Joel Lexchin • Ms. Barbara Gobis Ogle 	Regency B
1445 – 1500	Refreshment Break		Foyer
1500 – 1615	Closing Plenary: Maximizing Our Investment in Health Technologies	<ul style="list-style-type: none"> • Dr. Sarah Garner • Dr. Clifford Goodman • Dr. Chris Henshall • Ms. Diane McArthur • Dr. Brian O'Rourke 	Regency Ballroom
1615 – 1630	Official Closing	Dr. Brian O'Rourke	Regency Ballroom

Special Events

WELCOME RECEPTION AND SCIENTIFIC POSTER VIEWING

Sunday, April 3 A great networking opportunity, the Welcome Reception features scientific posters from across Canada and the opportunity to meet and talk with the authors about their work. A cash bar and light snacks will be available.
1700-1900
Regency A/B

SYMPOSIUM DINNER

Monday, April 4 Join the symposium speakers and delegates for a relaxing and enjoyable evening of great food and great company. A reception will start in the Regency Ballroom Foyer at 1715 with a cash bar available. We will move into the dining area at 1800 for seating. Be prepared for some lively and interactive entertainment.
1715 – 2130
Regency Ballroom
Remember – Casual Attire.

THE DR. JILL M. SANDERS AWARD OF EXCELLENCE AND POSTER AWARDS PRESENTATIONS

Tuesday, April 5 Join us in honouring the 2011 recipient of the Dr. Jill M. Sanders Award of Excellence. This award is presented annually to honour an individual whose outstanding achievements have significantly advanced the field of health technology assessment and its use in Canada. The winners of our poster competition will also receive their awards at this luncheon.
Awards Luncheon
1145 – 1315
Regency Ballroom

The Dr. Jill M. Sanders Award of Excellence in HTA

Dr. Maurice McGregor is the 2011 Recipient of the Dr. Jill M. Sanders Award of Excellence in HTA



Dr. Brian O'Rourke, President and CEO of the Canadian Agency for Drugs and Technologies in Health (CADTH) is pleased to announce that Dr. Maurice McGregor, MB, BCh, MD, FRCP(C), FRCP(Lond), FACC is the 2011 recipient of the Dr. Jill M. Sanders Award of Excellence in Health Technology Assessment (HTA).

Affectionately known to his colleagues in health technology assessment as the “grandfather of HTA of Canada,” Dr. McGregor is one of the preeminent figures in this important field of health policy analysis, consistently demonstrated an unrelenting passion for improving the recognition, production and utilization of HTA in Canada.

As the founding President of Quebec’s HTA Agency, the Conseil d’évaluation des technologies de la santé du Québec (1988 to 1994), and a founding Board member of the Canadian Coordinating Office for Health Technology Assessment, Dr. McGregor was instrumental in building the initial framework for the production and use of HTA in Canada. As the Chair of the HTA Unit at the McGill Health Centre (MUHC), he helped extend the use of HTA to hospitals and regional health authorities. As the author of more than 180 articles and as Chair and Editor of Canada’s Guidelines for the Management of Breast Cancer (1994–98), he championed the use of evidence in clinical practice. As a professor at McGill University, he was a mentor to new generations of HTA producers and users.

Dr. McGregor is currently an Honorary Physician and Chair of the Technology Assessment Unit of the McGill University Health Centre and Professor Emeritus of McGill University. In December 2010, he was appointed Officer of the Order of Canada for having pioneered and championed the field of health technology assessment in Canada, and for his leadership in medical education and cardiology.

The Dr. Jill M. Sanders Award will be presented to Dr. McGregor during an Awards Luncheon at the 2011 CADTH Symposium in Vancouver, BC. The Luncheon will be held on Tuesday, April 5 from 11:45 a.m. – 1:15 p.m.

About the Dr. Jill M. Sanders Award



The Dr. Jill M. Sanders Award of Excellence in HTA recognizes individuals whose outstanding achievements have significantly advanced the fields of health technology assessment, evidence-based drug reviews, or optimal technology utilization in Canada. Established by the Canadian Agency for Drugs and Technologies in Health (CADTH), the award is named in honour of Dr. Jill M. Sanders, President and CEO of CADTH from 1997 to 2010. Dr. Sanders led the transformation of CADTH from a small office into an agency with an international reputation for quality and a significant and growing impact on the quality and sustainability of health care in Canada. Dr. Sanders passed away in February 2010 following a battle with cancer.

Workshops

1

Methodology of Meta-Synthesis: Overviews of Systematic Reviews

April 3, 2011
0900 - 1200

Systematic reviews synthesize and appraise research results with the aim of providing balanced, unbiased evaluations of evidence on specific research questions. Given the role of systematic reviews in evidence-based medicine and decision-making, and the increasing volume of systematic reviews being made available, further distillations of the results of systematic reviews have a role to play in informing those practitioners interested in using evidence to inform decisions, whether when treating a patient or recommending policy options to government bodies. To support the integration of evidence-based medicine in the day-to-day work of clinicians, policy-makers, and others, meta-syntheses such as overviews of systematic reviews are a way to assemble the evidence so that responses to questions are clear and accessible.

Methods: An introduction to different methods used to systematically evaluate, summarize, and interpret data from systematic reviews will be presented to participants, with a focus on data extraction and analysis. Attendees will have the opportunity to look at and discuss a variety of examples of overview methods and outputs.

Educational Objectives: Participants will gain an understanding of how to conduct an overview of systematic reviews, and the strengths and limitations of using overviews to guide research and support decision-making.

Presenters: Julia Worswick and Carolyn Wayne,
Cochrane Effective Practice and Organisation of Care
(EPOC) Review Group

2

Clinical Guidelines: Bringing Evidence to Practice

April 3, 2011
0900 - 1200

Clinical guidelines are one of the most highly synthesized forms of knowledge transfer. Therefore, they are an important means of bringing evidence to practice and, by assisting health care professionals in providing the best and most efficient care to their patients, they also help to maximize the use of health care resources.

The goal of this workshop is to examine the role and value of guidelines in encouraging best practices in medical care, the issues involved in their development, and the best methods of their implementation.

The workshop will have the following structure:

- **Clinical guidelines.** This will be an introductory section, reviewing the role of guidelines in knowledge transfer and the important issues in guidelines development.
- **Guidelines implementation.** This section will examine the evidence for the effectiveness of guidelines and the effectiveness of the various methods of implementing them.
- **Guidelines as part of a computerized order entry system.** This section will review the work done by the Canadian Association of Radiologists on the implementation of radiology guidelines as part of a computerized order entry system, including evidence on the effectiveness of this methodology and the issues involved in this method of implementation.

The intent is to stimulate discussion and information exchange. To this end, participants will be encouraged to share their knowledge, experience, and questions about guidelines throughout the workshop.

Presenter: Dr. Martin Reed, Head, Department of Diagnostic Imaging, Winnipeg Children's Hospital

3

Literature Search 101: Essential Skills for the Health Technology Assessment Producer

April 3, 2011
0900 - 1200

Effective search strategies assist researchers in finding high-quality information quickly. This two-part workshop will cover key concepts that will improve your database searching skills and also provide a framework for understanding the role of information specialists in health technology assessment (HTA).

This workshop is geared for HTA producers who want to gain valuable search tips and a better understanding of the search requirements in HTA work. The ten tips presented in this workshop will help make searching for information more effective and efficient. The workshop will provide tips, tricks, and techniques for both PubMed and Ovid MEDLINE searching. Participants will also gain a better understanding of the complex systematic review search strategies created by their information specialist colleagues.

Presenter: David Kaunelis and Kelly Farrah, Information Services Methods Specialists, Canadian Agency for Drugs and Technologies in Health

4

Applying the CONSORT Extension for N-of-1 Trials (CENT) Guidelines

April 3, 2011
0900 - 1200

Pharmaceutical development and commercialization primarily consists of phase I, II, and III randomized controlled trials (RCTs). However, such use of RCTs to guide patient care is limiting, as trials do not allow for exploration of off-label use and examination of treatment effects in a realistic clinical setting (i.e., pragmatic versus explanatory use); most often, these trials evaluate efficacy, not effectiveness. One way pharmaceutical companies can overcome these limitations is by utilizing N-of-1 trials as part of the research and development or R&D process. As they are relatively inexpensive to conduct, N-of-1 trials may also offer a cost-effective way for pharmaceutical companies to carry out long-term, post-market surveillance (phase IV evaluation) of drugs. An N-of-1 trial typically refers to a prospectively planned randomized, multiple cross-over evaluation performed in a single subject (i.e., ABAB design).

The purpose of this hands-on workshop is to guide the researcher/clinician in the methods of conduct and reporting of N-of-1 trials using newly developed reporting guidelines for N-of-1 trials — the CONSORT (Consolidated Standards of Reporting Trials) Extension for N-of-1 Trials or the CENT Statement. A consensus-based statement, CENT is intended to be a minimum set of items that should be reported in ABAB N-of-1 trials. Attendees will learn how to design and report N-of-1 trials during this interactive workshop.

Presenters: Dr. Sunita Vohra (Pediatrician/Professor) and Salima Punja (Grad Student), University of Alberta

5

Introducing Budget Impact Analyses — Can We Afford Not To?

April 3, 2011
0900 - 1200

Decision-makers need reliable affordability information to use in their deliberations on whether to fund an intervention or not. The budget impact analysis framework analyzes the full financial impact of an intervention, including cost add-ons and offsets in the wider health system. This workshop will address the following:

- concepts and techniques applicable to budget impact analyses for both drugs and other types of health technologies
- basic forecasting techniques
- sources of data and other information
- considerations for health programs and services.

Best practices, as outlined in the Patented Medicine Prices Review Board (PMBRB) budget impact guidelines and a helpful list of Dos and Don'ts will also be discussed. To better understand the concepts and principles discussed in this workshop, practical examples relevant to local environments within the Canadian health system will be discussed.

Presenters: Karen Lee (Director of Health Economics), Chris Cameron, (Health Economist) and Ann Vosilla, (British Columbia Liaison Officer), Canadian Agency for Drugs and Technologies in Health; Bruce Brady (Health Economist), British Columbia Ministry of Health

6

Value of Information Analysis: High Popularity Comes with Low Intimidation

April 3, 2011
1300 - 1600

Model-based economic evaluation has been an important tool in supporting evidence-based policy-making. Data inputs to an economic model typically come from various sources. Uncertainty is a key issue that needs to be adequately and appropriately addressed in all model-based economic evaluations. Although probabilistic sensitivity analysis can demonstrate the level of uncertainty, value of information (VOI) analysis is the method that can quantify the uncertainty and then guide future research. However, the application of VOI has been limited since its development, which might be partly due to high computational intensity if nested Monte Carlo simulations are required. This half-day workshop will provide an overview of the basic concept of VOI and will demonstrate how to conduct VOI analysis using nested Monte Carlo simulations. A new method without using nested Monte Carlo simulations will be introduced that may help improve computational efficiency in VOI analysis.

Educational Objectives:

- Understanding the concept of VOI analysis
- Calculating expected value of perfect information (EVPI) using nested Monte Carlo simulation
- Learning a simpler method for EVPI calculation.

Prerequisite: People who are familiar with economic evaluation and probabilistic sensitivity analysis, and who have some knowledge of basic statistics.

Presenters: Dr. Feng Xie (Assistant Professor), McMaster University; Dr. Nick Bansback (Health Economist) and Dr. Mohsen Sadatsafavi (PhD Candidate), University of British Columbia

7

An Introduction to Proposed Approaches for Quantitative Benefit-Risk Evaluation

April 3, 2011
1300 - 1600

The goal of health technology assessment is to inform quality decisions that link evidence with health care delivery, leading to a sustainable health care system. In health care, a common scenario includes the introduction of new therapies that may offer an additional health benefit to a patient, but may also pose an added risk. In practice, health systems decisions are often made qualitatively and subjectively due to short timelines for such decisions. Quality decision-making requires comprehensive evaluation of the following comparative evidence:

- expected benefit (i.e., risk reduction of adverse outcomes)
- expected risk (i.e., increased risk of adverse events)
- estimates of uncertainty of expected benefit and expected risk
- estimates for decision-makers' preferences for benefit/risk trade-off between all relevant comparators.

Making decisions that regard the benefit/risk balance requires preference trade-offs of these potential harms and benefits of one treatment relative to another treatment. Recent recommendations to the United States Food and Drug Administration and the European Medicines Agency include the use of more quantitative, transparent, and explicit benefit/risk analysis method to facilitate regulatory decisions. To enable decision-makers to find the right balance between benefit and risk, this workshop will introduce the use of three different methods of benefit/risk analysis: incremental net benefit, stated choice methods, and multi-criteria decision analysis. Although all methods will be discussed using specific case studies, there will be a focus on the incremental net benefit framework.

Educational Objectives:

This workshop will introduce the concept of quantitative benefit/risk analysis, incorporating decision-makers' risk preferences into clinical and regulatory decision-making using specific drug and non-drug case studies.

Presenters: Dr. Larry Lynd (Associate Professor) University of British Columbia

8

Contextualization of Health Technology Assessments: Is There a “Science”?

April 3, 2011
1300 - 1600

Decision-makers who attempt to use technology assessment for health care decisions are often faced with a difficult problem: The best available scientific evidence is often insufficient or inappropriate for making local decisions. Evidence from one specific health care context may not readily apply in another context because of differences in population dynamics and epidemiology, organization of care, availability of resources, local values, and priorities. It has been recognized that evidence must be sufficiently “contextualized” to aid local decisions.

Contextualization in health technology assessment has been defined as a “scientific method that brings forward the different perspectives of key informants on components of a context to construct a multidimensional representation of the issues involved.” [From a presentation by Banken et al., HTAi 2007, Adapted from Mucchielli, A. Dictionnaire des méthodes qualitatives en sciences humaines et sociales. Armand Colin. Paris, 2005.]

The purpose of this workshop is to discuss the various approaches to contextualization that have been applied in Canada and abroad, and the issues surrounding them. Workshop participants will consider how contextualization has been defined, the methods that have been used to achieve it, and the gaps and potential for future improvement. The workshop will end with a discussion of the implications of contextualization for future collaborative opportunities in Canada.

Presenters: Dr. Stephen Bornstein, Memorial University;
Dr. Janet Martin, High Impact Technology Evaluation Centre;
Dr. Iga Lipska, Poland’s Agency for Technology Assessment
Department;
Dr. Don Juzwishin, Alberta Health Services;
Dr. Davy Cheng, London Health Sciences Centre

9

Overview, Method, and Appraisal for Adaptive Design Trials

April 3, 2011
1300 - 1600

An Adaptive Design Trial is a multistage study design that uses accumulating data to decide how to modify aspects of the study without undermining the validity and integrity of the trial. It requires that the trial be conducted in multiple stages with access to the accumulated data. This workshop will cover adaptive designs for: adaptive allocation rules (dynamically alters the allocation probabilities to reflect the accruing data in the trial); sampling (at each stage determining how many patients will be sampled at the next stage); stopping rules (for reasons of efficacy, harm, futility); and decisions pertaining to design changes (e.g., changing test statistics, redesigning multiple end points, changing the

Workshops

patient population). Adaptive design prospectively specifies and tests the hypotheses that include investigation of the intervention effect in the originally investigated unselected participant population and the pre-specified participant subsets.

Presenters: Dr. George Wells, Director, Cardiovascular Research Methods Centre, University of Ottawa Heart Institute;
Dr. Vijay Shukla, Senior Advisor, Canadian Agency for Drugs and Technologies in Health
Robert Li, Health Canada
Karen Lee, Director – Health Economics, Canadian Agency for Drugs and Technologies in Health

Plenary Sessions

OFFICIAL OPENING

April 4, 2011
0830 - 0900
Regency Ballroom

Dr. Brian O'Rourke, President and CEO of the Canadian Agency for Drugs and Technologies in Health will welcome symposium participants, describe some of the symposium highlights and outline anticipated outcomes.

1

Evidence to Practice: Maximizing Our Investment in Health Care

April 4, 2011
0900 - 1030
Regency Ballroom

A panel of Deputy Ministers of Health will outline the opportunities and challenges they face as they work to improve the health of the citizens in their respective jurisdictions and discuss the relationship between health technology assessment, health care delivery, health system sustainability and improved patient outcomes.



Kevin McNamara is Deputy Minister of Health in Nova Scotia. He was previously Chief Executive Officer of South Shore Health. Throughout his career, Kevin has played a strategic role effecting change in several organizations. As Deputy Minister of Nova Scotia's Department of Environment and Labour, he served as a member of the government's executive team, providing advice to the Premier, Cabinet, and Ministers. Prior to this, he served as Vice-President of Human Resources for the Queen Elizabeth II Health Sciences Centre in Halifax, where he was a key member of the senior leadership team. Kevin was a key player in the creation of the Cobequid Multi-Service Centre, the first free-standing Emergency Health Centre in North America. He served as Executive Director and was instrumental in the facility planning and construction, in addition to recruiting community volunteers and operating a Capital Fundraising Campaign that raised \$1 million. Kevin continues to be active in the community and is currently a Board member of the LaHave River Salmon Association.

Plenary Sessions



Saäd Rafi was appointed Deputy Minister of the Ontario Ministry of Health and Long-Term Care, effective February 16, 2010. Most recently, Mr. Rafi was Deputy Minister of the Ministry of Energy and Infrastructure. Previously, he was National Infrastructure Advisory and Project Finance Practice Leader at Deloitte & Touche LLP. Mr. Rafi formerly served the Ontario Government as the Deputy Minister of Transportation and the Deputy Minister of Community Safety. He was seconded to the Ontario SuperBuild Corporation, Ministry of Finance, as Vice-President, Public-Private Partnerships. He has held a number of senior management positions in the Ministry of Transportation, Cabinet Office, and the Ministry of Economic Development, Trade and Tourism. Mr. Rafi holds a Bachelor of Arts and a Master of Arts, in Public Administration, from Carleton University.



Paddy Meade is the Deputy Minister with the Department of Health and Social Services (HSS) in the Northwest Territories. Prior to her appointment to the Deputy Minister position, Ms. Meade was Executive Operating Officer, Alberta Health Services; Deputy Minister of Health and Wellness and Deputy Minister of Aboriginal Affairs and Northern Development for the Government of Alberta. Ms. Meade was also CEO of the Alberta Alcohol and Drug Abuse Commission (AADAC). Ms. Meade's experience includes six years as Executive Director of the Correctional Services Division, Young Offender Branch for Alberta Justice. She was also the program director at the Enviro Wilderness School and spent several years working with youth in conflict with the law, including serving as director of the Young Offender Centres in Calgary and as program director of the Strathmore Youth Development Centre. Ms. Meade is married and has two university student children. In her spare time, Ms. Meade enjoys outdoor activities, travel, art, and music. She is also committed to lifelong learning and enjoys continuous study in a variety of areas.



Moderator — Dr. Terrence Sullivan, Chair of CADTH Board of Directors, is the former President and Chief Executive Officer of Cancer Care Ontario, where he worked for 10 years until 2011. From 1993 to 2001, Dr. Sullivan held the position of President of the Institute for Work & Health, a private, not-for-profit Institute affiliated with the University of Toronto, which he developed into North America's leading research centre on work-related injury. Dr. Sullivan has held senior roles in the Ontario Ministries of Health, Intergovernmental Affairs, and the Cabinet Office. He served as Executive Director of the Premier's Council on Health Strategy for two successive First Ministers of Ontario, including serving as Deputy Minister. Dr. Sullivan is an active behavioural scientist with research and practice interests in cancer prevention and health systems performance. He holds faculty appointments in the Department of Health Policy, Management and Evaluation and the Dalla Lana School of Public Health at the University of Toronto. His current voluntary commitments include Chair of the Ontario

Agency for Health Protection and Promotion. Previous Board experience includes the Canadian Partnership Against Cancer, the Canadian Association of Provincial Cancer Agencies, the Ontario Institute for Cancer Research, the Institute for Clinical Evaluative Sciences, Allergen, and the University Health Network.

2

Maximizing Our Investment in Clinical Practice Guidelines

April 5, 2011
0830 – 0945
Regency Ballroom

Clinical practice guidelines provide an essential link between evidence and practice. Yet, consensus can trump evidence in guideline development. Guidelines also influence health spending by governments and insurers. However, there is no widely accepted way of incorporating economic considerations into guidelines – or even reaching agreement that economic considerations have a place in guidelines. This session will explore the relationship between health technology assessment and clinical practice guidelines, consider how guidelines incorporate clinical and economic evidence, and discuss what can be done to promote compliance with guidelines.



Dr. Norm Campbell is a Professor of Medicine, Community Health Sciences and Physiology and Pharmacology at the University of Calgary and is a member of the Libin Cardiovascular Institute of Alberta. Dr. Campbell holds the CIHR Canadian Chair in Hypertension Prevention, is on the Operations Committee and Board of Hypertension Canada, the Steering Committee of the Health Canada Intersectoral Sodium Reduction Committee, and chairs the Pan American Health Organization / World Health Organization (WHO) Regional Expert Group on Cardiovascular Disease Prevention through Dietary Salt Reduction that has the task of making policy recommendations to reduce dietary sodium in the Americas, and is a member of the WHO Nutrition Guidance Expert Advisory Group. Dr. Campbell obtained his MD from Memorial University in Newfoundland, where he also did his Internal Medicine residency. He went on to study Clinical Pharmacology at the Mayo Clinic under Dr. Richard Weinshilboum, and is a Specialist in Clinical Hypertension (American Society of Hypertension). Dr. Campbell has over 250 peer-reviewed manuscripts.

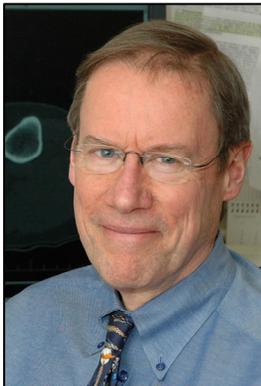


Dr. Scott Klarenbach is an Associate Professor in the Department of Medicine at the University of Alberta, where he works as a nephrologist, health economist, and health services researcher. He holds a Population Health Investigator award from Alberta Innovates - Health Solutions, and has expertise in conducting policy-relevant economic analysis in areas of kidney disease, diabetes, cancer, and obesity. He chairs the Canadian Society of Nephrology Clinical Practice Guidelines methodology subcommittee, the Economic Outcomes subgroup of the Canadian Hypertension Education Program, and serves on the Canadian Optimal Medication Prescribing and Utilization Service (COMPUS) Expert Review Committee responsible for developing evidence-based guidelines for Ministries of Health in Canada.

Plenary Sessions



Dr. Valerie Palda, MD (Queen's), MSc (Toronto) is the Medical Director of the Guidelines Advisory Committee within the Centre for Effective Practice and an Associate Professor at the University of Toronto in the Departments of Medicine and Health Policy, Management and Evaluation. A specialist in Internal Medicine, her academic interests include evidence-based guideline methods, systematic reviews, and knowledge translation. She has been a member of the American College of Physicians' Clinical Efficacy Assessment Subcommittee and the Canadian Task Force on Preventive Health Care, and now mainly facilitates or offers methods support to guideline panels and development groups. She has an interest in increasing guideline methods capacity in the health care community, and co-directs a graduate course in guideline methods for health professionals, as well as offering annual educational workshops in guideline methods. Her publications may be found at PUBMED – palda v



Dr. Martin Reed is the Head of the Department of Radiology at the Children's Hospital in Winnipeg and a Professor of Radiology and of Pediatrics and Child Health at the University of Manitoba. His major research interest is health services research, particularly utilization, guidelines, and quality improvement. He is the Chair of the Guidelines Working Group of the Canadian Association of Radiologists, Co-convener of the Guidelines Working Group for the International Radiology Quality Network, a member of the Appropriateness Criteria Committee of the American College of Radiology, and a member of the Editorial Panel of Diagnostic Imaging Pathways.



Moderator — Dr. Stirling Bryan is Director of the Centre for Clinical Epidemiology & Evaluation, and Professor in the School of Population & Public Health at UBC. He is also honorary professor at the University of Birmingham (UK) and an adjunct associate at the Center for Health Policy at Stanford University. In 2005-2006, Dr. Bryan was a Commonwealth Fund Harkness Fellow in Health Care Policy, based at Stanford. He sits on the Editorial Board of *Health Economics*, a journal for which he is also an Associate Editor. Dr. Bryan's research interests span the areas of outcome measurement, economic evaluation, health technology assessment, and health care decision-making. His work includes both applied and methodological contributions.

Maximizing Our Investment in Health Technologies

April 5, 2011
1500 – 1615
Regency Ballroom

Decisions about the adoption and use of drugs, devices and medical procedures shape the organization and delivery of health care services and drive optimal health outcomes and health system expenditure growth. For more than 20 years, health technology assessment has supported informed decisions, constantly evolving as health system complexity and resource allocation pressures have increased. But could its impact be even greater? An international panel will explore the benefits being achieved globally through innovative initiatives such as value-based pricing in the UK, comparative effectiveness research reforms in the USA and the range of approaches being taken to manage the entry of health technologies. What are the lessons for Canadian health care providers and decision makers? Can we harness the benefits of these and other initiatives to maximize our investment in health technologies?



Dr. Sarah Garner is the Associate Director for Research and Development at the UK's NICE. Dr. Garner, a 2010-2011 Harkness Fellow in Health Care Policy and Practice, is spending one year in the US examining comparative effectiveness research on innovation, low-value health care, and value-based insurance design. A pharmacist, Dr. Garner specializes in medicines management, has a PhD in Health Technology Assessment, and has worked at NICE since 2000. Dr. Garner is on the Regulation of Medicines Review Panel, undertaking independent reviews of UK licensing authority decisions, and is an Editor for the Cochrane Skin Group. Dr. Garner has a special interest in antimicrobials and was previously Pharmacist Lead for the UK Department of Health Advisory Committee on Antimicrobial Resistance. In 2002, she co-authored a Department of Health-funded report "Disease Registers in England," which examined how registers are used in the UK. In 2010, she contributed a chapter on assessing the quality of registers for the US AHRQ handbook "Registries for Evaluating Patient Outcomes."



Clifford Goodman, PhD, is a Senior Vice-President and Principal at The Lewin Group, a health care policy and human services consulting firm based in Falls Church, Virginia. He has 30 years of experience in such areas as health technology assessment, comparative effectiveness research (CER), health economics, and studies pertaining to health care innovation, regulation, and payment. He directs studies and projects for an international range of government agencies; pharmaceutical, biotechnology, and medical device companies; health care provider institutions; and professional, industry, and patient advocacy groups. Dr. Goodman directs the Lewin Group Center for CER, involving work in such areas as a national CER inventory, a national horizon scanning system, and a multi-payer claims database for CER. He is the chair of the Medicare Evidence Development & Coverage Advisory Committee (MEDCAC) for the US Centers for Medicare and Medicaid Services. He has testified to Congress on issues pertaining to Medicare coverage of health care technology. Dr. Goodman is Vice-President of the professional society, Health Technology Assessment International (HTAi), and is a Fellow of the American Institute for Medical and Biological Engineering. He did his undergraduate work at Cornell University, received a master's degree from the Georgia Institute of Technology, and earned his doctorate from the Wharton School of the University of Pennsylvania.

Plenary Sessions



Dr. Chris Henshall works as an independent consultant, advising governments and public and private sector organizations on health, research, and innovation policy. He was the Founding President of Health Technology Assessment International (HTAi), and is currently Chair of the HTAi Policy Forum and a Board member of the Alberta Research and Innovation Authority, an Associate Professor in the Health Economics Research Group at Brunel University, and an honorary Fellow in the Centre for Health Economics at the University of York. Chris has worked previously for the Health Promotion Research Trust, the UK Medical Research Council, the Department of Health and NHS in England (where he was involved in establishing the NHS R&D Budget, the NHS HTA Programme, and the National Institute for Health and Clinical Excellence), the Department of Trade and Industry (where he was responsible for UK science and innovation policy and funding), and the University of York (where he was responsible for promoting enterprise and innovation and links with the economy, government, and businesses at home and overseas).



Diane McArthur is Assistant Deputy Minister and Executive Officer of Ontario Public Drug Programs, appointed in June 2010. Ms. McArthur has been the Assistant Deputy Minister responsible for seniors' issues within the Government of Ontario, and Executive Coordinator of Health and Social Policy in the Cabinet Office of the Government of Ontario. In the latter position, she supported the policy decision-making processes of the Cabinet committee that deals with health; social services; health promotion; francophone, women's, and seniors' issues; and was responsible for broader public sector labour relations. Ms. McArthur has held progressively more senior positions in several ministries since joining the Government of Ontario as a Management Intern in 1989. She has extensive experience in health human resources policy and planning for health provider training, education, supply and distribution initiatives, data and health information planning and analysis, health care provider negotiations, rural health policy, labour relations, and service delivery restructuring. Ms. McArthur has a Bachelor of Public Relations from Mount Saint Vincent University in Halifax and a Master of Business Administration from the University of Ottawa.



Moderator - Dr. Brian O'Rourke is the President and Chief Executive Officer of the Canadian Agency for Drugs and Technologies in Health (CADTH). With more than 28 years in pharmacy practice in various leadership capacities, he actively positions CADTH as the leading source of health technology information in Canada. In carrying out CADTH's mandate, Dr. O'Rourke ensures that CADTH delivers timely and innovative products and services in response to increasingly demanding health care challenges. His leadership activities focus on providing health care decision-makers with evidence-based information, tools, and resources about the effectiveness of drugs and other health technologies in response to the rapid rate of technological changes in health care. As CADTH is a recognized world leader in health technology assessment, Dr. O'Rourke works closely with national and international partners in CADTH's efforts to improve health outcomes.

Concurrent Sessions

A1

Concurrent Session A1 – Oral Presentations

Evidence, Ethics, and Quality: Issues in Health Technology Assessment Methodology

April 4, 2011

1100 – 1230

Regency A

No “Evidence” but Good Reasons: Understanding Evidentiary Standards in Ethics Analysis

Presenting Authors: Ken Bond (Research Associate), Institute of Health Economics
Katherine Duthie (Doctoral Candidate), University of Alberta

Co-author: Angela Purcell, Nova Scotia Department of Health

Ethics analysis in health technology assessment (HTA) is considered to be of value to decision-makers not only for strong theoretical and ethical reasons, but also because it is believed to increase the transferability and, thus, the utility of a health technology assessment. However, in moving from evidence to practice, difficulties arise with the integration of ethics analyses into HTAs, as a result of differences between evidentiary standards used in clinical and economic analyses (probabilistic evidence of cause and effect) and ethics analysis (systematic reasoning about ethical issues).

We will discuss three practices evident in HTA and evidence-based decision-making that are symptomatic of a persistent misunderstanding of these differences in standards of evidence: the misapplication of grading of evidence and strength of recommendations frameworks, the turn to scientific literature to identify ethical issues, and the dependence on descriptive empirical studies for normative conclusions.

We will then describe a framework for thinking about and explaining evidentiary standards in ethics and its implications for analysis that can be understood by people with different methodological backgrounds and that makes clearer the kind of support that empirical data provides when conducting ethics analysis. Drawing on a recent ethics analysis, we illustrate potential challenges for researchers and decision-makers in taking this new approach to evaluating evidence in ethics analyses.

The Use of Quality Instruments to Weight the Evidence obtained from Randomized Controlled Trials (RCTs)

Presenting Author: Dr. Maurice McGregor (Professor Emeritus),
Department of Medicine, McGill University

Co-authors: Xuanqian Xie (Biostatistician) and Dr. Nandini Dendukuri (Director, Technology Assessment Unit), McGill University Health Centre

Introduction: In the course of synthesizing the evidence provided by conflicting randomized controlled trials (RCTs) of varying quality, it is common to weight the results of each study, explicitly or implicitly, according to its quality. However, when recently assessing the effectiveness of negative pressure wound therapy (NPWT), we found that the application of commonly used criteria could result in inappropriate exclusion of valid evidence. We speculated that existing instruments had been largely developed in the context of drug trials, which might sometimes render them inappropriate for estimation of the quality of non-pharmacological interventions.

Method: To evaluate the quality of RCTs of NPWT, we developed a new instrument. Four design characteristics that are likely to influence the validity of the conclusions of RCTs were recognized: selection bias, attrition bias, detection bias, and imprecision. Arbitrary scores were allocated for each.

Intervention: We compared the criteria considered in this instrument to those considered in two instruments widely used for measuring the quality of RCTs, the Jadad and Cochrane scales. We found that, in practice, the differences in these instruments could give significantly different results.

Conclusion: Rigorous application of instruments developed in one context to very different interventions can result in the inappropriate exclusion of valid evidence. When using such instruments, consideration should be given to the possibility that they may require adaptation to the context in which they are to be used.

Don't Put the Cart Before the Horse (Using the Hierarchy of Logical Questioning for Systematic Reviews)

Presenting Authors: Dr. Aaron Tejani (Research Assistant), Dr. Ken Bassett (Chair, Drug Assessment Working Group) and Mr. Ciprian Jauca (Coordinator), Therapeutics Initiative, University of British Columbia

Several published Cochrane reviews answer research questions that do not seem appropriate in the context of current knowledge. For example, is there any point in knowing which interventions increase influenza vaccination rates if there is no evidence that the vaccination leads to a significant reduction in morbidity and mortality? A simple framework known as the “hierarchy of logical questioning” can be used to deal with this dilemma.

Objective: To describe how to identify the appropriate systematic review research questions by using the hierarchy of logical questioning framework.

Methods: Several examples of recent reviews will be described that answer research questions which are presumptive/lack clinical importance in the context of current knowledge. In each case, an overview of current knowledge will be explored, followed by the development of a hierarchy of logical questioning. The final step will be to identify what the appropriate research question should have been for each of the examples. In addition, the audience will be alerted to the possible negative consequences (e.g., increasing adherence to medications that lead to net harm) of conducting a systematic review in which the research question is presumptive/of limited clinical importance. Finally, in an effort to avoid being misled, participants will be shown how to use the aforementioned framework in order to properly interpret systematic reviews that have already been conducted.

Conclusions: By using the hierarchy of logical questioning, researchers can produce more appropriate research questions and systematic reviews that would better serve knowledge users.

Multi-Criteria Decision-Analysis: Prioritizing the Use of the Medical Isotope Technetium-99m During a Supply Disruption

Presenting Author: Dr. Martin Reed, Department of Radiology, Health Sciences Centre, Winnipeg Children's Hospital; Co-Chair, Canadian Agency for Drugs and Technologies in Health Medical Isotopes and Imaging Modalities Advisory Committee

Co-authors: Dr. Michelle Mujoomdar (Manager-Clinical Research), Kimberlee Lambe (Knowledge Exchange Officer, and Trinh Luong (Director-HTA and Optimal Use), Canadian Agency for Drugs and Technologies in Health
Dr. François Dionne, University of British Columbia

Given recent global shortages, CADTH was asked to provide national guidance on the management of the medical isotope Technetium-99m (^{99m}Tc) in times of supply disruption. The guidance will be developed in partnership with the CADTH Medical Isotopes and Imaging Modalities Advisory Committee (MIIMAC), which comprises individuals with expertise in diagnostic imaging and research methodology; representatives from institutions, health regions, Ministries of Health; and members of the public.

CADTH is using a multi-criteria decision analysis approach (MCDA) to develop the guidance on the priority use of ^{99m}Tc . MCDA was selected primarily because of the complexity of the project given that ^{99m}Tc is used across a number of clinical areas and that jurisdictional access to alternative imaging modalities varies. The use of MCDA for this project means that health benefits are defined from the multiple relevant perspectives, both in expertise and jurisdiction, represented on MIIMAC. The research goal is to assess how well ^{99m}Tc -based imaging performs with respect to a number of criteria when compared to options such as other medical isotopes or other diagnostic imaging modalities such as magnetic resonance imaging. Examples of the criteria include diagnostic accuracy, patient acceptability, and cost.

The national guidance document will form the foundation for the development of a flexible tool that can be customized for use at the local level. Customization will permit users to input jurisdictional-, regional-, or institutional-specific data and relative weighting of criteria. The output will be a tailored priority list of ^{99m}Tc usage that can be used during a supply disruption, reflecting the local environment.

A2

Concurrent Session A2 – Oral Presentations
Evidence-Based Policy-Making: What Works?

April 4, 2011

1100 – 1230

Plaza A

**Developing a Strategy for Knowledge Translation in Primary Care:
Lessons from the Summer Institute on Primary Care Research,
Canadian Institutes of Health Research**

Presenting Author: Dr. Kelly Grindrod (Assistant Professor), University of Waterloo

Co-authors: Matthew Menear (PhD Student), University of Montreal
Kathleen Clouston (Post-Doctoral Fellow), University of Manitoba
Dr. France Légaré (Professor), Université Laval
Dr. Peter Norton (Professor), University of Calgary

Background: To guide primary health care reform, we need high-quality primary care research and a knowledge translation (KT) strategy that is specific to the primary care setting.

Methods: The Canadian Institutes of Health Research have committed to supporting primary care research. From June 20 to 23, 2010, two of these institutes — the Institute of Population and Public Health and the Institute of Health Services and Policy Research held an intensive workshop in the rural community of Alliston, Ontario, for future researchers in primary care. This event, which focused on the complexities of primary care research, brought together 30 trainees from across Canada (including top graduate students and post-doctoral/health professional fellows) and 13 leading primary care researchers and decision-makers.

Results: This presentation will provide researchers, decision-makers, and primary care providers (PCPs) with information on the training initiative. Over the four days of the Alliston workshop, a common theme emerged from the activities: The primary care setting is unlike any other in how it influences KT and KT research. For progress, consideration needs to be given to the following factors:

- PCPs have diverse expertise and experiences
- primary care communication channels differ from other settings
- partnerships need to exist between PCPs and researchers
- the primary care system is complex.

Conclusion: The primary care setting is different from other health care settings. Recognizing this will allow primary care stakeholders to tailor their KT research and strategies to meet the specific needs of policy-makers and PCPs.

Adaptation of Published Evidence-Based Recommendations on Heritable Thrombophilia Testing to Consensus-Based Guidelines in British Columbia

Presenting Author: Dr. Tyler Smith (Resident),
University of British Columbia Laboratory Medicine

Co-authors: Dr. David Pi (Hematopathologist) and
Dr. Monika Hudoba (Division Head Hematopathology),
Vancouver General Hospital
Dr. Agnes Lee (Thrombosis Program Director),
University of British Columbia and Vancouver Coastal
Health

Standard heritable thrombophilia testing (HTT) assesses patients for the presence of factor V Leiden, prothrombin gene mutation, and deficiencies of antithrombin and proteins C and S. Unfortunately, it remains uncertain how these mutations interact with acquired clinical risk factors, which are strong determinants of thrombosis. This has led to significant variability in physician practice and frequent inappropriate ordering of HTT. In April 2010, Baglin et al. published evidence-based guidelines for HTT on behalf of the British Committee for Standards in Haematology. To determine the consensus and relevance of these recommendations in British Columbia, we conducted an anonymous online survey of specialists with expertise in thrombosis to quantify their agreement or disagreement with the British recommendations. Responses were scored from -2 (strongly disagree) to +2 (strongly agree). A participation rate of 65% (20 of 31) was received. Of the 30 recommendations, 15 (50%) received strong support, 10 (33%) received moderate support, and five (17%) received weak support, as defined by mean scores of 1.0–2.0, 0.50–0.99, and 0–0.49, respectively. We also introduced a decision-making tool to guide HTT ordering in patients admitted for acute care at Vancouver General Hospital that dramatically reduced inappropriate HTT usage. We are now utilizing the ADAPTE framework to develop British Columbia practice guidelines on HTT. Successful implementation of this project will lead to improved efficiency and cost savings in HTT ordering, and will serve as a model of knowledge transfer aiding the development of future guidelines targeting other areas of clinical ambiguity.

Healing Resource Wounds through the Use of Evidence: The Silver Lining in a Vacuum of Evidence

Presenting Author: Dr. John Embil (Director, Infection Prevention and Control Unit), Winnipeg Health Sciences Centre

Co-author: Mr. Dan Skwarchuck (Executive Director, Health Services Integration), Winnipeg Regional Health Authority

The Winnipeg Regional Health Authority (WRHA) is a health management organization serving Winnipeg and the province of Manitoba. The cost of delivering programs and individualized care threatens to exceed fiscal capacity and, thus, rational, evidence-based decisions are essential.

The Canadian Agency for Drugs and Technologies in Health (CADTH) is an impartial agency whose mandate includes performing systematic reviews of literature and synthesis of the research to inform health decision-makers on interventions that are both clinically and cost-effective.

Wound care is a priority for health authorities, but the cost of wound care products has also become a significant concern. For the WRHA, negative pressure therapy [NPT] and silver-based dressings [SBD], with annual costs exceeding several million dollars in annual expenditures, became an area of interest, as the clinical and cost justification for both of these therapies had been questioned. A CADTH review of SBD and NPT requested by the WRHA revealed that there was insufficient evidence to support the use of either therapy for many of the indications in which they were currently being used. In particular, SBD did not appear to add any benefit over conventional dressing. This data has allowed the WRHA to create clear indications for the rational use of SBD and NPT. In addition to optimizing the rational use of these therapies, the WRHA anticipates significant cost savings. This information should be available to all health care providers to inform their critical thinking and evidence-based decisions.

A3

Concurrent Session A3 – Oral Presentations HTA in Hospitals: Reflections and Perceptions

April 4, 2011

1100 – 1230
Plaza B

Five Years of a Local Health Technology Assessment Program in a Surgical Department

Presenting Author: Dr. Paule Poulin (Research Scientist, Department of Surgery), Alberta Health Services

Co-authors: Dr. Lea Austen (Surgeon), Ms. Ann Kyle (Research Scientific Editor), Mr. John Kortbeek (Professor and Head, Department of Surgery) and Dr. René Lafrenière (Surgeon, University of Calgary), Alberta Health Services

There is pressure for surgical departments to introduce new and innovative health technologies, while also ensuring that they are safe and effective and can be managed with available resources. To address this, we previously developed a local health technology assessment (HTA) program to systematically evaluate and monitor new technologies at the local level. We present here a retrospective analysis of the outcomes of this program as used by the Department of Surgery and Surgical Services in the Calgary Health Region over a five-year period from December 2005 to December 2010. Of the 68 technology requests, 15 were incomplete and dropped by the applicant, 12 were approved, 24 were given restricted approval conditional on satisfactory outcomes, 14 were approved for research use only, and three were referred to additional review bodies. Subsequent outcomes reporting resulted in at least five technologies being dropped for failure to perform. In this session, we will also report observations on what worked well, as well as problems that arose during the development and operation of this program

and areas for improvement. Decisions made by this local HTA program were rarely “yes” or “no.” Rather, many technologies were given restricted approval, with full approval contingent on satisfying certain conditions such as clinical outcomes reporting, training protocol development, funding, etc. Thus, innovation could be supported, while ensuring safety and effectiveness in the local setting. Analysis of what worked well, what needs improvement, and lessons learned will give us a better understanding for adapting this program to the newly formed Alberta Health Services.

Clinicians’ and Administrators’ Perceptions of Hospital Health Technology

Presenting Author: Carmen Thompson, Research Assistant/Graduate Student, University of Calgary

Co-authors: Dr. Ariel Ducey (Assistant Professor of Sociology) and Dr. René Lafrenière (Department of Surgery), University of Calgary
Dr. Amiram Gafni (Professor, Department of Clinical Epidemiology and Biostatistics), McMaster University
Dr. Charles Weijer (Professor and Canadian Research Chair, Department of Philosophy), University of Western Ontario

Background: Concern has been growing about the licensing and adoption of surgical devices into clinical practice before full evidence of their effectiveness and safety is available. Evidence for this analysis is from a Canadian Institute of Health Research (CIHR)-funded study examining how ethical and economic principles inform the roles, responsibilities, information, and policy needs of stakeholders in the introduction of surgical devices into clinical practice.

Design: Our study involves case studies of selected pelvic floor surgery devices representing three Health Canada risk classes. In-depth, semi-structured interviews were conducted with representatives from federal regulatory bodies, device manufacturers, clinicians, patients, health care institutions, provincial health departments, and professional societies. Participants were recruited from clinical, academic, and regulatory settings in two Canadian provinces. Interviews with physicians and administrators provided the data for this analysis.

Objective: To compare and contrast clinicians’ and administrators’ perceptions of hospital health technology assessment (HTA) programs and their impact on adoption of new surgical devices into clinical practice.

Results: Preliminary findings suggest that there are differences in physicians’ and administrators’ perceptions of local HTA programs. Areas of disagreement include devices requiring assessment, evidence requirements, and ethical and economic rationales for decisions. Perspectives about local HTA programs varied according to site of practice, type of physician or administrator, organizational context, and personal characteristics and preferences.

Conclusions: Local HTA programs are a strategy for managing economic, safety, and effectiveness concerns in the adoption of new surgical devices. Participation in these programs is increasingly required of physicians. Organizational culture and constraints determine the nature and authority of local HTA programs.

Contrasting Roles of HTA Organizations in Canada: Evidence from a Qualitative Interview Study

Presenting Authors: Dr. Sue Ross (Director of Research, Obstetrics & Gynaecology), and Carmen Thompson (Research Assistant/Graduate Student, University of Calgary)

Co-authors: Dr. Ariel Ducey (Assistant Professor of Sociology) and Dr. René Lafrenière (Department of Surgery), University of Calgary
Dr. Amiram Gafni (Professor, Department of Clinical Epidemiology and Biostatistics), McMaster University;
Dr. Charles Weijer (Professor and Canadian Research Chair, Department of Philosophy), University of Western Ontario

Background: Concern has been growing about the licensing and adoption of surgical devices into clinical practice before full evidence of their effectiveness and safety is available. Health technology assessment (HTA) forms an important part of the adoption of new technologies into clinical practice. Evidence for this analysis is from a CIHR-funded study examining how ethical and economic principles inform the roles, responsibilities, information and policy needs of stakeholders in the introduction of surgical devices into clinical practice.

Design: Our study involves case studies of pelvic floor surgical devices as examples of elective surgeries. In-depth semi-structured interviews were conducted with representatives of relevant stakeholders from clinical, academic and regulatory settings in two Canadian provinces. A variety of HTA organizations were identified, and representatives were interviewed.

Objective: To examine the contrasting roles of HTA organizations, and their impact on adoption of new surgical devices into clinical practice.

Results: Preliminary findings suggest that HTA organizations have contrasting and overlapping roles and responsibilities. There are also gaps which result in lack of clear and independent evaluations to guide clinical practice. For example, higher level HTA evaluations are available to recommend types of procedure, but local evaluations are needed to recommend adoption of specific devices. Local evaluations require duplication of effort across institutions.

Conclusions: Increasing constraints on health care budgets ensure that the role of HTA evaluations is increasingly important in informing the adoption of new surgical devices. HTA organizations must coordinate their activities to ensure their evaluations remain relevant, while avoiding duplication of effort.

Can Applying Health Technology Assessment Processes to Hospital Decision-Making Influence Choices?: A Case Study of Low-Molecular-Weight Heparin in Chronic Hemodialysis Patients

Presenting Author: Natasha Burke (Research Associate), PATH Research Institute, McMaster University

Co-authors: Dr. Jean-Eric Tarride (Associate Professor), James M. Bowen (Assistant Professor), and Ron Goeree (Associate Professor), PATH Research Institute, McMaster University

Background: A pilot project was established to explore how health technology assessment (HTA) processes can be applied to policy decision-making at a hospital level. Secondary to a formulary request, a case study was initiated.

Objective: To evaluate the use of low-molecular-weight heparin (LMWH) versus unfractionated heparin (UFH) in hemodialysis using a structured, systematic, evidence-based HTA approach and to examine the influence on the policy decision compared to the current process.

Methods: A systematic review and meta-analysis was conducted to evaluate the effectiveness, safety, and cost-effectiveness of all LMWHs versus UFH in hemodialysis. Hospital-specific drug utilization and budget impact was estimated. Implementation issues associated with adopting LMWHs were assessed in terms of resource utilization and workload for pharmacy, nursing, and dialysis technicians. Following review of the formulary request using the current process, results of the more evidence-based approach were presented to decision-makers.

Results: After reviewing 998 citations, 25 studies (1 systematic review, 12 randomized, 12 non-randomized) were identified. Meta-analysis demonstrated no statistically significant differences between LMWH and UFH for circuit thrombosis, bleeding, or compression time. No cost-effectiveness studies were identified. Switching to LMWH has an incremental pharmacy budget cost of more than \$500,000 depending on brand and dosage and would result in a re-allocation of workload between dialysis technicians and nurses.

Conclusions: LMWH demonstrated no advantage over UFH in effectiveness or safety, but would result in a substantial budget impact to the hospital. The incremental information obtained using an evidence-based HTA process resulted in a different decision compared to the current hospital process.

A4

Concurrent Session A4 – Oral Presentations Behavioural Change

April 4, 2011
1100 – 1230
Regency B

Academic Detailing: The British Columbia Experience

Presenting Author: Dr. Terryn Naumann (Director, Evaluation and Coordinator, Provincial Academic Detailing (PAD) Service), British Columbia Ministry of Health Services

Co-authors: Dr. Anne Nguyen (Director, Evaluation), Dr. Sarah Jennings (Director, Information), Dr. Kelly Grindrod (A/Director, Evaluation), and Dr. Suzanne Taylor (Executive Director), British Columbia Ministry of Health Services

The British Columbia (BC) Ministry of Health Services' Pharmaceutical Services Division (PSD) has established a successful academic detailing service which aims to provide objective, balanced, evidence-informed drug information to physicians and other health care professionals on the best prescribing practices. This presentation will be of interest to pharmacy and government decision-makers seeking to promote evidence-informed prescribing among health care professionals.

The BC Provincial Academic Detailing (PAD) service was launched in March 2008. Funding is provided by PSD to regional health authorities and the University of British Columbia's eHealth Strategy Office. Drug therapy topics are recommended by an advisory committee. Each topic is developed in consultation with an independent clinical expert who writes a newsletter article, teaches part of an accredited upskilling workshop, and reviews other printed materials/tools. Each topic is accredited for a 1.0 Mainpro-M1 continuing education credit.

To date, the PAD service has provided academic detailing sessions on human papillomavirus (HPV) vaccination, anticoagulation in atrial fibrillation, antibiotics in community practice, inhaled medications for chronic obstructive lung disease, and medications for osteoporosis.

As of October 2010, PAD has 11 (9.0 FTEs) academic detailing pharmacists. Over 1,100 physicians and other health care professionals have participated in at least one session. Technology-enabled academic detailing (TEAD) sessions have been introduced, allowing academic detailing sessions to be conducted via web conferencing.

Evaluation of PAD involves a mixed-methods approach with qualitative surveys, focus groups, and interviews and a quantitative assessment enabled by a designed delay, clustered randomization process, and use of the provincial health databases.

Evidence-Based Tools for Policy-Makers: The Impact of Warnings, Academic Publications, and Formulary Restrictions on Drug Prescribing in Ontario

Presenting Author: Tara Gomes (Project Research Lead), Ontario Drug Policy Research Network, Institute for Clinical Evaluative Sciences

Co-authors: Dr. Muhammad Mamdani (Director of the Applied Health Research Centre), the Keenan Research Centre, Li Ka Shing Knowledge Institute;
Dr. David Juurlink (Head of the Division of Clinical Pharmacology and Toxicology), Sunnybrook Health Sciences Centre

As decision-makers strive to use health research to inform prescribing policies, it is important to consider the effectiveness of the various policy approaches and knowledge dissemination tactics that may be employed. Drug formulary changes, health regulatory agency warnings, and peer-reviewed publications are tools commonly used throughout evidence-based policy decision-making processes;

however, the appropriateness and impact of these approaches may vary. This presentation will be of interest to health policy-makers with an interest in evidence-based decision-making.

This presentation describes results from three studies that examined the impact of these tools on drug prescribing trends in Ontario. The first study examines the impact of health regulatory agency safety warnings on desmopressin- prescribing among children. This study also highlights the specificity of the warnings, showing decreased desmopressin use among children, but no change in use among older age groups. In addition to the issuance of warnings and drug label changes, provincial public drug programs often use formulary restrictions to tailor the availability of drugs to specific patient groups. In a second study, we demonstrate the effect of various provincial formulary changes to the reimbursement criteria for erythropoietin-stimulating agents in cancer patients, and the additional effect of safety warnings from regulatory agencies. Finally, academic publications can be a useful tool for knowledge dissemination, particularly to health care professionals. We measured the impact of a drug interaction publication and associated media coverage on prescribing trends, and found a significant change in prescribing practice, despite a lack of regulatory agency warnings or formulary changes.

Drug Use Optimization at the British Columbia Ministry of Health Services, Pharmaceutical Services Division: Decreasing Demand By Increasing Evidence-Based Knowledge Translation

Presenting Author: Dr. Suzanne Taylor (Executive Director, Drug Use Optimization Branch), British Columbia Ministry of Health Services

Co-authors: Dr. Sarah Jennings (Director-Information, Drug Use Optimization Branch); Dr. Terryn Naumann (Co-Director, Evaluation, Drug Use Optimization Branch); Dr. Barbara Gobis Ogle (Director, Utilization) and Mr. Bob Nakagawa (Assistant Deputy Minister; Pharmaceutical Services Division), British Columbia Ministry of Health Services

Purpose: The Drug Use Optimization (DUO) branch mission is to educate and engage the province's prescribers, other health professionals, patients, and public on the optimal use of medications to achieve improved health outcomes in a fiscally responsible manner and to evaluate the impact of programs and services.

Target audience: This presentation will be useful for decision-makers, health care professionals, patients, members of the public, and educators desiring a sustainable health care system that optimizes health outcomes and optimizes the use of medications and medication-related human resources.

Background: The Pharmaceutical Services Division embodies a therapeutically oriented pharmaceutical management system that includes consideration of best drugs, best policies, best deals, and best prescribing. Four branches bring this system to life. The DUO branch focuses on best prescribing, supporting

pharmacists to work to their full scope of practice, and facilitating evaluation of real world safety and effectiveness and real world cost-effectiveness.

Methods: The DUO is involved with facilitating and evaluating multifaceted evidence-based, best-practice, optimal use behavioural change initiatives such as Provincial Academic Detailing, Education for Quality Improvement of Patient Care, Do Bugs Need Drugs, BC Medication Management Project, Clinical Pharmacy Services under the British Columbia Pharmacy Services Agreement, Health Literacy initiatives, implementation of CADTH optimal use recommendations, linkages for development of British Columbia Guidelines, contributions to professional newsletters and conferences, and educational outreach visits to health fairs and community groups. Examples of these initiatives and how they are integrated will be presented.

Conclusion: Collaborative aligned messaging and relationships are keys to successful behavioural change strategies. Evaluation is key to validating this important work.

A5

Concurrent Session A5 – Oral Presentations Health Economics

April 4, 2011

1100 – 1230

Georgia B

A Prospective Comparison of the SF-6D and the EQ-5D Yield Values that Differ Threefold: Implications for Decision-Makers

Presenting Author: Dr. Jennifer Davis, Post-doctoral Fellow, Centre for Clinical Epidemiology and Evaluation

Co-authors: Dr. Teresa Liu-Ambrose (Assistant Professor); Mr. Karim Khan (Professor) and Dr. Carlo Marra (Director, Collaboration for Outcomes Research and Evaluation), University of British Columbia; Dr. Clare Robertson (Associate Professor), University of Otago

Background: Falls are the leading cause of chronic disability and are associated with reduced health-related quality of life. The EQ-5D and the SF-6D can be used to estimate quality-adjusted life-years (QALYs) and, thus, measure health gains and losses. Few studies in falls prevention have compared how differences in these instruments can affect decision-making. Hence, our primary objective was to quantify the differences between incremental cost-effectiveness ratios (ICERs), depending on whether or not QALYs were estimated from the EQ-5D or the SF-6D.

Methods: The study sample included 155 community-dwelling women aged 65 to 75 years who participated in a 12-month randomized controlled trial; 123 partook in the 12-month follow-up study. Fifty-four participants received the once-weekly resistance training, 51 participants received the twice-weekly resistance training, and 50 participants received the twice-weekly balance and tone classes (the comparator). QALYs were calculated using the EQ-5D and SF-6D at baseline, six months and 12 months during the intervention period. QALYs were calculated for the follow-up study using the EQ-5D and SF-6D administered monthly for a subsequent 12 months.

Results: The ICERs for once- or twice-weekly resistance training compared with balance and tone classes was three times larger when QALYs were calculated using the EQ-5D (CAD\$ 28, 510; 12, 210) compared with the SF-6D (CAD\$ 8,707; 4,778).

Conclusion: These results demonstrate that, depending on a decision-maker's willingness to pay threshold, the type of instrument used may lead to a different decision. This emphasizes the need for standardization of measures used for health technology assessment.

Using Economic Evaluation to Inform Clinical Trial Design

Presenting Author: Dr. Nick Bansback (Post-doctoral Fellow), University of British Columbia

Co-authors: Mr. Mohsen Sadatsafavi (PhD Student, Faculty of Pharmaceutical Sciences) and Professor Aslam Anis (Director, School of Population and Public Health) University of British Columbia; Professor Alan Brennan (Director, School of Health and Related Research), University of Sheffield

Objectives: As reimbursement has become an additional hurdle in the development cycle, a new therapeutic strategy that fails this hurdle has developmental costs that could have been spent better elsewhere. We provide a framework to design confirmatory (e.g., phase III) trials based on considerations including reimbursement, alongside the safety and efficacy components required for regulatory approval.

Methods: Using value of information methods, we demonstrate how a decision model informed from a phase II study, and other evidence, can be used to help considerations regarding the length of study, types of outcomes to collect, patient subgroups to include, and sample size. This is illustrated using a case study of HMG-CoA reductase inhibitors. The decision model examines the 10-year costs and benefits (on lipid profiles; subsequent risk of coronary events [e.g., coronary heart disease]; and RA activity [DAS/HAQ]) of adding HMG-CoA reductase inhibitors to conventional therapy. Uncertainty analysis was performed by assigning joint probability distributions to each parameter. Value of information (global/ partial EVPI and EVSI) was undertaken.

Results: We find that if the willingness to pay for a quality-adjusted life-year is \$11,000, then the future phase III clinical trial should be longer than 12 months, include a health utility measure, and include up to 2,000 respondents per arm including a subgroup of patients with milder disease activity at baseline.

Conclusions: The study shows how relatively simple and quick economic evaluation approaches can inform decisions on phase III designs that have huge economic consequences. A number of issues and implications remain, and are discussed.

How Lost Productivity Should Be Measured and Valued In Economic Evaluations

Presenting Author: Ms. Wei Zhang (Health Economist), Centre for Health Evaluation and Outcome Sciences, St. Paul's Hospital;

Co-authors: Dr. Nick Bansback (Health Economist/Post-doctoral Fellow) and Dr. Aslam Anis (Director/Professor, Centre for Health Evaluation and Outcome Sciences), University of British Columbia

The objective of this study is to review current Canadian guidelines for including lost productivity in economic evaluations, and to provide further detailed methodological guidance on how to measure and value lost productivity in practice. Current guidelines suggest using gross wage rates to value lost time from paid work. However, wages may not be equal to marginal productivity if a job involves team production, if the output is time-sensitive, or if perfect substitutes for workers are not readily available. Therefore, wage is not a good proxy representing the value of productivity loss. For practical use, a multiplier adjusting wage to marginal productivity needs to be developed to value lost time. Three methods for developing multipliers will be reviewed:

- using multipliers developed by previous studies which surveyed managers of a great number of employers in the United States
- using a newly developed employee self-reported questionnaire which collects information on the related job and workplace characteristics
- using existing employee/employer-linked data in Canada which includes information on productivity and workplace characteristics from employers and wage and job characteristics from employees.

Furthermore, according to current guidelines, lost productivity while at work is considered as one main component of total lost productivity. However, different instruments developed to measure lost productivity while at work generate widely varying loss estimates. Further investigation is required to identify which instrument provides a better estimate. Finally, we also provide recommendations on the appropriate recall periods for measuring lost time from paid work, based on the literature evidence.

A6

Concurrent Session A6 – Oral Presentations Moving from Evidence to Practice

April 4, 2011

1100 – 1230
Balmoral

Smart-Testing of Blood Glucose: The Road from Evidence to Practice Change in BC

Presenting Author: Dr. Sarah Jennings (Director, Information, Drug Use Optimization Branch, Pharmaceutical Services Division), British Columbia Ministry Of Health Services

Co-authors: Aileen Mira (Pharmacist, Drug Use Optimization Branch); Dr. Suzanne Taylor (Executive Director, Drug Use Optimization Branch); Jesmina Birerovic (Program Analyst- Information, Drug Use Optimization Branch) and Mr. Bob Nakagawa (Assistant Deputy Minister, Pharmaceutical Services Division), British Columbia Ministry of Health Services

Concurrent Sessions

Purpose: Implement a self-monitoring of blood glucose (SMBG) knowledge translation strategy that helps bring evidence into practice and improves health care system sustainability in British Columbia.

Target audience: This presentation will be useful for health policy-makers, health care providers, decision-makers, and patients.

Background: The use of blood glucose test strips by people with diabetes, not treated with insulin, costs BC PharmaCare about \$11.8 million per year. The recent recommendations from the Canadian Agency for Drugs and Technologies in Health regarding unnecessary routine SMBG in this population is an opportunity to maintain health outcomes while enhancing sustainability of the health care system.

Methods: Stakeholder meetings with participation from the Canadian Diabetes Association (CDA) and CADTH were held to determine current local values, beliefs, and ideas. A multi-faceted education plan was designed and approved. It incorporates CADTH implementation tools (animated shorts, alternate prescription pads, posters, prescribing aids, and other self-management tools); low- and no-cost partnership opportunities such as Education for Quality Improvement in Patient Care interventions, Ministry of Health Services newsletters, college and association journal articles, e-blasts, and website postings; as well as presentations including webinars, live sessions for key target audiences of diabetes educators, other health care professionals, patients and public; and networking with diabetes education centres and health authority home and community care programs.

Conclusion: The accepted education plan focuses on “smart-testing” and comprehensive diabetes management, and uses a multifaceted approach to behavioural change. Development, integration, implementation, and plans for evaluation of the education plan will be shared.

Tablet-Splitting

Presenting Author: Mr. Alan Cassels (Pharmaceutical Policy Researcher), University of Victoria

Co-authors: Ms. Jaclyn Morrison (Research Coordinator), University of Victoria; Dr. Colin Dormuth, Mr. Greg Carney and Dr. Malcolm Maclure, Pharmacoepidemiology Group, Therapeutics Initiative, Department of Anesthesiology, Pharmacology and Therapeutics, University of British Columbia

With flat-lowering (pricing of cholesterol) drugs, where different dosage sizes are priced nearly equally, patients (and private and public drug plans) can save significant drug costs by splitting higher-dosed tablets. While not all classes of drugs can be safely split, evidence suggests splitting statin tablets can be done safely and effectively. Analysis of province-wide statin use in British Columbia (BC) showed that splitting occurred in 4.5% of statin prescriptions (2006), with an associated cost savings of \$2.3 million. With funding from Canadian Institutes of Health Research (2009/2010), our research group developed and distributed printed educational materials (PEMs) to 4,000 BC family physicians (FPs) outlining the basics of statin-splitting and providing detailed cost savings for each of the statin

drugs. The PEMs were packaged with physician reminders, patient handouts, and two pill-splitting devices and mailed out to all FPs, who were randomized to an early or delayed group. With a six-month delay between mailouts, we analyzed provincial level prescribing data to measure the impact of this educational program. Our analysis shows that a published statin-splitting journal article, subsequent media attention, and our mailed educational material to family physicians likely resulted in a \$1.0 to \$1.5 million annual savings on statins, with an average increase of \$20,000 to \$30,000 per week. Educational materials to physicians can increase drug cost savings for patients and drug plans at a fraction of the intervention cost. Drug plans not investing in simple, educational interventions are probably missing an important opportunity to achieve more cost-effective and sustainable prescribing.

What Factors Contribute to the Gaps Between Evidence and Practice?

Presenting Author: Dr. Bing Guo (Research Associate), Institute of Health Economics

Co-author: Christa Harstall (Director, HTA), Institute of Health Economics

Background: For the treatment of type 1 diabetes mellitus, insulin pump therapy (IPT) has been proposed to have several advantages over the standard care – multiple daily injections (MDI). In Alberta, insulin pumps are currently not covered by the Health Ministry.

Objective: To present our experience with a provincial project on the role of IPT for the treatment of type 1 diabetes mellitus in comparison to MDI

Method: Comprehensive literature search for and analysis of research evidence from systematic reviews and new randomized controlled trials (RCTs) for three patient groups: children, adults, and pregnant women.

Findings: Pregnant women are a subgroup that may benefit from IPT; however, available evidence came from six RCTs published between 1986 and 1993. Severe hypoglycemia is an important indicator for IPT, but most RCTs did not include this patient group. Three manufacturers in Canada supply insulin pumps; however, new and improved models come into the market every five years. Some research evidence is based on older types of devices that are no longer available. Continuous improvement in insulin analogues also makes this a challenging area where the published research is outdated quickly.

Conclusion: Overall subtle difference in the short-term outcomes between IPT and MDI and lack of longer-term outcomes such as secondary complications of type 1 diabetes mellitus make it difficult to determine the superiority of IPT over MDI. Attempting to make policy decisions informed by published evidence in such cases requires more reliance on values and preferences. How to incorporate these components in a rapid review remains a challenge for HTA researchers.

Concurrent Session A7 – Oral Presentations Health Technology Assessment and Oncology

April 4, 2011

1100 – 1230

Georgia A

Cost-Effectiveness of Epidermal Growth Factor Receptor Gene Mutation Testing for Patients with Advanced Non-Small Cell Lung Cancer Living in Ontario

Presenting Author: Dr. Wendong Chen (Health Economist, Toronto Health Economics and Technology Assessment), University Of Toronto

Co-authors: Dr. Peter Ellis (Associate Professor), McMaster University; Dr. Leslie Levin (Head, Medical Advisory Secretariat), Ontario Ministry of Health and Long-Term Care; Dr. Murray Krahn (Professor), THETA, University of Toronto

Objective: To assess the cost-effectiveness of epidermal growth factor receptor (EGFR) gene mutation testing for guiding the application of gefitinib as first-line therapy in patients with advanced non-small cell lung cancer (NSCLC) living in Ontario.

Methods: A decision analytic model was developed to compare EGFR gene mutation testing strategy versus no testing strategy in patients with advanced NSCLC. Under the testing strategy, patients testing positive for mutation would receive gefitinib as first-line therapy. Under no testing strategy, patients would receive conventional chemotherapy as first-line therapy. Probability variables were estimated through literature review. Utility variables were estimated from a multivariate linear regression analysis taking into account the clinical responses and side-effects associated with treatment for NSCLC. Cost variables were based on two Ontario cost studies for NSCLC. Both benefits and costs were discounted at 5% per annum.

Results: Compared to no testing strategy, the incremental cost-effectiveness ratio for EGFR gene mutation testing was \$46,021 per life year or \$81,071 per quality adjusted life year (QALY). The cost-effectiveness of EGFR gene mutation testing was sensitive to the cost and efficacy of gefitinib. The budget impact analysis projected that EGFR gene mutation testing would cost the Ontario health care system \$4.6M, \$7.0M, \$7.9M, \$8.1M, and \$8.1M more a year in the next five years.

Conclusion: EGFR gene mutation testing would be cost-effective in patients with advanced NSCLC in Ontario if willingness-to-pay was above \$81,000 per QALY. The efficacy and cost of gefitinib significantly affected the cost-effectiveness of EGFR gene mutation testing.

The Role of Cost-Effectiveness Evidence in Cancer Care Funding Decisions: A British Columbian Case Study (1998 to 2008)

Presenting Author: Zahra Musa (Research Network Manager), Cancer Care Ontario

Co-authors: Dr. Stuart Peacock, Dr. Laurel Kovacic and Dr. Susan O'Reilly, British Columbia Cancer Agency;
Dr. Suzanne Taylor, British Columbia Ministry of Health Services

Background: The Priorities and Evaluation Committee (PEC) at the British Columbia Cancer Agency makes funding recommendations for new cancer interventions in British Columbia. PEC examines both clinical and cost-effectiveness evidence when making recommendations.

Objective: To examine the role of economic evidence in British Columbia cancer funding decisions made from 1998 to 2008 by analyzing funding trends according to incremental cost-effectiveness ratios (ICERs) and assessing whether or not there is a significant difference between the ICERs for funded versus not-funded interventions.

Methods: All proposals submitted to PEC between 1998 and 2008 were reviewed; ICERs and final funding decisions were abstracted and used to generate league tables. League tables were analyzed for funding trends and the Wilcoxon rank-sum test was used to assess whether or not there is a statistically significant difference between ICERs of funded and not funded proposals.

Results: League tables were sorted according to outcome: life-years gained (LYG), palliated-years gained (PYG), and remission-years gained (RYG). In the LYG table, all interventions with ICERs less than \$56,914/LYG were funded, and there was a mixture of decisions between \$57,000/LYG and \$243,500/LYG. In the PYG table, all proposals with ICERs less than \$60,183/PYG were funded, and there was a mixture of decisions between \$61,000/PYG and \$280,000/PYG. There is a statistically significant difference between the ICERs of funded proposals and not funded proposals in the LYG table, but not in the PYG and RYG tables.

Conclusion: Cost-effectiveness evidence does impact cancer funding decisions in British Columbia; however, trends suggest that other decision-making criteria also play a significant role in these decisions.

Gene Expression Profiling for Guiding Adjuvant Chemotherapy Decisions in Women with Early Breast Cancer: A Cost-Effectiveness Analysis of 1,000 Strategies for the Provision of Adjuvant! Online, Oncotype DX, and Chemotherapy

Presenting Author: Mike Paulden, Research Associate, THETA, University of Toronto

Co-authors: Jacob Franek (Clinical Epidemiologist), Ontario Ministry of Health and Long-Term Care
Mr. Ba Pham (Senior Research Associate) and
Dr. Murray Krahn (Professor), University of Toronto

Background: Adjuvant chemotherapy decisions for women with early-stage breast cancer are complex. Oncotype DX is validated at predicting distant recurrence-free response in patients with ER+ LN early-stage breast cancer. This enables chemotherapy to be better targeted at higher risk patients than is possible through

the use of Adjuvant! Online (AOL) or clinical judgement alone. However, existing cost-effectiveness analyses of Oncotype DX have numerous limitations: In particular, they consider a limited range of strategies and do not separately consider intermediate risk.

Methods: We present an Ontario-based cost-effectiveness analysis which comprehensively addresses these limitations. We build upon a Markov model developed by Tsoi and colleagues, using data from the NSABP B-14 and B-20 clinical trials. We assume that AOL and Oncotype DX may be provided separately or sequentially and consider chemotherapy for each risk group, resulting in 1,000 unique strategies for the provision of AOL, Oncotype DX, and chemotherapy.

Results: Oncotype DX is cost-effective in all patients regardless of AOL risk. The highest ICER is in patients at low AOL risk (\$29,000 per QALY), while Oncotype DX dominates in patients at high AOL risk. Chemotherapy is cost-effective only in patients at intermediate or high Oncotype DX risk. The highest ICER is in patients at low AOL and intermediate Oncotype DX risk (\$64,000 per QALY). Chemotherapy is dominated in patients at low Oncotype DX risk.

Conclusion: Oncotype DX appears to be cost-effective regardless of a patient's AOL risk. These results have informed the **Ontario Health Technology Advisory Committee's** recent deliberations regarding the funding of Oncotype DX in Ontario.

Estimating Preference-Based Index from Cancer-Specific Quality of Life Measures for Use in Cost-Utility-Analysis

Presenting Author: Dr. Paulos Teckle, Research Scientist, Canadian Centre for Applied Research in Cancer Control (ARCC)

Co-authors: Dr. Stuart Peacock (Co-Director) and Ms. Kim van der Hoek (Manager), Canadian Centre for Applied Research in Cancer Control;
Dr. Stephen Chia (Senior Scientist) and Dr. Karen Gelmon (Head), Investigational Drug Program, Experimental Therapeutics, Department of Medical Oncology;
Dr. Barb Melosky (Lung Cancer Chair and Chairman of the Colorectal Screening Program), British Columbia Cancer Agency

Objective: To help facilitate economic evaluations of interventions for treating cancer, we estimated utility indices for the frequently used, cancer-specific EORTC QLQ-C30 instrument of quality of life, by mapping it onto each of the EQ-5D and SF-6D general health preference-based indices.

Methods: A sample of 367 cancer patients from the Vancouver Cancer Centre completed the EORTC QLQ-C30, EQ-5D, and SF-6D health-related quality of life questionnaires. Models of the relationships between the EORTC QLQ-C30 and each of the preference-based indices were estimated using regression analyses. We examined three alternative modelling approaches: ordinary least squares (OLS),

generalized linear model (GLM) using a Gaussian distribution and log link, and censored least absolute deviations (CLAD). The performance of the models was assessed in terms of how well the responses to the cancer-specific instrument predicted utilities from each of the EQ-5D and SF-6D instruments.

Results: The CLAD approach considers the non-normal (left-skew) distribution of the utility scores and their apparent truncation at 1. Results from the final models of the three approaches did not differ significantly. Physical and emotional functioning and pain subscales of the EORTC QLQ-C30 were significant predictors of the EQ-5D and SF-6D utility scores. Cognitive functioning and insomnia subscales of the QLQ-C-30 were moderately associated with the EQ-5D, while the social-functioning was a significant predictor of the SF-6D score. The root mean square error (RMSE) for the SF-6D was lower (0.064), suggesting better predictions than for the EQ-5D (0.098).

Conclusion: There is potential to estimate both the EQ-5D and SF-6D utilities using responses from the EORTC QLQ-C30 cancer-specific measure of quality-of-life, even though the EORTC QLQ-C30 was not designed as a utility instrument. Our results suggest that it is possible to estimate quality-adjusted life-years (QALYs) from studies where only cancer-specific instruments have been administered.

B1

Concurrent Session B1 – Panel Discussion

April 4, 2011

1330 – 1500

Plaza A

Greater Than the Sum of Its Parts: Melding and Adapting Seven Guidelines

Panellists: Christa Harstall, Dr. Carmen Moga, and Dr. Ann Scott,
Institute of Health Economics
Dr. Werner Becker, University of Calgary

The lack of sophisticated evidence analysis inherent in guideline adaptation can be overcome with credible seed guidelines; a consistent, transparent methodology; and clear documentation of the often subjective contextualization process.

The session will present an overview of the methods used by the Alberta Ambassador Program to meld and contextualize seven "seed" guidelines into one clinical practice guideline on low back pain. The successful strategies and major challenges associated with the guideline adaptation process will be described. Also, the results of an evaluation that benchmarked the Ambassador process with the ADAPTE framework and identified opportunities for improvement will be outlined. The Ambassador Program's initial success was, in part, due to its origins in a knowledge translation strategy, which enabled it to leverage existing stakeholder interest and receptivity into the guideline development process. Thus, the utility of the adaptation process used for low back pain in other areas of clinical practice will be examined through a case study of its use in creating a guideline on headache. The discussion will focus on the tools and strategies that were useful in both of these two very different areas of primary care.

The problems associated with updating an adapted guideline will also be presented, and practical solutions offered based on the experience of the Ambassador Program.

Concurrent Sessions

B2

Concurrent Session B2 – Panel Discussion

April 4, 2011 **Health Technology Assessment for Health System Sustainability:
1330 – 1500** **Opportunities and Challenges**
Regency B

Panellists: Dr. Arminee Kazanjian, University of British Columbia
Dr. John Embril, Health Sciences Centre, Winnipeg
Regional Health Authority, University of Manitoba
Dr. Donald Juzwishin, Alberta Health Services
Petr Kresta, Winnipeg Regional Health Authority
Denise Dunton, Interior Health Authority

The cost of delivering programs and individualized care threatens to exceed fiscal capacity, thus difficult choices based on evidence of effectiveness and value are necessary. Clinicians and researchers often remain unclear about the utility of synthesized, unbiased evidence to inform health decisions at the practitioner level. Accepting or rejecting a health care intervention based on best evidence is preferred to making choices based on anecdote, interests, or uninformed preferences.

Questions surrounding health technology assessment (HTA) include: Is HTA from an agency mandated to systematically review and synthesize research effective to inform health decision-makers on interventions? What affects uptake and dissemination of an HTA? What types of organization structures, processes, and enablers need to be in place to mobilize evidence like HTA? What might guide clinicians to make appropriate use of such evidence and how can the evidence best reach these potential users? What are the barriers to uptake? Examples for discussion will include wound care and development of provincial bariatric services. There are; however, dissenting voices who question whether HTA is effective to inform health decisions. These voices need to be heard and considered. In this panel, presenters will share their experience and point of view and engage the audience in a discussion about balanced decision-making with the use of unbiased evidence as one important consideration. Optimizing the appropriate use of interventions at the jurisdictional as well as the practitioner level for clinical and cost-effective interventions on behalf of Canadians' health and economics is our goal.

B3

Concurrent Session B3 – Panel Discussion

April 4, 2011 **Health Technology Assessment and Comparative Effectiveness Topic
1330 – 1500** **Development and Priority Setting: Overview of Canadian and
Plaza B** **International Processes**

Panellists: Michel Boucher and Sandy Pagotto, Canadian Agency for Drugs and Technologies in Health; Pam Curtis, Center for Evidence-based Policy, Oregon Health and Science University; Dr. Sarah Garner, National

Institute for Health and Clinical Excellence; Nina Buscemi, Alberta Health Services; Dr. Reiner Banken, Institut national d'excellence en santé et en services sociaux

Given the wide range of health technologies and the limited resources to assess these, HTA organizations need to develop topic nomination and prioritization processes. These vary among HTA organizations, but all aim at selecting topics that will best meet their respective stakeholders' needs.

In Canada, CADTH recently converted its topic nomination and priority-setting framework from a program-specific (CDR, COMPUS, HTA) advisory-panel-based mechanism to a centralized intake and integrated prioritization process. In Quebec, AETMIS uses two prioritization frameworks: i) requests submitted by macro level decision-makers are prioritized at the ministry level; ii) other requests are submitted directly to the agency and prioritized by the board members. In Alberta, responsibility for technologies to be reviewed lies with the Alberta Advisory Committee on Health Technologies. In Ontario, OHTAC also uses an advisory committee to prioritize submissions. In the US, AHRQ priority-setting process uses a stakeholder group (a volunteer group that includes clinicians, researchers, third-party payers, consumers of federal and state beneficiary programs as well as health care industry professionals). In the UK, NETSCC - HTA (formerly known as NCCHTA) priority-setting mechanism involves the use of an advisory prioritization strategy group (composed of clinicians, medical advisors, and researchers).

The panel will include representatives from Canadian as well as international HTA organizations. They will describe the topic nomination and priority-setting framework and discuss the strategic importance of this process for their individual organization. A debate will follow to identify the pros and cons of each approach.

B4

Concurrent Session B4 – Panel Discussion

April 4, 2011
1330 – 1500
Georgia B

Improving Health Outcomes, Health Care System Sustainability, and Encouraging Innovation by Collaborating with Industry

Panellists: Leah Clark, Industry Canada
Mark Ferdinand, Rx&D
Dennis Dougharty, Abbott Point of Care

This panel will discuss how better collaboration between industry and health authorities could lead to the adoption of more innovative products in the health care system and improved health outcomes. Mr. Mark Ferdinand from Rx&D will discuss the importance of considering the full value of different technologies through modeling the scope of their social and economic returns. The panel will also use the examples of the Healthcare Associated Infections Technology program in the NHS in the United Kingdom and the uptake of regenerative medicines practices in the German health care system. These innovative initiatives aim to identify new technologies that provide the best value and the most impact in two very different areas of health care. Panellists will explain how they built support for change from industry and in their respective health care systems.

The fourth panellist will be from Abbott Point of Care. Abbott, a global multinational, develops and manufactures diagnostic technologies in Canada that bring many traditionally centralized laboratory services to the bedside. Abbott has had limited demand from health care systems in Canada for this potentially disruptive technology. Abbott will present its views on how the Canadian health care system could better support the uptake of innovative products. These concrete examples will spark a discussion on the challenges in deriving the full value of health innovations unless technology's uptake, use, and broad effects are well considered by all players. Taking into account these elements and sharing responsibilities for managing technology in society are at the foundation of the notion of constructive technology assessment (CTA).

B5

Concurrent Session B5 – Panel Discussion

April 4, 2011
1330 – 1500
Balmoral

Critical Thresholds in the Use of Scientific Data for Decisions About Health Products

Panellists: Dr. David Clapin and H el ene Quesnel, Health Canada
Dr. Robert Peterson, Drug Safety and Effectiveness Network
Dr. Stanislav Glezer, Sanofi-Aventis Canada
Dr. Holger Schuenemann, McMaster University

Regulators of health products, technology assessors, payers, industry, researchers, practitioners, and patients all rely on judgments about scientific information to reach decisions. In a system that is best served by an efficient translation of evidence into practice, there are significant challenges when each decision-maker is dealing with a different scope of evidence, and may be acting according to critical thresholds of acceptance that are not subject to a shared understanding. The purpose of this workshop is to explore current paradigms for the use of scientific evidence by the key parties in decisions about health products.

In the context of the life-cycle approach to medicines, areas of discussion include: (1) what evidence on benefit-risk is needed for clearance by a regulator, taking into account post-market commitments and formal risk-management plans, and how can this evidence, and resulting decisions, be best understood by all decision-makers; (2) what is the optimum balance of effort in generating different types of evidence, given that randomized controlled trials may be critically important for one party, whereas observational data gathered locally in practice may be critically important for another party; (3) what are the appropriate trigger points or thresholds for transparency and communications about scientific information to the end-users, particularly under circumstances of uncertainty; and (4) what are the best practices internationally in a system of global effort that drives the growth of knowledge about drugs both before and after licensure.

A new paradigm is needed to help face problems in the pathway from evidence to informed use of health products. The learning outcome sought is a way of preserving the power of the current system, and yet extending it to deal more consistently with the full scope of needs for reliable information to meet the diverse purposes of decision-makers.

B6

Concurrent Session B6 – Panel Discussion

April 4, 2011 **How Can Decision-Makers Consider Other Factors in Decision-Making: Multi-Criteria to Maximize Opportunities to Bring Evidence into Practice**
1330 – 1500
Georgia A

Panellists: Dr. Mireille Goetghebeur, EVIDEM Collaboration
Ron Goeree, McMaster University
Dr. Janet Martin, London Health Sciences Centre
Dr. Paule Poulin, Alberta Health Services
Dr. Tammy Clifford, Canadian Agency for Drugs and Technologies in Health

Sustainability of health care systems requires optimal resource allocation relying on a number of scientific and contextual criteria as well as disparate streams of information. Multi-Criteria Decision Analysis (MCDA) is an established method widely used in various disciplines and allows decision-makers opportunities to consider a wide range of factors when bringing evidence into practice. MCDA also promotes transparent and accountable decision-making and supports discussion among stakeholders with diverse perspectives. Multi-criteria approaches have successfully been used in HTA in Canada and other countries. The purpose of this panel is to discuss MCDA approaches, their origins and current applications, and whether these approaches are feasible for health care decision-making at macro, meso, and micro levels. The panel will offer perspectives from producers and users of MCDA and is intended for all health care stakeholders interested in new approaches to decision-making. The session will include the following panellists and presentations:

1. Overview of MCDA – what do users want and what can we offer them?
2. Principles of MCDA applied to HTA – development and applications of the EVIDEM framework for decision-making
3. Experience at a provincial level – some observations in using a multi-criteria decision tool to develop recommendations on health technologies by the Ontario Health Technology Advisory Committee
3. Experience at the hospital level – use of the Know4Go multi-criteria model in Ontario
4. Development and use of a local decision support and priority setting multi-criteria model in Alberta

Concurrent Sessions

B7

Concurrent Session B7 – Panel Discussion

April 4, 2011

1330 – 1500

Regency A

Openness in Health Technology Assessments

Panellists: Adrian Griffin, Johnson & Johnson
Lynn Buchanan, BIOTECCanada
Dr. Andreas Laupacis, Li Ka Shing Knowledge Institute
Karen Philp, Canadian Association of Wound Care
Dr. Martin Zagari, Amgen

CADTH and other HTA agencies have responded to calls for more public engagement through the introduction of public members (CADTH) and patient members (e.g., Committee to Evaluate Drugs) and mechanisms for written patient group submissions. But the deliberative process of expert committees continues to take place behind closed doors. Persons with a specific and direct interest in the outcome of those deliberations, including patients, health care providers and manufacturers, have no opportunity to appear before the expert committees to make submissions and answer questions or to hear the debate. Would a more open process improve the quality of recommendations and the level of acceptance on the part of all stakeholders? What are the barriers to establishing a more open process? How can all stakeholders work together to create a more open and transparent mechanism for assessing new therapies and making recommendations for public coverage?

C1

Concurrent Session C1 – Oral Presentations Decision-Maker Support

April 4, 2011

1530 – 1700

Plaza A

Are Computerized Clinical Decision Support Systems Effective at Improving the Process of Care and Patient Outcomes, and What Makes an Effective System? A Decision-Maker and Researcher Partnership Systematic Review

Presenting Author: Pavel Roshanov, Graduate Student, McMaster University

Background: Despite decades of research on computerized clinical decision support systems (CCDSSs), results from rigorous evaluations remain mixed and little is known about what makes an effective system. Previous systematic reviews seeking characteristics important for success were limited by small sample sizes and poor quality of primary studies.

Objective: To determine if CCDSSs are effective at improving care processes or patient outcomes, and to identify characteristics associated with effectiveness.

Methods: A systematic review of randomized trials comparing use of CCDSSs to usual practice or non-CCDSS controls in clinical care settings. We conducted

literature searches to January 2010 in bibliographic databases and scanned reference lists. Guided by partnerships with clinicians and senior hospital administrators, we considered more than 50 trial and system characteristics. Authors of all included primary studies were contacted to provide additional information and to help select features potentially associated with effectiveness. Two outcome categories were analyzed independently: "process of care outcomes" (such as appropriate monitoring of disease) and "patient outcomes" (such as values of test results).

Results: In the 166 included trials, success rates for process of care and patient outcomes averaged 60% and 24%, respectively, across six categories of application: toxic drug monitoring and dosing, acute care, primary preventive care, chronic disease management, diagnostic test ordering, and drug prescribing. We will use univariate and multivariate analyses to identify features significantly associated with effectiveness.

Conclusions: CCDSSs affect the process of care, but have limited benefit for patients. Our analysis will provide empirical guidance on effectiveness, optimal design, and implementation.

Decision-Makers' Use of Decision Models: A Case Study

Presenting Author: Dr. Ava John-Baptiste, Post-Doctoral Fellow, St. Michael's, Cancer Care Ontario

The Centers for Medicare and Medicaid Services (CMS) considered covering computed tomography colonography (CTC) to screen for colorectal cancer (CRC). The Cancer Intervention & Surveillance Network (CISNET) developed decision models to assist CMS in comparing CTC to other screening methods. We conducted a descriptive case study of the CMS decision on CTC using document analysis and key informant interviews. Informed by previously published literature, we developed a theoretical framework on the use of decision models and generated a list of provisional codes. We performed content analysis, modifying the codes in response to insights that emerged from the study data. We measured reliability of the coding process using a subset of the study data. Four members of the CMS Coverage and Analysis group (CAG) and eight members of the Medicare Coverage and Analysis Advisory Panel (MEDCAC) participated in key informant interviews. In the reliability sub-sample, the percent agreement across 26 codes ranged from 88% to 100%. Framing was the most frequently coded, as decision-makers discussed analytic approaches taken by the modellers. Decision makers identified many gaps that were inadequately addressed by the models, but felt confident in the results to the extent of what the models did address. Decision-makers were supportive of using models to inform coverage decisions, feeling that the process of modeling helped focus the policy discussion around CTC. No respondents felt modeling distracted the discussion. Decision-makers felt the same decision (not to cover CTC) would have been made without modeling.

Resource Light, Impact Heavy: The Rapid Response Niche

Presenting Author: Kristen Moulton (Clinical Research Assistant), Canadian Agency for Drugs and Technologies in Health

Co-authors: Ms. Nancy Robertson (Knowledge Exchange Officer) and Ms. Brendalynn Ens (Liaison Officer), Canadian Agency for Drugs and Technologies in Health

Concurrent Sessions

The purpose of this presentation is to:

1. demonstrate how rapid response short reports are helpful tools to inform evidence-based decisions
2. showcase the impact of rapid responses for the immediate request and beyond
3. highlight the return-on-investment these reports offer.

This presentation is geared toward audience members faced with the need to make evidence-based decisions under tight timelines. This could include health system managers and policy-makers responsible for considering available evidence to inform the delivery of sustainable health care options.

Health system decision-makers are under pressure to make informed decisions with little time to wait for or wade through extensive technology assessments. These decision makers have questions such as:

- What is the evidence?
- Is there a one-stop list of available evidence?
- Is there a high-level summary of evidence available?
- The available health technology assessment is too broad and there isn't time for a new one – what can be provided in a short period of time to inform a more specific question?
- What is sacrificed with a Rapid Review?

Examples highlighted in this presentation will include Rapid Review summary of abstracts prepared to summarize the available evidence regarding:

1. dose creep of biologics in non-RA indications
2. herpes zoster vaccinations for patients 60+.

These short reports did not require significant investment with respect to CADTH's time or resources compared to other products and yet they add impact beyond the original intended use for the information. Specific impact information will be provided.

C2

Concurrent Session C2 – Oral Presentations Pharmaceutical Issues

April 4, 2011

1530 – 1700

Regency B

What Information Do Pharmaceutical Sales Representatives Provide to Family Physicians? A Comparative Study in Vancouver, Montreal, Sacramento, and Toulouse

Presenting Author: Dr. Barbara Mintzes (Assistant Professor),
Therapeutics Initiative (University of British Columbia)

Co-authors: Dr. Joel Lexchin (Professor), York University
Ms. Ellen Reynolds (Research Coordinator), University
of British Columbia

Background: The information provided by sales representatives has been shown to influence physicians' prescribing decisions, an influence that is often underestimated. All medicines can cause harm as well as benefit; accurate, balanced information includes both components.

Methods: This is the first comparison of safety-related information provided by sales representatives in different regulatory environments. We carried out a comparative cross-sectional study in Vancouver, Montreal, Sacramento, and Toulouse. Physicians who regularly saw sales representatives were recruited to report on consecutive sales visits. These sites represent three national regulatory environments: France has the toughest approach internationally; the US is intermediate; and Canada reflects international norms.

We asked how often “minimally adequate information for safe and appropriate use” was provided. This was defined a priori to include six components: at least one serious adverse event, common adverse event, contraindication, indication, and no unapproved indications or unqualified safety claims.

Results: “Minimally adequate information” was rarely provided in any of the sites, and no information on harm was recorded in two-thirds of promotions in Vancouver, Montreal, and Sacramento. Qualified and unqualified safety claims, and information on benefits, were noted much more frequently. There were differences in Toulouse in provision of free samples, and food (“drug lunches”), and both common adverse events and contraindications were mentioned more often.

Conclusions: Some important differences to the sales visit were seen. However, in all four sites, physicians received inadequate information on serious and common harmful effects of medicines and contraindications to use, raising questions about whether information quality is compromising protection of patients’ health.

Gabapentin: Fairy Tale or Nightmare?

Presenting Author: Shawn Bugden (Associate Professor, Faculty of Pharmacy), University of Manitoba

Gabapentin (Neurontin®) was licensed in Canada as an adjunctive treatment of epilepsy in 1993. This drug, however, was widely used for its off-label use in the neuropathic pain associated with diabetic peripheral neuropathy and post-herpetic neuralgia. Gabapentin became a blockbuster medication and went on to have sales in the billions of dollars per year in North America. More than 80% of these sales appear to be associated with off-label indications. Litigation in the United States has revealed that there was considerable promotion of these off-label indications and considerable fines for the manufacturer. Recent publications have also suggested that there have been considerable problems with the quality of the research that supported the off-label indications for gabapentin. Despite these problems there has been widespread adoption of gabapentin in the clinical practice guidelines. This session will examine the literature supporting the use of gabapentin and assess the current appropriate use of gabapentin. As we look backwards at the gabapentin story, it is important to reflect on the implications for future drug use decisions with a view to ensuring evidence guides our practice.

The Cost-Effectiveness of Diacetylmorphine Compared to Methadone in Chronic Treatment-Refractory Opioid-Dependent Individuals

Presenting Author: Dr. Bohdan Nosyk, (Postdoctoral Fellow), UCLA Integrated Substance Abuse Programs, Centre For Health Evaluation & Outcome Sciences

Concurrent Sessions

Co-authors: Mrs. Daphne Guh (Statistician);
Mr. Evan Mickleham (Research Associate);
Dr. Nick Bansback (Postdoctoral Fellow); and
Dr. Aslam Anis (Director), Centre for Health
Evaluation & Outcome Sciences

Background: Substitution treatment for opioid dependence with diacetylmorphine has been proven effective among patients refractory to standard treatment. However, a challenge to the use of diacetylmorphine has been the increased direct costs of therapy over conventional substitution treatment.

Methods: The North American Opiate Medication Initiative (NAOMI) was a randomized trial comparing the effectiveness of diacetylmorphine versus optimized methadone maintenance treatment in chronic, treatment-refractory patients. We used trial-based data, supplemented with administrative drug dispensation data for British Columbia, Canada, and other published data sources, to construct a Semi-Markov cohort model to capture the chronic, recurrent nature of opioid dependence. Incremental cost-effectiveness ratios were calculated to compare diacetylmorphine to methadone maintenance in this population.

Results: Individuals in the MMT cohort accumulated an average of 8.332 discounted QALYs and generated a societal cost of C\$1,230,037 (2009). The corresponding values in those with access to diacetylmorphine were 9.180 QALYs and C\$1,195,164. Thus, provision of diacetylmorphine to chronic, treatment-refractory patients was a dominant strategy providing greater incremental health benefits (0.848 incremental QALYs gained) while reducing the total costs to society (C\$54,873 per patient). One-way and probabilistic sensitivity analysis confirmed these results for a wide range of valuations of societal willingness to pay to achieve a gain of one QALY.

Conclusions: A treatment strategy including diacetylmorphine was more effective and less costly than methadone in individuals with chronic, treatment-refractory opioid dependence. Increased direct costs of treatment should not be considered a barrier to adoption of this treatment.

C3

Concurrent Session C3 – Oral Presentations Emerging Technologies/Innovation

April 4, 2011

1530 – 1700
Regency A

Innovation in Health Technology Assessments: Is There Anything New or Are We Just Double-Counting?

Presenting Author: Dr. Stirling Bryan (Professor), University of British Columbia

Co-authors: Dr. Craig Mitton (Associate Professor) and
Helen Lee (Research Assistant), University of British
Columbia

Background: Concern has been expressed about the decline in the rate of innovatory products emerging in health care. National guideline agencies that typically use cost-effectiveness criteria stand accused of failing to support innovation. A solution proposed by Dowie, amongst others, is the incorporation of “innovation” as an explicit criterion in multi-criteria decision analysis (MCDA). This would require application of a clear and consistent definition of innovation.

Objectives: (1) To review published definitions of innovation in health and non-health settings. (2) To develop a taxonomy of innovation-related criteria that might be seen in an MCDA exercise. (3) To review published health care MCDA exercises to explore the application of innovation-related criteria.

Methods: Formal and comprehensive literature reviews were undertaken on definitions of innovation in health and non-health settings, and applications of MCDA in health care.

Results: In very general terms, all definitions of innovation included “newness”, with some pointing to a requirement for “substantial improvement”. For example in health care, Ferner suggests that innovation would see treatment of a condition where historically there has been no effective therapy. Other definitions relate to advancement of science or economic development. Our taxonomy of innovation-related criteria includes: knowledge generation, health gain (e.g., substantial improvement), need or equity (e.g., new treatment for underserved patient group), and economic growth. Fifteen MCDA applications in health care were identified and only one explicitly included innovation. However, other innovation-related criteria, such as health gain and equity, were common.

Conclusion: Innovation as a stand-alone criterion in MCDA offers nothing new.

Is Newer Always Better? Re-evaluating the Benefits of Newer Pharmaceuticals

Presenting Author: Dr. Michael Law (Assistant Professor, Centre for Health Services and Policy Research), University of British Columbia

Co-author: Dr. Karen Grepin (Assistant Professor), New York University

Whether newer pharmaceuticals justify their higher costs by reducing other health expenditures has generated significant debate. We replicated a frequently cited paper by Lichtenberg on these so-called “drug offsets”. We found the results of our replication of this analysis are highly dependent on the model and dataset used: substituting either a model less sensitive to expenditure outliers or a newer data release results in the effect disappearing; substituting both causes it to reverse in direction. Further, we tested the suitability of similar methods using drugs for hypertension as a case study. We found that our observational results run counter to well-established clinical trial evidence on comparative efficacy and concluded that our model, as well as other studies that do not adequately control for unobserved characteristics that jointly determine drug choice and health expenditures, are likely subject to significant bias. Further, we will discuss the preliminary results from a second replication study we are performing assessing research on the link between newer drugs and life expectancy. These results carry important lessons for both researchers that conduct and policymakers that need to interpret observational comparative effectiveness studies.

Innovation Deficit or Imitation Deficit in Drug Development?

Presenting Author: Colleen Cunningham (Research Coordinator),
University of British Columbia, Centre for Health
Services and Policy Research

Co-authors: Professor Steve Morgan (Associate Professor and
Associate Director) and Professor Michael Law
(Assistant Professor), University of British Columbia,
Centre for Health Services and Policy Research

It has been widely noted that the rate of new drug development is decreasing while research spending is increasing. This may be due to a decline in breakthrough drug development, follow-on drug development, or both. To shed light on this, we classified all past approvals of new molecular entities (NMEs) into three categories of novelty: pioneers (first-in-class medicines), early entrants (approved within 10 years of related pioneers), and late entrants (approved more than 10 years after related pioneers).

Rates of first-in-class “pioneer” drug approvals displayed a post-war boom and subsequent lull in the 1960s. Since the 1970s, however, five-year averages of pioneer NME approvals have been stable, generally ranging between eight and 10. The average annual rate of first-in-class drug discovery was 9.2 for 2005 to 2009. Rates of early entrant and late entrant approvals have fluctuated much more dramatically in recent years. Average annual rates of early entrant NME approval peaked at 8.6 for 1996 to 2000 and have subsequently fallen to 1.0 for 2005 to 2009. Similarly, annual average rates of late entrant NME approvals peaked at 15.6 for 1995 to 1999 and have since fallen to 7.4 for 2005 to 2009.

Although rates of total drug discovery are currently at a 30-year low, the average number of first-in-class discoveries has not fallen below historical averages. The nature of pioneering discoveries has changed as the sector transitions from the “age of the receptor” to the “age of biotechnology”. This information is critically important because false perceptions of the innovation deficit may provoke inappropriate policy responses.

C4

Concurrent Session C4 – Oral Presentations **Priority Setting and Resource Allocation**

April 4, 2011

1530 – 1700

Georgia B

Contributing to Hard Choices: An Online Tutorial for What Advisory Committee Members Need to Know About Priority Setting and Resource Allocation Decisions in Cancer Control

Presenting Author: Dr. George Browman (Clinical Oncologist),
British Columbia Cancer Agency

Co-authors: Colene Bentley (Health Services Researcher), British Columbia Cancer Agency;
Louise Zitzelsberger (Health Services Researcher), Canadian Partnership Against Cancer;
Tim Birch-Jones (Instructional Designer), Objektive Consulting

Background: A common feature of ethical frameworks for priority setting and funding decisions in health care is involvement of stakeholders. The challenge is to help participants who have little prior exposure to priority setting and evaluation principles to feel comfortable and be constructive contributors.

Purpose and Audience: To describe progress in development of an online tutorial for those participating in health technology assessment as stakeholders.

Description: Modeled after online research ethics tutorials, this educational tool orients learners to the fundamental principles of resource allocation decision-making including opportunity cost, marginal benefits and costs, evaluating evidence, the population versus individual perspective, social values, and legitimacy of decisions based on fair process. Content is arranged into five scenarios-based modules that address: 1) the “need” for the tutorial (media headlines, public perceptions, and equity); 2) evidence and health outcomes; 3) economic evaluation; 4) technology assessment; and 5) social values considerations. Recognizing public pressure for access to costly new cancer technologies presented in the media, the tutorial shows the need for advisory committees to involve stakeholders and to make choices that are fair and yield the greatest benefit to the population at large for the resources available. Learners have the option to receive a certificate of completion when exiting.

As a web-based tool, this online tutorial is designed also for use by the public as one way to better communicate the complexities of resource allocation decisions in order to contribute to public acceptance.

Hospital Resource Utilization by Patients with Schizophrenia: Improved Effectiveness after Conversion from Oral Treatment to Risperidone Long-Acting Injection (RLAI)

Presenting Author: Dr. David Kocerginski (Chief of Psychiatry, Medical Director, Mental Health and Addictions), William Osler Health System and Brampton Civic Hospital

Objective: Test hypothesis that RLAI treatment of patients with schizophrenia in an injection clinic would reduce the number of relapses, ER visits, and hospitalizations at Brampton Civic Hospital, thus reducing hospital costs and improving clinical management.

Methods: A retrospective chart review was conducted in patients with schizophrenia to compare the number of Emergency Room (ER) visits, hospitalizations for acute psychosis, and the length of stay in the ER and the Mental Health Unit pre- and post-RLAI initiation. Eligible patients were treated with an oral antipsychotic medication for at least one year during the pre-RLAI initiation (oral treatment) period and on RLAI for a similar duration during the post-RLAI initiation (RLAI treatment) period.

Results: Twenty-five patients were enrolled. Compared to the oral treatment period, the rate of ER visits was 6.21 times lower in the RLAI treatment period ($P < 0.0001$). The rate of hospitalizations was 8.5 times lower in the RLAI treatment period than the oral treatment period ($P < 0.0001$). There were also significant

reductions in length of ER and hospital stays during the RLAI treatment period. Relative to oral treatment, RLAI treatment results in an annual savings to the hospital and the health care system of \$22,778 and \$17,355, respectively. Based on the 25 patients in the study, this represents an annual savings of \$569,450 to the hospital and \$433,875 to the health care system.

Conclusions: The substantial savings accruing to the hospital and the health care system provide a strong economic rationale for long-acting-injection clinics as an alternative level of care for patients with schizophrenia.

The Past and Future of Health Care Priority Setting in Canada

Presenting Author: Dr. Craig Mitton (Associate Professor), University of British Columbia

Co-authors: Stuart Peacock, British Columbia Cancer Agency
Francois Dionne and Evelyn Cornelissen, University of British Columbia
Neale Smith, Vancouver Coastal Health Research Institute

As claims on health care resources vastly outstrip their availability, difficult decisions must be made about what services to fund and not to fund. Both decision-makers and researchers commonly believe that structured approaches or guidelines ought to improve the quality of resource allocation choices. In fact, most are in agreement that local, regional, and provincial bodies need a more structured approach when making trade-offs across new technologies and services. However, as it stands, the majority of organizations still utilize implicit and largely political processes.

The authors have conducted an extensive program of studies across several provinces drawing on both economics and ethics to inform development and implementation of formal, yet pragmatic approaches to priority setting. In this presentation, we will summarize five recent cases. These occur in a range of health care settings – province-wide agencies, regional authorities, local health integration networks, and individual acute care and long-term care facilities. We articulate seven key lessons about how to design and implement priority setting efforts in order to maximize the likelihood of success.

Despite this body of evidence and proven past successes, resource allocation in practice continues to be extremely challenging for decision-makers. This is so even among agencies that have adopted models for priority setting based upon rigorous research. Drawing from the cases, we will conclude by identifying the nature of the challenges remaining, and outline future lines of research addressing the extent to which the aspirations and ambitions of formal priority setting are likely achievable in the Canadian health sector.

C5

Concurrent Session C5 – Oral Presentations
Evidence to Practice

April 4, 2011

1530 – 1700

Georgia A

Mobilizing Evidence to Practice: It's All About Partnerships

Presenting Authors: Ann Vosilla (Liaison Officer), Canadian Agency for Drugs and Technologies in Health
Dr. Alison Hoens (Physical Therapy Knowledge Broker), University of British Columbia

Uptake of evidence in health care is challenging. Two critical initial ingredients to enhance uptake of evidence are (1) the identification of symbiotic partners and (2) ensuring productive relationships with partners by identifying and meeting their specific needs. In 2009 the CADTH BC Liaison Officer and the BC Physical Therapy Knowledge Broker partnered to form an alliance to mobilize evidence into practice at the local level. CADTH supported a number of projects which subsequently translated into guiding decisions for purchase of equipment, updating of a provincial guideline, and informing a change in clinical practice. The success of the partnership was the result of a clear understanding of roles and needs. Moreover, the success stimulated a ripple effect of potential similar benefits for other health care organizations and teams. Local needs were met and evidence was mobilized deep within the health system. Optimum practice methods include a process that links knowledge brokering activities so that outcomes are maximized and duplication of effort is minimized. Sustainable partnerships are crucial components to successful transfer and uptake of health evidence. Health decision-makers are constrained by time, finances, and knowledge gaps – partnerships that provide timely, cost-effective information sharing are critical to mobilizing evidence into practice.

Aligning Care with Evidence: Key Findings from Health Care in Canada 2010

Presenting Author: Kira Leeb (Director, Health System Analysis), Canadian Institute for Health Information

Co-authors: Jeremy Veillar (Vice President, Research and Analysis) and Cheryl Gula (Manager, Health Reports), Canadian Institute for Health Information

Appropriateness of care was studied through examples where care provided did not align with evidence of its effectiveness or appropriateness. The first examples were interventions that continue to be performed across Canada, despite clear research findings of little benefit. In 2008 to 2009, there were over 3,600 therapeutic knee arthroscopies and over 1,000 vertebroplasties. The appropriateness of other interventions was evaluated in light of substantial rate variations across jurisdictions. Specifically, in 2008 to 2009, differences in primary c-section rates were three-fold, ranging from 23% to 5%. If the entire country achieved the lowest provincial rate, there would be an estimated 14,500 fewer primary c-sections and a \$32 million cost difference. Similar analyses for hysterectomy revealed a three-fold difference in rates across jurisdictions, from 512 to 185 per 100,000 women aged 20 plus.

The study next highlighted diabetes as an area where reported compliance with clinical practice guidelines was low. Only one in three Canadian diabetics reported receiving all recommended community care and monitoring. Care settings were also explored, with over 2.1 million hospital days involving alternate level of care in 2008 to 2009, representing 6% of all hospitalizations.

The news is not all bad. Cardiac care exemplified an area where focused attention resulted in improvements sustained over time. This was evidenced by significant declines in AMI in-hospital mortality, hospitalizations, and readmissions. Even so, significant cross-jurisdictional variations in AMI rates persist. If all jurisdictions achieved the lowest provincial rate of AMI hospitalization, there would be an estimated 11,240 fewer cases and \$91 million cost difference.

A National Electronic Medical Record Network: Bridging the Evidence-Practice Gap

Presenting Author: Dr. Donna Manca (Director of Research and Associate Professor), University of Alberta

Co-authors: Dr. Karim Keshavjee (CEO), InfoClin Inc.
Mr. Ken Martin (Senior Data Manager), Canadian Primary Care Sentinel Surveillance Network

The Canadian Primary Care Sentinel Surveillance Network (CPCSSN) is a “network of networks”, with nine existing family practice research networks, each using electronic medical records (EMR) to capture data on their patients at the point of care. We have developed a secure and robust architecture that extracts data from the EMRs of more than 140 physician practices. Data from seven different EMRs is extracted on a quarterly basis to create a longitudinal database. Our process standardizes the format, cleans the data, removes identifiable text, de-identifies the database and transmits that resulting dataset to a central data repository for research and surveillance purposes. The data pipeline delivers information on patients with five chronic diseases (diabetes, high blood pressure, depression, arthritis, and COPD) on a routine production schedule. The dataset has information on approximately 100,000 patients, with 40,000 who have at least one of the chronic diseases. Basic demographics, comorbid conditions, medications, lab results, risk factors, referrals, and procedures are available in the database.

We provide audit and feedback to participating physicians on a quarterly basis. Physicians get insight into the care gaps in their practice population that are not always apparent when treating patients one at a time. Physician preferences and the impact of audit and feedback reports will be shared with the audience.

The CPCSSN should be widely publicized and made available to family physicians, researchers, and health policy-makers across Canada.

C6

Concurrent Session C6 – Oral Presentations
Informing Clinical Practice

April 4, 2011

1530 – 1700

Balmoral

**Evaluating a Pediatric Emergency Department Intervention:
Promotion of a Standard Practice Change for Salbutamol Inhalation by
Nebulization to Metered-Dose Inhalers with Holding Chambers**

Presenting Author: Barbara Hill-Taylor (Graduate Student), Dalhousie University

Co-authors: Dr. Katrina Hurley (Director, Medical Informatics), Dr. Ingrid Sketris (Chair, Health Services Research Focusing on Pharmaceutical Policy and Utilization Management) and Andrew Wing (Medical Student), Dalhousie University; Dr. Colleen O'Connell (Statistician), IWK Health Centre; Dr. Douglas Sinclair (Executive Vice President & Chief Medical Officer), St. Michael's Hospital

Study Objectives: We measured and evaluated the change in inhaled salbutamol delivery in a tertiary pediatric emergency department (ED) following a clinical practice intervention.

Methods: This was a retrospective study. Weekly inhaled salbutamol and holding chamber inventory data, ED triage, and hospital admission trends were assessed using interrupted time series analysis from January 1, 2003 to May 31, 2010. Key informants and administrative documents were used to identify individual components of the intervention.

Results: Before the intervention, the mean number of metered-dose inhalers (MDIs) supplied to the ED was 0.28 per week. Following the intervention, it was 9.26 per week, resulting in a mean increase of 8.98 per week (95% CI 7.64 to 10.31). The change in MDIs use was abrupt and persistent. Salbutamol delivery by nebulization declined less abruptly, but steadily. ED triage coding and hospital admission rate showed no relationship to the practice change. Changes in salbutamol and holding chamber use coincided with the timing of the clinical practice intervention, especially with the posting of a tailored asthma care map. Key informants noted that multiple components contributed to adherence to the intervention: a qualitative barrier study, interdisciplinary educational events, and clinical guideline development. Additionally, the intervention seemed to offer an improved staff and patient ED experience.

Conclusion: A multifaceted intervention resulted in a change in the standard of practice for salbutamol inhalation in a pediatric ED. Findings may be used by other EDs for evidence-informed improvement in patient care in acute care settings.

Cost Analysis of Parenteral Nutrition Therapies Among Canadian Hospitalized Patients: Multi-Chamber Bag System Versus Compounding

Presenting Authors: Dr. Frank Xiaoqing Liu (Manager) and Dr. Robin Turpin (Senior Director), Global Health Economics, Baxter Healthcare Corporation

Co-authors: Marc Botteman (Partner), Pharmerit International; Suji Srikanthan (Manager) and Janice Oruck (Pharmacist), Baxter Corporation Canada; Kate Mercaldi, Epidemiologist, United BioSource Corp

Objectives: Parenteral nutrition (PN) provided via manufactured premix versus compounding may be associated with different health outcomes and treatment costs. Our aim is to compare the Canadian costs of hospitalized patients receiving PN via premixed multi-chamber bag (MCB) versus compounded PN.

Methods: The costs and survival rates were estimated using a decision tree model. Infections (blood stream infections [BSI] and non-BSI infections) and survival rates, and ICU and non-ICU length of stays for patients who received MCB and compounded PN were estimated using the United States Premier Perspective™ hospital database and applied to Canadian hospitalized patients.. All estimates were adjusted with available confounding variables, including patients' admission type, age, gender, surgical status, comorbidities, prior PN use, and duration of PN therapy, as well as hospital bed size, type, and region. Published literature was used to develop the Canadian ICU and non-ICU cost per day.

Results: Infection rates were significantly different between MCB and compounded PN (all infections: 52.49% among 4,669 patients received MCB and 54.69% for 64,315 patients received compounded PN, $p < 0.05$; BSI: 19.07% for MCB and 25.44% for compounded PN, $p < 0.05$). Model-derived survival rates were 87.69% and 84.27% for MCB and compounding PN, respectively. Estimated total per-patient hospitalization costs for MCB PN were C\$26,473 (95% CI :\$20,495 to \$33,098), C\$1,473 (95% CI:\$346 to \$2,819) less than for patients who received compounded PN (C\$27,946; 95% CI:\$21,665 to C\$34,969).

Conclusions: Compared to compounded PN, MCB PN were associated with lower infections, including BSI, lower total estimated hospitalization costs, and higher survival rate.

Barriers for Integrating Personalized Medicine into Clinical Practice

Presenting Author: Dr. Mehdi Najafzadeh (PhD Candidate), University of British Columbia

Co-authors: Dr. Carlo Marra (Associate Professor), Dr. Larry Lynd (Associate Professor), Dr. Stirling Bryan (Professor), and Dr. Aslam Anis (Professor), University of British Columbia

Background: As advances make genome sequencing more affordable, the availability of new genomically based diagnostic and therapeutic strategies (i.e., personalized medicine) will increase. This wave will hit front-line physicians who may be faced with a plethora of patients' expectations of integrating genomic data into clinical care.

Objective: To elicit the preferences of physicians around applying personalized medicine in their clinical practice as these strategies become available.

Methods: Using a Best Worst Scaling (BWS) choice experiment, we estimated the relative importance of attributes that influenced physicians' decision for using personalized medicine. Six attributes included in the BWS: type of genetic tests (tests for disease predisposition and/or drug response), training for genetic testing, clinical guidelines, professional fee, privacy protection laws, and cost of genetic tests. A total of 197 physicians in BC completed the experiment. Using latent class analysis (LCA), we explored heterogeneities in preferences.

Results: "Type of genetic tests" had the largest importance, suggesting that physicians' decision was highly influenced by availability of genetic tests for patients' predisposition to diseases and/or drug response. Interestingly, physicians valued genetic tests for disease predisposition slightly higher than the genetic tests for determining drug response. "Training" and "Guidelines" were the attributes with the next highest importance, respectively. LCA identified two classes of physicians. Compared to class 2, class 1 had a larger importance weight for the "type of genetic tests", but smaller weights for "professional fee" and "cost of tests".

Conclusion: Physicians provided a clear ranking for relative importance of attributes, although minor preference heterogeneities were present.

C7

Concurrent Session C7 – Oral Presentations Evidence-Based Cost Savings

April 4, 2011

1530 – 1700

Plaza B

Evaluating the Cost-Effectiveness and Economic Impact of Cognitive Behavioural Therapy Versus Pharmacotherapy for British Columbia

Presenting Authors: Dr. Larry Lynd (Professor) and Dr. Moshen Sadatsafavi (Student) University of British Columbia

Co-authors: Dr. Mark Lau (Director), British Columbia Cognitive Behaviour Therapy Unit; Dr. Carlo Marra (Professor), University of British Columbia

Background: Mental health problems present a substantial burden of illness on the Canadian population. We developed a decision analytic model comparing pharmacotherapy to CBT for the treatment of depression over a two-year time horizon from both the perspective of the health care system and the societal perspective.

Methods: All data on effectiveness (i.e., remission, adherence, and relapse) were extracted from previously published trials or economic analyses. The specific direct costs included pharmacotherapy, CBT, hospitalization, physician visits, and psychiatrist visits. For the analysis from the societal perspective, the annual probability of becoming unemployed with and without the diagnosis of depression was taken from the literature and from the national statistical data. The cost of lost productivity was based on the average number of hours absent from work per week multiplied by the average Canadian hourly wages. The societal cost of depression-

related unemployment was estimated based on the probability and duration of unemployment and income assistance rates.

Results: The average direct cost of treating a patient for depression with CBT over a two-year period was \$4,456 versus \$4,883 for pharmacotherapy (incremental - \$427). The average total cost was, respectively, \$11,496 and \$16,915 (incremental - \$5,419). CBT results in a mean of 1.3786 QALYs gained over two years per patient treated versus 1.3283 QALYs gained with pharmacotherapy (incremental +0.0503 QALYs).

Discussion: Given these results, the treatment of depression with CBT appears to be less costly and more effective relative to pharmacotherapy, independent of whether direct or total costs are considered.

Real World Cost-Effectiveness of Cancer Drugs: Challenges and Opportunities

Presenting Authors: Sara Khor (Health Services Research Associate) and Dr. Jeffrey Hoch (Director), Canadian Centre for Applied Research in Cancer Control

Dr. Andreas Laupacis, the inaugural recipient of CADTH's Jill M. Sanders Award of Excellence in Health Technology Assessment (HTA) has noted that, "Sometimes it's really clear-cut that a drug is fantastically effective and safe. Other times it's clear-cut that it's not. And a whole bunch of times we don't know. We don't know how this drug is going to work in the real world."

Maximizing our investment in health care involves making good choices about which drugs we choose to reimburse. Ontario's HTA process involves careful scrutiny of cancer drugs before they are funded. In fact, cancer drugs have their economic value probed three times before being approved: once by the Joint Oncology Drug Review; once by the Committee to Evaluate Drugs; and once by the Ministry of Health (MOH).

Regardless of the analytical method employed, data required to make confident decisions regarding a drug's true value are typically not available, and pharmacoeconomic (PE) analyses must use models built from numerous untested assumptions, creating uncertainty about the actual cost-effectiveness of a new drug. Accurate information about true health care costs and patient survival is needed to determine the true value of a new therapy.

For a report due to the Ministry of Health at the end of March 2011, the PE Research Unit at Cancer Care Ontario will estimate the real world cost-effectiveness of three new drugs using administrative data. In addition to discussing our results, we will review the challenges and opportunities of real world cost-effectiveness analysis.

Maximizing Sustainability Through Reprocessing and Remanufacturing

Presenting Author: Dianne Trudeau (Operations Leader for Medical Device Reprocessing), Providence Health Care, St Paul's Hospital

Canadian health care is now in a position to maximize its investment in health care with supply strategies that avoid costs and yet maintain quality and safety through evidence-based practices. Supply costs are typically one of the three largest cost areas in a hospital, and medical device costs are a significant part of this. Traditional medical device choices leave little or no room to improve clinical performance. However, innovative medical device programs focused on financial and environmental sustainability allow health care systems to maximize and combine safety and quality with efficiency.

Canadian health care systems need to explore alternatives for improving spending practices to enhance health care quality while remaining environmentally responsible. The health care sector is facing major challenges, and to respond to these challenges, we need to address how we spend resources and how we use and dispose of resources. We need new technologies and strategies. Remanufacturing and reprocessing medical devices is a new technology proven to produce substantial results in health care quality as well as environmental impact. This session addresses the need to develop new models for sustainable resource usage and how medical device remanufacturing technologies pioneer this model. Reprocessing and remanufacturing in a medium-sized hospital can enable a cost avoidance of \$500,000 to \$1 million per year in supply costs, allowing a redirection of resources to patient care initiatives such as new technology investments, research, or hiring more nurses. The same program reduces medical waste by literally thousands of pounds.

D1

Concurrent Session D1 – Panel Discussions

April 5, 2011

1015 – 1145
Regency A

Value-Based Drug Reimbursement: Do We Want It? Do We Already Have It?

Panellists: Scott Gavura (Director, Provincial Drug Reimbursement Programs), Cancer Care Ontario
Dr. Jeffrey Hoch (Director, Pharmacoeconomics Research Unit), Canadian Centre for Applied Research in Cancer Control
Dr. David Shum (Director of Reimbursement and Health Economics), Hoffmann-La Roche
Kevin Wilson (Executive Director), Saskatchewan Health

Co-authors: Ms. Angela Rocchi, (Principal) and Ms. Betty Miller (Principal), Axia Research

Value-based drug reimbursement (VBR), at its core, is paying a price for a drug based on the value it provides. While stakeholders generally agree that VBR is attractive in principle, there are questions about how feasible it would be to implement. Current Canadian pricing agreements are based largely on discounting

based on perceived value-for-money, without formal evaluation of their subsequent effectiveness in actually delivering that value. How effectively do current Canadian listing agreements deliver VBR? Is a value-based pricing strategy, as planned in the United Kingdom, feasible and attractive in the Canadian context? Are real-world evaluations of effectiveness possible and can they inform reimbursement?

D2

Concurrent Session D2 – Panel Discussions

April 5, 2011

1015 – 1145
Regency B

The Drug Safety and Effectiveness Network (DSEN): Evidence for Informed Decisions

Panellists: Dr. Robert Peterson, Drug Safety and Effectiveness Network, Canadian Institutes of Health Research
Bob Nakagawa, British Columbia Ministry of Health Services
Dr. Chris Turner, Health Canada
Dr. Colin Dormuth, University of British Columbia
Dr. Diane Forbes, Drug Safety and Effectiveness Network, Canadian Institutes of Health Research
Dr. Christian Brochu, Drug Safety and Effectiveness Network, Canadian Institutes of Health Research

The Drug Safety and Effectiveness Network (DSEN) has been established at the Canadian Institutes of Health Research (CIHR) in partnership with Health Canada to increase evidence on the post-market safety and effectiveness of drugs available to a broad spectrum of decision-makers; and to increase capacity within Canada to undertake high-quality research in this area.

DSEN is funding the establishment of a network of Collaborating Centres (CCs). The DSEN CCs are composed of researchers and other team members from across jurisdictions, universities, and organizations. Their role is to respond to specific queries submitted by the regulator, provinces, and other stakeholders to support evidence-based decisions. Following a comprehensive feasibility assessment, these queries will be prioritized on a research agenda ratified by the DSEN Steering Committee.

Several CCs will be established in principal thematic areas of research methodologies, each supporting distinctive competencies within the national DSEN initiative. The CC for Observational Studies (CCOS) was established in January 2011. Also, DSEN recently launched two competitive funding opportunities to establish other CCs in the thematic areas of *Prospective Studies* and of *Network Meta-Analysis and Innovative RCT Designs*.

This session will present details of DSEN's functionality and inform interested stakeholders on how to access the Network. A panel representing Health Canada, provinces, researchers, and CIHR will present perspectives on the opportunities DSEN can afford to provincial and other stakeholders and respond to questions from the participants.

D3

Concurrent Session D3 – Panel Discussions

April 5, 2011

1015 – 1145

Georgia A

Using CADTH Recommendations for Self-Monitoring of Blood Glucose in Nova Scotia: Go Fast Alone or Go Far Together

Panellists: Dr. Michael Allen (Director, Evidence-based Programs), and Isobel Fleming (Senior Academic Detailer), Dalhousie CME Academic Detailing Service; Peggy Dunbar (Program Manager), Diabetes Care Program of Nova Scotia; Corinne Tobin (Coordinator), Dalhousie Continuing Pharmacy Education; Pam McLean-Veysey (Team Leader, Drug Evaluation Unit), Capital Health - Pharmacy Department

In 2008, the Nova Scotia Pharmacare Program spent approximately \$4 million providing glucose test strips to people with type 2 diabetes not taking insulin; almost \$900,000 was for patients with no diabetes medications on record. The CADTH recommendation states that routine self-monitoring of blood glucose is not recommended for most adults in this population, and that testing does not represent an efficient use of health care resources. While CADTH provides some guidance for when testing may be indicated, the implication is that much of the testing being done is unnecessary.

The organizations represented by the panellists worked together to develop tools and interventions to promote the adoption of the CADTH recommendation for self-monitoring of blood glucose in Nova Scotia. As a result, individual and interprofessional learning strategies have delivered a consistent message to diabetes educators, pharmacists, and physicians. We anticipate that future analysis will reflect a more evidence-informed and cost-effective approach to self-monitoring. The purpose of this panel session is to briefly describe the role of each organization, our collaborative efforts, and our results. We will then invite comments and questions from the audience. (Intended audience is clinicians, policy-makers, health care managers, consumers, and knowledge translation professionals.)

D4

Concurrent Session D4 – Panel Discussions

April 5, 2011

1015 – 1145

Georgia B

Alberta Health Services and Advancing the Uptake of Health Technology Assessment and Innovation: An Update on Alberta's Experience

Panellists: Rosmin Esmail, Dr. Donald Juzwishin, Dr. Paule Poulin, Dr. Lea Austen and Jitendra Prasad, Alberta Health Services

This panel discussion will highlight the issues and challenges associated with the introduction and application of health technology assessment in the newly formed Alberta Health Services. The panel discussion will also focus on the issues, collaborations, challenges, opportunities, and progress on developing a culture of

Concurrent Sessions

evidence-informed assessment, procurement, implementation, and evaluation of health technologies.

Alberta has demonstrated leadership locally, provincially, and nationally in health technology assessment and its application in the health care policy-making and delivery. The recent amalgamation of the health authorities into one provider organization raises new challenges and opportunities for the advancement in the use of HTA at the bedside, management table, and the board room.

The panel will describe the experience and directions from the perspective of:

1. Moderator and introduction – Dr. Don Juzwishin
2. Health technology assessment and innovation and research – Dr. Paule Poulin
3. Central procurement and supply management – Jitendra Prasad
4. Clinical engagement – Dr. Lea Austen
5. Knowledge management – Rosmin Esmail.

An integrated Health Technology Assessment and Innovation Program at AHS that supports a culture of evidence-informed decision-making requires the close collaboration of key stakeholders, including Contracting, Procurement, and Supplies Management (CPSM), Research, Clinical leadership and Knowledge Management. The audience will also be engaged in a question and answer session.

D5

Concurrent Session D5 – Panel Discussions

April 5, 2011

1015 – 1145

Plaza B

CSI: A Café Scientifique Investigation - Using Café to Demystify Recommendations, Engage Audiences, and Address Barriers

Panellists: Kristen Chelak,(Theme Lead), Canadian Agency for Drugs and Technologies in Health; Dr. Adil Virani, (Director, Pharmacy Services), Fraser Health Authority; Dr. Suzanne Taylor (Executive Director, Drug Use Optimization), British Columbia Ministry of Health Services

Co-authors: Janet Crain, Manager (Knowledge Exchange) Ann Vosilla (British Columbia Liaison Officer), and Andrea Berube (Knowledge Exchange Officer), Canadian Agency for Drugs and Technologies in Health

CADTH recently published evidence-based recommendations on self-monitoring of blood glucose (SMBG) that have sparked debate in the diabetes community. The recommendations are inconsistent with current prescribing and use of blood glucose test strips, but if practice changed to reflect the evidence, more than \$150 million would be freed up to be spent elsewhere.

To overcome barriers preventing the uptake of these recommendations, CADTH used the “Café Scientifique” model to start a grassroots discussion among patients

and health professionals to promote open dialogue about the evidence and the cultural, financial, and scientific interests that surround SMBG. A “Café Scientifique” brings the public and leading experts together to discuss scientific issues in a relaxed setting.

CADTH held 11 “Café Scientifique” events across Canada. At each event, three experts briefly outlined the evidence and discussed how the recommendations affected their practice. The remaining time was dedicated to small group discussions and questions from the audience. Outcomes, including the attendees’ intention to change practice or behaviour following the event, were measured using evaluation forms.

This panel presentation will summarize the project results and offer insight from a participating expert on the impact of using the Café model to overcome resistance to new evidence. It will examine issues that arise when new evidence is published, including audience engagement and transparency. It will also explore the benefits of bringing patients and providers together to discuss the evidence and how new information can be applied in decision-making to maximize our investment in health care.

E1

Concurrent Session E1 – Panel Discussion

April 5, 2011

1315 – 1445

Regency A

Building Bridges: Regulatory Science and Reimbursement Decision-Making

Panellists: Dr. Judith Glennie (Director, Strategic Health Technology Assessment), Janssen-Ortho Inc.; Dr. Robert Peterson (Executive Director), DSEN, CIHI; Dr. Jesse Berlin (Vice President, Epidemiology), Johnson & Johnson Pharmaceutical Research and Development; Dr. Stuart MacLeod (Executive Director), British Columbia Child & Family Research Institute; Dr. David Mendelssohn, Humber River Regional Hospital

Developments in regulatory science methods and the recent FDA emphasis on regulatory science renewal both reinforce the importance of understanding – on the part of a broad range of decision-makers – the range of methods applied to evidence evaluation throughout the product life cycle.

There already exist challenges in terms of understanding/acceptance of the validity of some regulatory science methods on the part of many in the reimbursement environment. Incremental to this is the challenge of using the products of regulatory science (i.e., trials developed to meet regulatory needs) – let alone data derived from comparative effectiveness research efforts – for purposes of reimbursement decision-making.

The panel will discuss these challenges and potential means to overcome them, in an effort to bridge the gap between these two worlds. Panel members will also share insights into European initiatives aimed at regulatory, HTA agency, and payer communication and collaboration, with the longer-term goal of examining opportunities for alignment.

April 5, 2011

1315 – 1445

Georgia B

Guideline Development: Overcoming Challenges of Limited Evidence and Implementation at a National Level

Panellists: Rhoda Reardon (Research & Evaluation Manager), College of Physicians And Surgeons Of Ontario; Clarence Weppler (Manager, Physician Prescribing Practices), College of Physicians & Surgeons of Alberta; Ms. Emma Irvin (Manager of IS and Systematic Reviews), Institute for Work and Health; Dr. Michael Allen (Director of Evidence-Based Programs), Dalhousie Continuing Medical Education; Dr. Norman Buckley (Director, Michael G. DeGroot National Pain Centre), McMaster University

Chronic non-cancer pain (CNCP) is a major health problem affecting approximately 25% of Canadians. Opioids have a role in the management of CNCP, but pose the apparently contradictory problems of under use in some populations such as seniors, and misuse including diversion in others, as well as potential side effects including addiction. In response to these concerns, the Canadian medical regulatory authorities formed the National Opioid Use Guideline Group which oversaw development of the *Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-cancer Pain*.

Developing a clinical practice guideline must balance the need for strong evidence, clinical relevance, and utility. Clinical questions are usually more complex than a well-framed research question and controlling guideline scope is a perennial challenge that developers face. Lack of strong evidence to address real-world clinical questions often means that a guideline must blend expert opinion with evidence. Once a guideline is complete, effective implementation introduces more challenges, including engaging trusted "messengers", translation into practice-useful "tools", measuring impact, and ensuring the guideline is appropriately updated.

The panel will briefly describe the continuing story of how each of these challenges was addressed in creating and moving to practice a national guideline with cross-country participation. Participants will be invited to pose questions and provide suggestions, contributing additional ideas to enhance the impact of the *Guideline*. The presentation is intended for guideline developers, researchers, and knowledge transfer practitioners who synthesize evidence and move knowledge to practice, health care policy-makers, program administrators, and health care providers

E3

Concurrent Session E3 – Panel Discussions

April 5, 2011

1315 – 1445 **Eyes Wide Open: Using Evidence to Rethink the Treatment Model for Type 2 Diabetes in Canada**
Georgia A

Panellists: Chris Cameron (Health Economist), Canadian Agency for Drugs and Technologies in Health; Dr. Ehud Ur, (Head, Division of Endocrinology), Vancouver General Hospital; Dr. Scott Klarenbach, University of Alberta

Co-authors: Sumeet Singh (Manager, Clinical Research) and Heidi Staples (Clinical Research Officer), Canadian Agency for Drugs and Technologies in Health

The rising prevalence of type 2 diabetes in Canada fuels demand for health care services and places an enormous financial burden on patients and our health system. Using CADTH's clinical and cost-effectiveness evidence for several therapies as a starting point, this panel will discuss the need for an evidence-based prescribing model for type 2 diabetes that benefits patients and is sustainable over the long term. With the increasing use of newer oral antidiabetes therapies that cost more than older agents, the panel will also examine whether they provide greater value to patients or the health system.

Our panellists will include: an endocrinologist who will present the clinical evidence and CADTH's recommendations for second- and third-line therapy after the failure of metformin and for self-monitoring of blood glucose; an expert in health economics who will outline new cost-effectiveness evidence, utilization, and budget implications of these newer agents; and an individual who will offer the perspective of Canada's leading diabetes advocacy organization. This panel includes experts with differing opinions on the approach to treating type 2 diabetes. The presentation will spark a frank discussion about the need for an evidence-based prescribing model that maximizes the significant resources that Canada invests in diabetes care.

E4

Concurrent Session E4 – Panel Discussion

April 5, 2011

1315 – 1445 **Surrogate Markers in Health Technology Assessments - To Use or Not To Use Is the Question**
Plaza B

Panellists: Dr. Charles Piwko (President), PIVINA Consulting Inc.; Bob Nakagawa (Assistant Deputy Minister, Pharmaceutical Services), BC Ministry of Health Services; Dr. Jeffrey Hoch (Director, Pharmacoeconomics Research Unit), Canadian Centre for Applied Research in Cancer Control; Laurene Redding (Director, Government & Economic Affairs), Takeda Canada; Muhammad Mamdani (Director), Applied Health Research Centre of the Li Ka Shing Knowledge Institute, St. Michael's Hospital and University of Toronto; Dr. Vijay Shukla (Senior Advisor), Canadian Agency for Drugs and Technologies in Health; Dr. Phil MacFarland, St. Michael's Hospital

The CADTH Guidelines for Economic Evaluation of Health Technologies (2006) defined a surrogate outcome as “a laboratory measurement or a physical sign used as a substitute for a clinically meaningful endpoint measuring directly how a patient feels, functions, or survives.” Surrogate markers are often used in clinical trials to determine clinical efficacy for the purposes of registration. They are employed in multinational trials as indirect measures of clinically meaningful and relevant outcomes from the effects of the drugs. Surrogate markers can typically be quantified to produce statistical significance in a smaller population and in shorter periods of time than would be needed to study the real clinical outcomes, and at lesser cost to those sponsoring the trial. Surrogate markers can be predictive of important patient outcomes if validated, presenting a “strong, independent, consistent association”. These markers may also with long-term observational data or database studies as intermediate endpoints. The objective of this panel discussion is to discuss all of the relevant perspectives on the use of surrogate markers in drug study, approvals, health technology assessments (HTAs), reimbursement, and clinical practice. Viewpoints will be presented for those who conduct HTAs, those who act as reviewers of HTAs, academics, and end-users of HTA.

E5

Concurrent Session E5 – Oral Presentations Public Engagement

April 5, 2011

1315 – 1445
Balmoral

La consultation citoyenne au Conseil du médicament (presented in French with simultaneous interpretation)

Presenting Author: Lucie Robitaille (Director General), Conseil du médicament

Objectives: To better understand the expectations of some, in terms of medications as well as the meaningful benefits that access to medication can bring, the Conseil du médicament initiated a consultation process in 2007 for patient groups and professional health associations to provide their feedback on drugs under review.

Approach: While the evaluation process at the Conseil du médicament is based on scientific evidence, the Conseil examines the position of new drugs in relation to the meaningful health outcomes they bring, thus providing a more balanced view of the hopes attached to them. This allows the Conseil to make informed recommendations to the Minister of Health and Social Services based on the criteria set out in the Québec Health Insurance Act and to offer the public reasonable and fair access to the drugs they require. All of the feedback received is analyzed, and some of it is submitted to the Comité scientifique de l'inscription and then to the Conseil, for experts to consider during their deliberations.

In terms of the selection criteria, the feedback that is presented covers ethical considerations and sheds light on some benefits that experts may not be aware of. Feedback that provides solid arguments, either in terms of scientific data or a new perspective, is also presented.

Three years after the launch of this initiative, the Conseil is now able to share the findings of the impact that this feedback has had on the reflections of its experts.

The Articulation of Public Values in Health Technology Assessment: The Use of Deliberative Discourse

Presenting Author: Dorina Simeonov (Masters Candidate), McMaster University

Co-author: Dr. Julia Abelson (Professor), McMaster University

Objectives: Interactive public engagement methods are being used more routinely to elicit public values to inform health system planning, policy-making and health technology evaluations. While considerable attention has been paid to which values are elicited from these processes, little systematic attention has been given to how these values are articulated through deliberative reasoning, and in the specific context of health technology evaluations. Our findings contribute new knowledge to the growing field of social values and ethics methods in health technology assessment (HTA).

Approach: The deliberations of a 14-person Citizen's Reference Panel on Health Technologies, which met five times between February 2009 and June 2010, were audiotaped and transcribed. The panel was convened to provide social values and ethics input to the Ontario Health Technology Advisory Committee to inform the development of its recommendations. Gee's (2005) concept of "discourse model" was used to undertake a high-level analysis of panel discussions, focused on describing identities, relationships, politics, and connections. Text analysis was used to examine the micro-level elements of the transcripts. Both levels of analysis were then used to examine the meso-level discourse dynamics within the citizen panel deliberations.

Results: Preliminary findings reveal that panel members used the resources provided to them, personal experience, and other sources of information to articulate their values toward the technologies under discussion. Members also assumed different roles during the meetings, which involved summarizing small group discussions, challenging recommendations, and acting as informal leaders. These "revealed" identities were consistent across meetings; they shaped the relationships formed among panel members and the connections made between social values and the technologies reviewed.

Conclusion: Discourse analysis methods offer in-depth and novel insights into how citizens deliberate about health technologies and suggest that these socio-political processes shape the values that are produced from these deliberations.

Patient Group Input to CADTH's Common Drug Review Process

Presenting Author: Elaine MacPhail (Senior Advisor), Canadian Agency for Drugs and Technologies in Health

In Canada and internationally, there is a growing recognition of the value and importance of greater public involvement in health care. CADTH recently introduced a formal approach for incorporating patients' perspectives into its Common Drug Review process and expert committee deliberations. This session will provide an overview of the new process, including: who can submit input, how to submit input, when to provide input, how patient group input is used, and how public drug plans receive the input. Lessons learned from CADTH's early experiences with Patient Group Input will also be presented.

Examining the Effectiveness and Improving the Quality of Patient Evidence in Drug Funding Decision-Making

Presenting Author: Harlon Davey (Patient Member), Ontario Ministry of Health and Long-Term Care, Committee to Evaluate Drugs

In recent years, shared decision-making between patients and their health care providers and the inclusion of patient preferences in patient care have been, in theory, embraced as models for good clinical practice. Patients' experiences, values, and preferences are increasingly acknowledged as important pieces of evidence for appropriate health care decision-making.

When funding reimbursement committees deliberate over the clinical efficacy, the pharmacoeconomic data, shared decision-making is a style of leadership that affords ownership, empowerment, and being part of a team that can make a difference. It is important that patients are part of that team and that their perspectives are also considered in a meaningful way as evidence.

The Ontario Ministry of Health included patient members on its Committee to Evaluate Drugs (CED) in July 2007. In April 2010, the patient submission process was launched by the CED so that patient perspectives could be included as evidence when making funding recommendations. The Common Drug Review (CDR) launched a similar process in May 2010.

The challenge is to determine what is considered patient evidence and how can it be delivered in a way that is given fair consideration along with the clinical and economic data. Deciding when and how to incorporate patient preferences is a challenge for policymakers.

A quantitative analysis of all drugs reviewed will be completed to see how the rates of positive recommendations for drugs that included patient submissions compares to the rates of positive recommendations of drugs that were reviewed prior to the launch of the patient submission process. Although there are limitations as to identifying whether it was the patient submission that had the impact to sway the opinion of committee members, it may be useful data as a proxy, and can contribute to long-term data.

A quantitative analysis collected by means of a survey distributed to members of committees that make funding recommendations across Canada will also be completed. Specific questions soliciting opinions on how effective the process is perceived and practiced, as well as identifying gaps may illustrate how the process is welcomed as well as identifying opportunities on how to improve it. This data will be collated and summarized.

E6

Concurrent Session E6 – Oral Presentations
Policy Issues Across Canada

April 5, 2011

1315 – 1445

Regency B

**The Power of One: The New British Columbia Health Authority
Pharmacy, and Therapeutics Committee and Medication Formulary**

Presenting Authors: Dr. Aaron Tejani (Drug Information and Clinical Research Coordinator); Sean Hardiman (Project Manager), Lower Mainland Pharmacy Services – British Columbia

Co-authors: Luciana Frighetto (Director) and Shallen Letwin (Executive Director), Lower Mainland Pharmacy Services – British Columbia
Darryl Samoil (Executive Medical Director), Fraser Health

Prior to 2009, hospitals within BC's six health authorities had fourteen Pharmacy, and Therapeutics Committees and fourteen corresponding medication formularies. In the summer of 2009, the BC Health Authorities (BCHA) endeavoured to create one medication formulary system for all hospitals in BC. A BC Health Authorities formulary would provide equitable access to evidence-based pharmacotherapy for patients, regardless of which hospital they were in. To date, a team of multidisciplinary clinicians and administrators have created one BC Health Authority Pharmacy, and Therapeutics committee (BCHA P&T), which is charged with making decisions regarding the BCHA medication formulary. This committee has developed standards and processes for decision-making based on best evidence from systematic reviews of randomized controlled trials. A Drug Review Subcommittee (DRS), comprised of pharmacists, is primarily responsible for producing the systematic reviews that will inform the BCHA P&T committee. Work teams include physicians (for their clinical expertise) and with the BC Pharmaceutical Services Division representatives (to gain community sector and drug policy insight). In addition, a formulary working group has been formed and is charged with creating the master medication formulary list. In a setting where all involved have one goal in mind, namely to ensure the medication formulary is evidence-based and fiscally sustainable, there have been both challenges and successes. This presentation will highlight the challenges in bridging the gap between the rules of evidence, clinical opinion, limited financial resources, and rational health care policy as well as provide the successes in the creation of one BCHA P&T and formulary.

**Novel Models of Surge Capacity Introduced in Alberta During H1N1
Pandemic 2009/2010**

Presenting Author: Laura Fitzgerald (Student), University of British Columbia

This presentation will overview of four novel models of surge capacity introduced during Alberta's H1N1 Influenza A Pandemic (2009-2010). Further, building on Regina Herzlinger's work, *Why Innovation In Healthcare is So Hard* (Herzlinger, Regina E. *Why Innovation in Healthcare is So Hard*, Harvard Business Review, May 2006, pages 1 to 10), specific system enablers will be discussed and which expedited

introduction of these models. The four models reviewed will include: Influenza Assessment Centres, Flu Response Units, Local Pharmacy Vaccination Programs, and Physician Telephone Consultation. Specific enablers to innovation discussed will include: legislation, stakeholder participation, funding, customer desires, accountability, and funding.

Drug Safety and Effectiveness in Canada: Issues, Challenges, and New Approaches

Presenting Authors: John Abbott (CEO), Health Council of Canada and Dr. Joel Lexchin (Professor), York University

Co-authors: Dr. Mary Wiktorowicz (Associate Professor), York University and Shilpi Majumder, Health Council of Canada

Although medications can offer significant health benefits, the risks associated with their use in the real world remain largely unknown once they become available for public use. Pharmaceuticals are approved based on company-sponsored clinical trials, which occur over a short period and typically involve a relatively homogeneous group of patients. Once approved, the drug is taken by a wider range of patients, (many having multiple conditions), over a prolonged period. As a result, more Canadians are being exposed to drugs whose safety profile is not completely known.

The Health Council of Canada's commissioned discussion paper, *Keeping an Eye on Prescription Drugs, Keeping Canadians Safe*, highlights the issues and challenges facing Health Canada in monitoring and regulating the safety of drugs available to Canadians. The current random nature of post-market surveillance is due in part to the lack of regulatory requirements that compel drug companies to conduct additional research on product safety and effectiveness once their drug has entered the market. Drug regulators in other countries face similar challenges. A comparison of international approaches highlights some lessons we can learn and emphasizes the key issues that need to be addressed to enhance public safety and confidence in pharmaceuticals in Canada.

This presentation will be aimed at addressing the challenges to effective post-market surveillance and learning from the experiences of other countries. Discussion will revolve around the steps that are necessary toward building a more effective Canadian system of pharmacovigilance.

Enabling Pharmacist Practice Change through Collaboration in British Columbia

Presenting Author: Barbara Gobis Ogle (Director, Utilization, Drug Use Optimization Branch, Pharmaceutical Services Division), British Columbia Ministry of Health

Co-Authors: Dr. Suzanne Taylor (Executive Director, Drug Use Optimization Branch), Bob Nakagawa (Assistant Deputy Minister, Evaluation and Research Branch, Pharmaceutical Services Division), Darlene Therrien (Executive Director, Policy Outcomes, Evaluation and Research Branch, Pharmaceutical Services Division), and John Bethel (Assistant Deputy Minister, Stakeholder and Partner Relations), British Columbia Ministry of Health Services

The Pharmaceutical Services Division (PSD), BC Ministry of Health Services has established a successful collaboration strategy to advance the quality of pharmacist services available to patients in BC communities. This strategy includes:

- investment in resources to support optimal drug use
- landmark negotiated agreements and partnership with the BC Pharmacy Association (BCPhA)
- identification of specific supportive roles for government in the practice change process.

This presentation will be of interest to health care professionals and government decision-makers seeking new ways to maximize health care value from any health care service.

Pharmacists are underutilized in the health care system and transitioning from a product-focused to a patient-focused model. For sustainable change to occur, all stakeholders, including government, need aligned resources, philosophies, and approaches. Between 2008 and 2010, PSD and BCPhA successfully negotiated three consecutive agreements. These agreements led to a demonstration project and new funding for clinical service initiatives being developed jointly with BCPhA.

As health care system change proceeds, government plays a critical role in five areas:

- communicating with key stakeholder groups, including health care professionals (HCP), about the value each profession brings to patients and the system
- establishing linkages between HCP and existing health programs
- informing government decision-makers about HCP roles and integration opportunities
- leveraging health care professionals to use CADTH optimal drug use messaging and tools in practice
- obtaining the necessary skill sets for internal government staff to effectively manage clinical service initiatives and support practice change as it's occurring.

Committees

CADTH would like to acknowledge the hard work and tremendous effort of these committee members.

Symposium Moderator

Mr. Peter Chinneck, Director, Partnerships and Strategic Initiatives, Canadian Agency for Drugs and Technologies in Health

Program Committee Members

Dr. Michael Allen, Director - Evidence-based Programs, Dalhousie University

Dr. Tarun Ahuja, Theme Lead, Mental Health and Diabetes, Canadian Agency for Drugs and Technologies in Health

Dr. Irmajean Bajnok, Director, International Affairs and Best Practice Guidelines Programs, Centre for Professional Nursing Excellence, Registered Nurses' Association of Ontario

Dr. Stirling Bryan, Professor, School of Population & Public Health, and Director, Centre for Clinical Epidemiology & Evaluation, University of British Columbia

Ms. Christine Chin, Director, Health Economics and Health Outcomes, Sanofi-aventis Canada

Dr. Tammy Clifford, Chief Scientist, Canadian Agency for Drugs and Technologies in Health

Ms. Janet Crain, Manager, Knowledge Exchange, Programs, Canadian Agency for Drugs and Technologies in Health

Mr. Brian Hutton, Project Quality Advisor, Canadian Agency for Drugs and Technologies in Health

Dr. Arminée Kazanjian, Professor, School of Population & Public Health, Faculty of Medicine, University of British Columbia

Mr. Brendan McIntosh, Research Officer, Canadian Agency for Drugs and Technologies in Health

Mr. Patrick Morin, Director, Innovation and Pricing Policies, Office of Pharmaceuticals Management Strategies, Health Canada

Mr. Bob Nakagawa, Assistant Deputy Minister, Pharmaceutical Services, British Columbia Ministry of Health

Mr. Marc Pelletier, Vice President, Clinical Operations and Clinical Support, Fraser Health

Dr. Sean Tunis, President and Chief Executive Officer, Center for Medical Technology Policy

Ms. Ann Vosilla, Liaison Officer, British Columbia, Canadian Agency for Drugs and Technologies in Health

Mr. John Yan, Director, Communications and Government Relations, Canadian Agency for Drugs and Technologies in Health

Symposium Coordinators

Ms. Dale Calder, Events Planning Officer, Canadian Agency for Drugs and Technologies in Health

Ms. Donna Lachance,
The Hillbrooke Group

Abstract Review Committee

Donna Angus, Manager Research Transfer Initiatives, Alberta Heritage Foundation for Medical Research

Ahmed Bayoumi, Scientist, Centre for Research on Inner City Health

Donna Champagne, Liaison Officer-Manitoba, Canadian Agency for Drugs and Technologies in Health

Peter Chinneck, Director – Partnerships and Strategic Initiatives, Canadian Agency for Drugs and Technologies in Health

Jocelyn Chisamore, Program Officer, Canadian Agency for Drugs and Technologies in Health

Janet Crain, Manager – Knowledge Exchange, Canadian Agency for Drugs and Technologies in Health

Nandini Dendukuri, Assistant Professor, McGill University

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Bev Holmes, Head of Communications and Knowledge Exchange, Michael Smith Foundation for Health Research

Tanya Horsley, Research Associate, The Royal College of Physicians and Surgeons of Canada

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Karen Lee, Director – Health Economics, Canadian Agency for Drugs and Technologies in Health

Mitchell Levine, Director - Centre for Evaluation of Medicines, McMaster University

Janet Martin, Director – High Impact Technology Evaluation Centre, London Health Sciences Centre

Alain Mayhew, Review Group Coordinator, Cochrane Effective Practice and Organisation of Care Group

Ryan McCarthy, Knowledge Exchange Officer, Canadian Agency for Drugs and Technologies in Health

Brendan McIntosh, Research Officer, Canadian Agency for Drugs and Technologies in Health

Pamela McLean-Versey, Team Leader - Drug Evaluation Unit, Capital Health

Catherine Moltzan, Hematologist, CancerCare Manitoba

James Murtagh, Managing Partner, James Murtagh & Associates

Christine Perras, Research Officer, Canadian Agency for Drugs and Technologies in Health

Julie Polisena, Research Officer, Canadian Agency for Drugs and Technologies in Health

Nancy Robertson, Knowledge Exchange Officer, Canadian Agency for Drugs and Technologies in Health

Margaret Sampson, Manager – Library Services, Children's Hospital of Eastern Ontario

Maida Sewitch, Assistant Professor, McGill University

Vivian Welch, Research Associate, Centre for Global Health, University of Ottawa

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Siham Yasai, Drug Safety and Effectiveness Network, Canadian Institutes for Health Research



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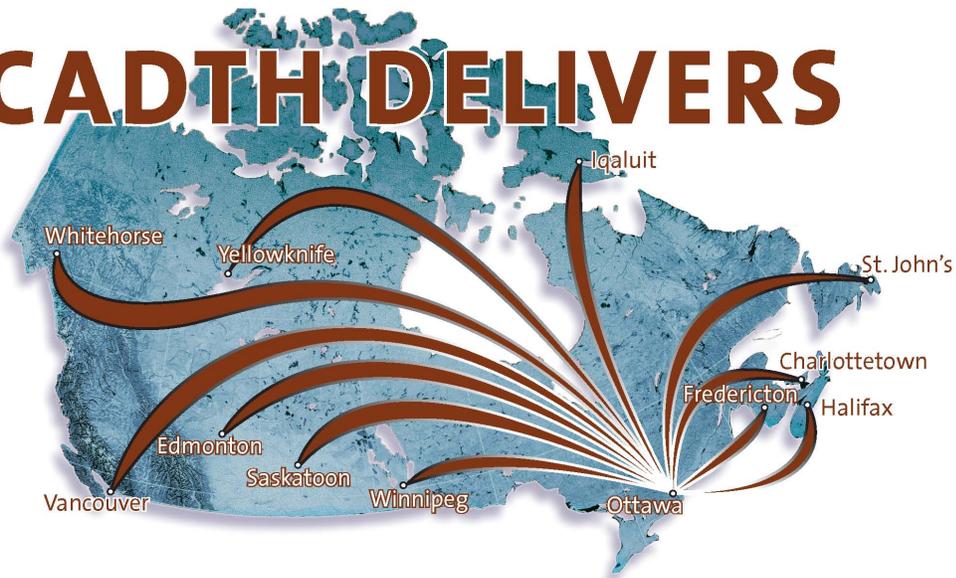
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