Learning from Each Other: 
Across Disciplines, Jurisdictions and Generations

Conference Program

Annual CAHSPR Conference

Hotel Bonaventure • Montreal, QC

Across Regions • Across Provinces • Across Nations
CAHSPR wishes to thank the conference sponsors for their generous support!

## Platinum

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## Exhibitors

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Thank you to the Conference Planning Committee Meeting for their contribution

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**Roxane Borges Da Silva**, Assistant Professor, Faculty of Nursing, Université de Montréal; Researcher, Université de Montréal Public Health Research Institute

Committee Members

**Jeremy Veillard**, President, CAHSPR; Vice President of Research and Analysis, Canadian Institute for Health Information  
**Frank Markel**, Executive Director, CAHSPR  
**Stephen Samis**, Vice President, Programs, Canadian Foundation for Healthcare Improvement  
**Robyn Tamblyn**, Scientific Director, Institute of Health Services and Policy Research, Canadian Institutes of Health Research  
**Elizabeth Drake**, Associate, Institute Strategic Initiatives, Institute of Health Services and Policy Research, Canadian Institutes of Health Research  
**Melodie Yun-Ju Song**, Health Policy PhD student, Department of Clinical Epidemiology and Biostatistics, McMaster University  
**Marcel Saulnier**, Director General, Health Care Strategies Directorate, Strategic Policy Branch, Health Canada  
**Lucie Richard**, Directrice, Institut de recherche en santé publique de l’Université de Montréal (IRSPUM)  
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Welcome to the 2015 CAHSPR Conference

It is our pleasure to welcome you to the 2015 CAHSPR Conference, our twelfth, held this year in Montreal. I hope you are reading this welcome note, not in the traditional paper program, but on our new conference app, another first for CAHSPR! In keeping with CAHSPR's mission to bring together health services researchers with decision makers so that we can learn from each other, this year's conference is entitled “Learning from Each Other: Across Disciplines, Jurisdictions and Generations.” We expect a robust attendance at our CAHSPR conference, so you should find old friends and new acquaintances with whom to share your love and passion of health services and policy research. Several of our plenary sessions promise to advance this theme of learning from each other. In the opening plenary session, Claude Evin, Director General of the Agence regionale de sante, Ile-de-France, will speak to us about the French health system, which has been recognized internationally for its high level of performance. Dr. Evin’s presentation will be followed by reaction from Antonia Maioni and Jean Rochon, two highly regarded figures within the Quebec healthcare system. Our focus on international comparisons continues with our Tuesday afternoon plenary session “Health System Improvement in Australia: Knowledge Organizations as Enablers,” presented by Jean-Frederic Levesque, now working in Australia as Chief Executive Officer of the Bureau of Health Information of New South Wales, but with a long record of experience in Canada. Alan Katz and Michel Clair will respond to Jean-Frederic’s presentation.

On Wednesday, Tony Culyer, our Hall Laureate for 2015 will give a personal perspective of 50 years of Health Economics. Our closing plenary session, on Thursday afternoon will focus on the important question of regionalization in our healthcare system, asking the question what is the future of regionalization? Jean Louis Denis will speak on recent research looking at regionalization, with commentary from such distinguished panelists as Brian Postl.

Space does not permit us to mention all of the wonderful sub-plenary sessions you can choose from at this year’s conference. It is a veritable buffet for the mind. Once again, the conference will provide an opportunity for CAHSPR’s theme groups to meet. Researchers and policy makers with a special interest in the areas of Child and Maternal Health, Primary Health Care, Mental Health, Collaborative Healthcare Improvement Partnerships, Applied Research in Cancer Care, and Health Human Resources will have a chance to meet with colleagues who share their interests. Of course, CAHSPR thrives on the energy of its student participants. We have a dedicated student theme group, and we expect to see Canada’s future leaders make their debut in our poster sessions and rapid fire presentations.

We would particularly like to thank Denis Roy and Erin Strumpf who co-chaired the program committee, and all of the committee members who planned this year’s event. Special thanks to Susan Bronskill and Roxanne Borges Da Silva for leading the abstracts review process. Finally, we thank Sally Cleford and her team at Face2Face Events Management for all their hard work to make this year’s conference a success.

We hope you enjoy the conference. You can learn more about CAHSPR at our website www.cahspr.ca. Please join us at the CAHSPR Annual General Meeting on Thursday, May 28th at 7:15am. We look forward to greeting all of you this week.

With best wishes

Jeremy Veillard
President
Canadian Association for Health Services and Policy Research

Frank Markel
Executive Director
Canadian Association for Health Services and Policy Research
Modern health systems rank amongst the most complex achievements of mankind. As is the case with any intricate organization, health systems across Canada are forever developing strategies and procedures to meet the needs of their population, in accordance with their individual context.

At the crossroads of Canadian and international learning systems, CAHSPR remains committed to reducing the gap between available research evidence and knowledge translation. In fact, CAHSPR endeavours to facilitate the sharing of knowledge and approaches, particularly with regard to research and experiments, to guide the improvement of policies and practices.

Discussions at the upcoming Montreal Conference, from May 26 to 28, will therefore focus on this particular theme: learning from each other, across disciplines, jurisdictions and generations.

The highest level of interaction between health regions, provinces and various leading countries has been built into the Program. In so doing, we hope to drive vibrant exchanges among the many professions and scientific disciplines found under the umbrella of health. Finally, we strove to provide space for the contrasting views held by various generations of men and women who work in the field, whether they are young and emerging or mid-to late-career, seasoned professionals.

It is our hope that these exchanges will feed conversations at the Conference, and create the spark that will revive or sustain passions for the public health system in our country.
Floorplan
### Monday, May 25, 2015  Pre-Conference Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>1:00pm – 5:00pm</td>
<td>THE COMMONWEALTH FUND INTERNATIONAL HEALTH POLICY SURVEY (IHP)</td>
<td>Fontaine H</td>
</tr>
<tr>
<td>1:00pm – 4:00pm</td>
<td>FROM EVIDENCE TO CHANGE: A WORKSHOP ON WRITING EVIDENCE/ISSUE BRIEFS</td>
<td>Fontaine F</td>
</tr>
<tr>
<td>2:00pm – 4:00pm</td>
<td>PRIMARY HEALTHCARE THEME GROUP ANNUAL GENERAL MEETING</td>
<td>Jacques Cartier</td>
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<tr>
<td>5:00pm – 6:00pm</td>
<td>CONFERENCE PRIMER</td>
<td>Fontaine G</td>
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<tr>
<td>6:00pm – 8:00pm</td>
<td>WELCOME RECEPTION</td>
<td>Salon Bonaventure</td>
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### Tuesday, May 26, 2015  Day 1

<table>
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<tr>
<td>6:15am – 7:30am</td>
<td>CAHSPR ON THE MOVE <em>(Meet in the hotel lobby)</em></td>
<td>Lobby</td>
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<tr>
<td>7:00am – 8:00am</td>
<td>BREAKFAST</td>
<td>Fontaine AB</td>
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<tr>
<td>8:00am – 8:10am</td>
<td>OPENING REMARKS</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>8:10am – 8:20am</td>
<td>OFFICIAL ABORIGINAL WELCOME</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>8:20am – 8:30am</td>
<td>WELCOME FROM THE CONFERENCE CO-CHAIRS</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>8:30am – 8:35am</td>
<td>RAPID FIRE PRESENTATION – The CHOICE Project: Engaging Older Adults in Healthcare Decision-Making</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>8:35am – 9:45am</td>
<td>KEYNOTE PRESENTATION – The French Health System: Insights From A High Performing System</td>
<td>Montreal Ballroom</td>
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<tr>
<td>9:45am – 11:00am</td>
<td>POSTER PRESENTATIONS <em>(Poster Presentations Guide – View pages 25)</em></td>
<td>Fontaine AB</td>
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<tr>
<td>11:00am – 11:15am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<tr>
<td>11:15am – 12:15pm</td>
<td>SUB-PLENARY SESSIONS</td>
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<tr>
<td></td>
<td>SP1  Health Care System Performance in Canada and the US: Challenges and Promise in Moving Toward Effective, Patient-Centered Care</td>
<td>Montreal Ballroom</td>
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<td></td>
<td>SP2  Strategies for Motivating Partnerships between Researchers and Research Users</td>
<td>Fontaine GH</td>
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<tr>
<td></td>
<td>SP3  Mobilizing health research to achieve sustainable health</td>
<td>Mont Royal</td>
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<tr>
<td>12:15pm – 1:30pm</td>
<td>NETWORKING LUNCH</td>
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<td>1:30pm – 2:45pm</td>
<td>CONCURRENT SESSIONS A <em>(Concurrent Sessions Guide – View pages 18)</em></td>
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<tr>
<td></td>
<td>A1: Health Human Resources</td>
<td>Fontaine C</td>
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<tr>
<td></td>
<td>A2: Health Reform I</td>
<td>Fontaine D</td>
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<tr>
<td></td>
<td>A3: Primary Healthcare: Reform and performance</td>
<td>Fontaine E</td>
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<tr>
<td></td>
<td>A4: Chronic Disease Management and Aging</td>
<td>Fontaine F</td>
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<td></td>
<td>A5: Knowledge Translation &amp; Exchange</td>
<td>Fontaine G</td>
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<td></td>
<td>A6: Health Care Costs and Chronic Disease</td>
<td>Fontaine H</td>
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<td>A7: PANEL – What can nurses do to solve the primary care woes of Canadian healthcare systems?</td>
<td>Mont Royal</td>
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<tr>
<td>2:45pm – 3:15pm</td>
<td>BREAK</td>
<td>Fontaine AB</td>
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<tr>
<td>3:15pm – 3:20pm</td>
<td>RAPID FIRE PRESENTATION – Quality Indicators for End-of-Life Care in Ontario</td>
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<td>3:20pm – 4:15pm</td>
<td>KEYNOTE PRESENTATION – Health System Improvement In Australia: Knowledge Organizations As Enablers</td>
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<td>4:30pm – 6:00pm</td>
<td>STUDENT THEME GROUP SPEED NETWORKING</td>
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### Day 2

#### Wednesday, May 27, 2015

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<td>7:30am – 8:20am</td>
<td>HEALTH HUMAN RESOURCES THEME GROUP BUSINESS MEETING (Breakfast available)</td>
<td>Longueil</td>
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<td>8:30am – 8:35am</td>
<td>RAPID FIRE PRESENTATION – Effects of Family Medicine Groups on visits to the emergency department among diabetics in Quebec between 2000 and 2011: a population-based segmented regression analysis of an interrupted time series</td>
<td>Montreal Ballroom</td>
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<td>8:35am – 9:45am</td>
<td>KEYNOTE PRESENTATION – Alchian, Williams, Bookshelves and Cost-Effectiveness Thresholds: The Power of Multum in Parvo</td>
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<td>9:45am – 10:00am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<td>10:00am – 11:15am</td>
<td>CONCURRENT SESSIONS B ( Concurrent Sessions Guide – View pages xxx)</td>
<td>Fontaine C</td>
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<tr>
<td>B1: Pharmaceutical Policy I</td>
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<td>Fontaine C</td>
</tr>
<tr>
<td>B2: Chronic Disease Management I</td>
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<td>Fontaine D</td>
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<td>B3: Primary Healthcare and Access</td>
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<td>Fontaine E</td>
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<tr>
<td>B4: Chronic Disease Management II</td>
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<td>Fontaine F</td>
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<tr>
<td>B5: Access &amp; Equity and Primary Healthcare</td>
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<td>Fontaine G</td>
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<tr>
<td>B6: Health Economics</td>
<td></td>
<td>Fontaine H</td>
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<tr>
<td>B7: PANEL – Improving care for older adults and individuals with dementia in the French and Canadian health care systems: insights and challenges in evaluating policy</td>
<td>Mont Royal</td>
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<td>12:15pm – 1:30pm</td>
<td>LUNCH WORKSHOP – Pan-Canadian Health Reform Analysis Network: How To Write A Health Reform Analysis And Get It Published</td>
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<td>1:30pm – 2:45pm</td>
<td>CONCURRENT SESSIONS C ( Concurrent Sessions Guide – View pages 18)</td>
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<td>C1: Aging</td>
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<td>C2: Aboriginal (Primary Healthcare &amp; Access and Equity)</td>
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<td>Fontaine D</td>
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<td>C3: Primary Healthcare and New Models</td>
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<tr>
<td>C4: Quality, Safety &amp; Performance Measurement and Primary Care</td>
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</tr>
<tr>
<td>C5: Quality, Safety &amp; Performance Measurement</td>
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<td>Fontaine G</td>
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<tr>
<td>C6: Research Methods or Innovations</td>
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<td>Fontaine H</td>
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<tr>
<td>C7: PANEL – Knowledge Translation Across Health Disciplines: Lessons on Successful Engagement and Meaningful Impact. An SWG-Led Panel</td>
<td>Mont Royal</td>
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<tr>
<td>2:45pm – 3:15pm</td>
<td>BREAK</td>
<td>Fontaine AB</td>
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<td>3:15pm – 4:30pm</td>
<td>CONCURRENT SESSIONS D ( Concurrent Sessions Guide – View pages 18)</td>
<td>Fontaine C</td>
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<tr>
<td>D1: Aging</td>
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<tr>
<td>D2: Access &amp; Equity &amp; Young</td>
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<td>Fontaine D</td>
</tr>
<tr>
<td>D3: Primary Healthcare (Cancer, Mental Illness, Alcohol)</td>
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<tr>
<td>D4: Chronic Disease Management</td>
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<td>Fontaine F</td>
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<tr>
<td>D5: Quality, Safety &amp; Performance Measurement (Patient Experience or Care)</td>
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<td>D6: Public Health</td>
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<td>Fontaine H</td>
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<tr>
<td>D7: PANEL – Pan-Canadian Real-world Health Data Network</td>
<td></td>
<td>Mont Royal</td>
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<tr>
<td>4:45pm – 5:15pm</td>
<td>THE JUSTICE EMMETT HALL MEMORIAL FOUNDATION ANNUAL GENERAL MEETING</td>
<td>Mont Royal</td>
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<tr>
<td>5:00pm – 6:30pm</td>
<td>MATERNAL &amp; CHILD HEALTH THEME GROUP MEETING</td>
<td>Longueuil</td>
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<td>7:00pm</td>
<td>STUDENT SOCIAL &amp; ACTIVITIES</td>
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### Thursday, May 28, 2015  Day 3

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<td>BREAKFAST</td>
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<tr>
<td>8:30am – 9:30am</td>
<td>SUB-PLENARY SESSIONS</td>
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<td></td>
<td>SP4  Building Systems-Level Evidence From The Mosaic of 12 Research Programs In The CIHR Signature Initiative On Community Based Primary Health Care (CBPHC Networking and Poster Session from 9:30am to 10:45am)</td>
<td>Mont Royal</td>
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<tr>
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<td>SP5  Prevention and Health Promotion in the Context of Health Reform and Budgetary Restrictions</td>
<td>Montreal Ballroom</td>
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<td>SP6  Towards People-Centered Health Systems: Novel Efforts To Support Public And Patient Engagement In Canada</td>
<td>Fontaine GH</td>
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<tr>
<td>9:30am – 9:45am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<tr>
<td>9:45am – 10:45am</td>
<td>POSTER PRESENTATIONS  (Poster Presentations Guide – View pages 25)</td>
<td>Fontaine AB</td>
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<tr>
<td>10:45am – 11:00am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<td>11:00am – 12:15pm</td>
<td>CONCURRENT SESSIONS E  (Concurrent Sessions Guide – View pages 18)</td>
<td>Fontaine C</td>
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<tr>
<td></td>
<td>E1: Health Reform II</td>
<td></td>
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<tr>
<td></td>
<td>E2: Access &amp; Equity and Aging</td>
<td>Fontaine D</td>
</tr>
<tr>
<td></td>
<td>E3: Primary Healthcare and Nursing</td>
<td>Fontaine E</td>
</tr>
<tr>
<td></td>
<td>E4: Chronic Disease Management</td>
<td>Fontaine F</td>
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<td></td>
<td>E5: Health Economics</td>
<td>Fontaine G</td>
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<tr>
<td></td>
<td>E6: Health Human Resources</td>
<td>Fontaine H</td>
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<tr>
<td></td>
<td>E7: PANEL – Creating Capacity in Support of System Transformation in Ontario</td>
<td>Mont Royal</td>
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<tr>
<td>12:15pm – 1:30pm</td>
<td>NETWORKING LUNCH &amp; AWARDS PRESENTATION</td>
<td>Montreal Ballroom</td>
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<tr>
<td>1:30pm – 2:45pm</td>
<td>CONCURRENT SESSIONS F  (Concurrent Sessions Guide – View pages 18)</td>
<td>Fontaine C</td>
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<tr>
<td></td>
<td>F1: Maternal Child Health &amp; Mental Health</td>
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<td></td>
<td>F2: Knowledge Translation &amp; Exchange</td>
<td>Fontaine D</td>
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<td>F3: Primary Healthcare Linked with Secondary Care</td>
<td>Fontaine E</td>
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<td></td>
<td>F4: Health Economics (Costs)</td>
<td>Fontaine F</td>
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<tr>
<td></td>
<td>F5: Quality, Safety &amp; Performance Measurement and Chronic Disease Management</td>
<td>Fontaine G</td>
</tr>
<tr>
<td></td>
<td>F6: Pharmaceutical Policy II</td>
<td>Fontaine H</td>
</tr>
<tr>
<td></td>
<td>F7: PANEL – Long-Term Solutions: Fair and Sustainable Options for Financing Universal Long-Term Care in Canada</td>
<td>Mont Royal</td>
</tr>
<tr>
<td>2:45pm – 3:15pm</td>
<td>BREAK</td>
<td>Fontaine AB</td>
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<tr>
<td>3:15pm – 3:20pm</td>
<td>RAPID FIRE PRESENTATION – Factors associated with having or not having a family doctor</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>3:20pm – 4:25pm</td>
<td>KEYNOTE PRESENTATION – Is There A Future For Regionalization In Canada?</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>4:25pm – 4:30pm</td>
<td>CLOSING REMARKS &amp; ADJOURNMENT</td>
<td>Montreal Ballroom</td>
</tr>
</tbody>
</table>
Conference Agenda
### Monday, May 25, 2015  Pre-Conference Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>1:00pm – 5:00pm</td>
<td><strong>THE COMMONWEALTH FUND INTERNATIONAL HEALTH POLICY SURVEY (IHP)</strong></td>
<td>Fontaine H</td>
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<td></td>
<td>Sponsored by CIHI and CIHR-IHSPR&lt;br&gt;This pre-conference workshop is intended for graduate and post-doctoral students, new investigators and policy makers who are interested in learning more about the International Health Policy survey and how to access and use the data to better understand health systems around the world. This session will feature experts: Michelle Doty (The Commonwealth Fund), Susan Brien (Health Quality Ontario) and Jean-Frédéric Levesque (Bureau of health information of New South Wales) as well as representatives of CIHI. Our experts will provide an orientation to the IHP Survey and the data collected, describe previous analyses and published results, and give workshop participants the opportunity to use a sample dataset.</td>
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<tr>
<td>1:00pm – 4:00pm</td>
<td><strong>FROM EVIDENCE TO CHANGE: A WORKSHOP ON WRITING EVIDENCE/ISSUE BRIEFS</strong></td>
<td>Fontaine F</td>
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<td></td>
<td>Coordinated by the CAHSPR Student Working Group&lt;br&gt;Led by the McMaster Health Forum, this pre-conference workshop is intended for graduate students, post-doctoral trainees, and early career researchers who are interested in learning how to write evidence/issue briefs to influence policy development and affect positive change in health service delivery. This workshop will provide an introduction on how evidence/issue briefs are used as knowledge translation tools in various policy settings, and will describe the different types of knowledge and implementation considerations involved in preparing and effective brief. A practical component of the workshop will give attendees an opportunity to integrate learned concepts into developing their own evidence/issue brief.</td>
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</tr>
<tr>
<td>2:00pm – 5:00pm</td>
<td><strong>CONFERENCE PRIMER</strong>&lt;br&gt;Coordinated by the CAHSPR Student Working Group&lt;br&gt;Presented by Jeremy Veillard, Frank Markel, Denis Roy, Erin Strumpf&lt;br&gt;The CAHSPR-SWG Pre-Conference Primer is a great way for new and returning attendees to become acquainted with the annual CAHSPR Conference! You are invited to join Jeremy Veillard (CAHSPR President) and Frank Markel (CAHSPR Executive Director), along with Erin Strumpf and Denis Roy (2015 CAHSPR Conference Co-Chairs), as well as a student representative, as they provide an overview of the conference and discuss the significance of this year’s conference theme. This is also a great opportunity to hear about CAHSPR’s latest initiatives and to ask any questions to our CAHSPR leadership.</td>
<td>Fontaine G</td>
</tr>
<tr>
<td>6:00pm – 8:00pm</td>
<td><strong>WELCOME RECEPTION</strong>&lt;br&gt;Open to all participants interested in Primary Healthcare</td>
<td>Salon Bonaventure</td>
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### Tuesday, May 26, 2015  Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>6:15am – 7:30am</td>
<td><strong>CAHSPR ON THE MOVE (Meet in the hotel lobby)</strong>&lt;br&gt;Coordinated by the CAHSPR Student Working Group&lt;br&gt;Start your day with a brisk morning run or walk around downtown Montreal. Coffee-fueled, enthusiastic guides will meet you in the hotel lobby, armed with maps of the most scenic routes we could muster. Have your photo taken (and maybe even tweeted) by one of our volunteers! For those who would like to go out on their own at a later time, guide maps will be available at the SWG table and on our website.</td>
<td>Lobby</td>
</tr>
<tr>
<td>7:00am – 8:00am</td>
<td><strong>BREAKFAST</strong>&lt;br&gt;Presented by Jeremy Veillard, President, CAHSPR</td>
<td>Fontaine AB</td>
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<tr>
<td>8:00am – 8:10am</td>
<td><strong>OPENING REMARKS</strong>&lt;br&gt;Presented by Jeremy Veillard, President, CAHSPR</td>
<td>Montreal Ballroom</td>
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<tr>
<td>8:10am – 8:20am</td>
<td><strong>OFFICIAL ABOREIGNAL WELCOME</strong>&lt;br&gt;Presented by Amelia Tekwatonti McGregor, Kahnawake Schools Diabetes Prevention Project; Community Advisory Board Member; Elder, Executive Committee</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>8:20am – 8:30am</td>
<td><strong>WELCOME FROM THE CONFERENCE CO-CHAIRS</strong>&lt;br&gt;Presented by Denis Roy, Vice-président, Science et gouvernance clinique, Vice-president, Science and clinical governance&lt;br&gt;Institut national d’excellence en santé et service sociaux; Erin Strumpf, Associate Professor, McGill University</td>
<td>Montreal Ballroom</td>
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<tr>
<td>8:30am – 8:35am</td>
<td><strong>RAPID FIRE PRESENTATION – The CHOICE Project: Engaging Older Adults in Healthcare Decision-Making</strong>&lt;br&gt;Presented by Jacobi Elliott, PhD Candidate, University of Waterloo</td>
<td>Montreal Ballroom</td>
</tr>
<tr>
<td>8:35am – 9:45am</td>
<td><strong>KEYNOTE PRESENTATION</strong>&lt;br&gt;The French Health System: Insights From A High Performing System&lt;br&gt;Presented by Claude Évin, director general, Agence régionale de santé, Île-de-France, former Solidarity, Health and Social Protection minister, and Chevalier de la légion d’honneur; Antonia Maioni, Professor, Department of Political Science, Institute for health and Social Policy, McGill University; President of the Canadian Federation for the Humanities and Social Sciences; Jean Rochon, medical expert at INS PQ and former Québec Health minister&lt;br&gt;This session will address key features on the French health system and outline its major strengths as well as some of the challenges it is currently dealing with. M. Évin will discuss his perspectives on some current system modernization initiatives and share his insights on how these might inform policy for Canada. This presentation will be followed by a panel discussion of lessons learned from the French health system and how these could inform health policy and system transformation in Canada.</td>
<td>Montreal Ballroom</td>
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<tr>
<td>9:45am – 11:00am</td>
<td><strong>POSTER PRESENTATIONS</strong>&lt;br&gt;(Poster Presentations Guide – View pages 25)</td>
<td>Fontaine AB</td>
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<tr>
<td>11:00am – 11:15am</td>
<td><strong>TRANSITION TO NEXT SESSION</strong></td>
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</tbody>
</table>
11:15am – 12:15pm SUB-PLENARY SESSIONS

SP1 Health Care System Performance in Canada and the US: Challenges and Promise in Moving Toward Effective, Patient-Centered Care

Moderated by Erin Strumpf, Associate Professor, Department of Economics, Department of Epidemiology, Biostatistics and Occupational Health, McGill University; Uwe E. Reinhardt, James Madison Professor of Political Economy, Professor of Economics and Public Affairs, Princeton University.

Presented by Eric Schneider, Senior Vice President for Policy and Research, The Commonwealth Fund; Ross Baker, Director, Quality Improvement and Patient Safety, Institute of Health Policy, Management and Evaluation, University of Toronto.

Sharing the North American continent, the US and Canadian health care systems have some notable differences but also face many challenges in common. The panelists will present past performance and promising developments in Canada and the US regarding high-quality, effective, and patient-centered care. New results from the Commonwealth Fund’s study comparing performance in 11 OECD countries’ health care systems will provide data and evidence to support these discussions.

Montreal Ballroom

12:15pm – 1:30pm NETWORKING LUNCH

1:30pm – 2:45pm CONCURRENT SESSIONS A

1:30pm – 2:45pm CONCURRENT SESSIONS B (Concurrent Sessions Guide – View pages 18)

A1: Health Human Resources

A2: Health Reform I

A3: Primary Healthcare: Reform and performance

A4: Chronic Disease Management and Aging

A5: Knowledge Translation & Exchange

A6: Health Care Costs and Chronic Disease

A7: PANEL – What can nurses do to solve the primary care woes of Canadian healthcare systems?

Montreal Ballroom

2:45pm – 3:15pm BREAK

3:15pm – 3:20pm RAPID FIRE PRESENTATION – Quality Indicators for End-of-Life Care in Ontario

Presented by Syron Bansal, Research Analyst, Health Quality Ontario

Montreal Ballroom

3:20pm – 4:15pm KEYNOTE PRESENTATION

Health System Improvement In Australia: Knowledge Organizations As Enablers

Keynote presented by Jean-Frédéric Levesque, Chief executive officer at Bureau of health information of New South Wales, Sydney, Australia and Researcher, Centre hospitalier universitaire de Montréal Research Centre.

Panelists: Alan Katz, Professor, Family Medicine and Community Health Sciences, Director of the Manitoba Centre for Health Policy; Michel Clair, Président, Alliance santé Québec, Former Chair, Commission sur le financement des services de santé (Commission Clair); Kjeld Møller Pedersen, Professor, Health Economics and Health Policy; Center of Health Economics Research, COHERE; University of Southern Denmark.

After a brief review of the fields of expertise occupied by knowledge organizations on the international scene, Dr Levesque will depict how Australia has structured its own approach nationally. He will draw comparisons with the accomplishments of Canada in that respect and suggest possible foci for improvements. Panelists will share their views on institution-based strategies currently being explored across jurisdictions in Canada, with a view of accelerating knowledge and research uptake in order to better support policy, practice and health system improvement.

Montreal Ballroom

4:30pm – 6:00pm STUDENT THEME GROUP SPEED NETWORKING

Make a connection, ask important questions and leave a lasting impression – in 7 minutes! Inspired by the exciting experience of speed dating, this event allows students to sign up for one-on-one conversations with some of CAHSPR's superstar experts and leaders. Biographies for experts and leaders will be available on our website before the conference and student sign-up will occur on a first-come first-serve basis. Not sure what to ask the expert? No problem! Tip sheets will be available at the SWG table and on our website for those who have never participated in such an event before.

Mont Royal
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00am – 8:30am</td>
<td>BREAKFAST</td>
<td>Fontaine AB</td>
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<tr>
<td>7:30am – 8:20am</td>
<td>HEALTH HUMAN RESOURCES THEME GROUP BUSINESS MEETING (Breakfast available)</td>
<td>Longueil</td>
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<tr>
<td>8:30am – 8:35am</td>
<td>RAPID FIRE PRESENTATION – Effects of Family Medicine Groups on visits to the emergency department among diabetics in Quebec between 2000 and 2011: a population-based segmented regression analysis of an interrupted time series. Presented by Renee Carter, PhD Candidate, McGill University</td>
<td>Montreal Ballroom</td>
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<tr>
<td>8:35am – 9:45am</td>
<td>KEYNOTE PRESENTATION</td>
<td>Montreal Ballroom</td>
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<td>9:45am – 10:00am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>CONCURRENT SESSIONS B (Concurrent Sessions Guide – View pages 18)</td>
<td>Fontaine C</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>B1: Pharmaceutical Policy I</td>
<td>Fontaine D</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>B2: Chronic Disease Management I</td>
<td>Fontaine D</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>B3: Primary Healthcare and Access</td>
<td>Fontaine E</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>B4: Chronic Disease Management II</td>
<td>Fontaine F</td>
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<td>10:00am – 11:15am</td>
<td>B5: Access &amp; Equity and Primary Healthcare</td>
<td>Fontaine G</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>B6: Health Economics</td>
<td>Fontaine H</td>
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<tr>
<td>10:00am – 11:15am</td>
<td>B7: PANEL – Improving care for older adults and individuals with dementia in the French and Canadian health care systems: insights and challenges in evaluating policy</td>
<td>Mont Royal</td>
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<tr>
<td>12:15pm – 1:30pm</td>
<td>NETWORKING LUNCH</td>
<td>Fontaine AB</td>
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<tr>
<td>12:15pm – 1:30pm</td>
<td>LUNCH WORKSHOP</td>
<td>Mont Royal</td>
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<td>1:30pm – 2:45pm</td>
<td>CONCURRENT SESSIONS C (Concurrent Sessions Guide – View pages 18)</td>
<td>Fontaine C</td>
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<tr>
<td>1:30pm – 2:45pm</td>
<td>C1: Aging</td>
<td>Fontaine C</td>
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<tr>
<td>1:30pm – 2:45pm</td>
<td>C2: Aboriginal (Primary Healthcare &amp; Access and Equity)</td>
<td>Fontaine D</td>
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<tr>
<td>1:30pm – 2:45pm</td>
<td>C3: Primary Healthcare and New Models</td>
<td>Fontaine E</td>
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<td>1:30pm – 2:45pm</td>
<td>C4: Quality, Safety &amp; Performance Measurement and Primary Care</td>
<td>Fontaine F</td>
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<td>1:30pm – 2:45pm</td>
<td>C5: Quality, Safety &amp; Performance Measurement</td>
<td>Fontaine G</td>
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<td>1:30pm – 2:45pm</td>
<td>C6: Research Methods or Innovations</td>
<td>Fontaine H</td>
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<tr>
<td>1:30pm – 2:45pm</td>
<td>C7: PANEL – Knowledge Translation Across Health Disciplines: Lessons on Successful Engagement and Meaningful Impact. An SWG-Led Panel</td>
<td>Mont Royal</td>
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<tr>
<td>2:45pm – 3:15pm</td>
<td>BREAK</td>
<td>Fontaine AB</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>CONCURRENT SESSIONS D (Concurrent Sessions Guide – View pages 18)</td>
<td>Fontaine C</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D1: Aging</td>
<td>Fontaine C</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D2: Access &amp; Equity &amp; Young</td>
<td>Fontaine D</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D3: Primary Healthcare (Cancer, Mental Illness, Alcohol)</td>
<td>Fontaine E</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D4: Chronic Disease Management</td>
<td>Fontaine F</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D5: Quality, Safety &amp; Performance Measurement (Patient Experience or Care)</td>
<td>Fontaine G</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D6: Public Health</td>
<td>Fontaine H</td>
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<tr>
<td>3:15pm – 4:30pm</td>
<td>D7: PANEL – Pan-Canadian Real-world Health Data Network</td>
<td>Mont Royal</td>
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<td>4:45pm – 5:15pm</td>
<td>THE JUSTICE EMMETT HALL MEMORIAL FOUNDATION ANNUAL GENERAL MEETING</td>
<td>Mont Royal</td>
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<td>5:00pm – 6:30pm</td>
<td>MATERNAL &amp; CHILD HEALTH THEME GROUP MEETING</td>
<td>Longueil</td>
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<tr>
<td>7:00pm</td>
<td>STUDENT SOCIAL &amp; ACTIVITIES</td>
<td>TBC</td>
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</table>

Come join us for a relaxing evening of good company and great conversation at the annual CAHSPR-SWG Student Social. Location is to be determined, but will be within walking distance of the conference hotel.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Activity</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00am – 8:30am</td>
<td>BREAKFAST</td>
<td>Fontaine AB</td>
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<tr>
<td>8:30am – 9:30am</td>
<td>SUB-PLENARY SESSIONS</td>
<td>Mont Royal</td>
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<tr>
<td>8:30am – 9:30am</td>
<td>SP4  Building Systems-Level Evidence From The Mosaic of 12 Research Programs In The CIHR Signature Initiative On Community Based Primary Health Care</td>
<td>Mont Royal</td>
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<td>Moderated by Jeannie Haggerty, CBPHC Innovation Team PI and Common Indicators Group, McGill University</td>
<td>Mont Royal</td>
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<td>Presented by Robyn Tamblyn, Scientific Director, Institute for Health Services and Policy Research, CIHR; Luc Boileau, CEO, Institut national d’excellence en santé et en services sociaux; Astrid Brouselle, Canada Research Chair, Université de Sherbrooke; Jean-Frédéric Levesque, Chief executive officer at Bureau of health information of New South Wales, Sydney, Australia and Researcher, Centre hospitalier universitaire de Montréal Research Centre; Alan Katz, Professor, Family Medicine and Community Health Sciences, Director of the Manitoba Centre for Health Policy; Grant Russell, Head of School of Primary Health Care, Professor of General Practice Research, Monash University, Melbourne Australia</td>
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<td>Learning From Others: Across Disciplines</td>
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<td>How have the CIHR Innovation Team Grants spurred interdisciplinary research?</td>
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<td>What are the lessons for policy makers?</td>
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<td>Join us!</td>
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<tr>
<td>9:30am – 9:45am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<td>9:45am – 10:45am</td>
<td>POSTER PRESENTATIONS (Poster Presentations Guide – View pages 25)</td>
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<tr>
<td>10:45am – 11:00am</td>
<td>TRANSITION TO NEXT SESSION</td>
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<tr>
<td>11:00am – 12:15pm</td>
<td>CONCURRENT SESSIONS E (Concurrent Sessions Guide – View pages 18)</td>
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<tr>
<td></td>
<td>E1: Health Reform II</td>
<td>Fontaine C</td>
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<tr>
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<td>E2: Access &amp; Equity and Aging</td>
<td>Fontaine D</td>
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<td>E3: Primary Healthcare and Nursing</td>
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<td>E4: Chronic Disease Management</td>
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<td></td>
<td>E5: Health Economics</td>
<td>Fontaine G</td>
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<td></td>
<td>E6: Health Human Resources</td>
<td>Fontaine H</td>
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<td></td>
<td>E7: PANEL – Creating Capacity in Support of System Transformation in Ontario</td>
<td>Mont Royal</td>
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</table>
12:15pm – 1:30pm  NETWORKING LUNCH & AWARDS PRESENTATION  
**Rising Star Award** (Sponsored by Canadian Institutes for Health Research)  
**Article of the Year** (Sponsored by Canadian Institutes for Health Research)  
**Jack Boan Student Essay Awards** (Sponsored by The Justice Emmett Hall Memorial Foundation)  
**Student Poster Awards** (Sponsored by Canadian Institutes for Health Research)  
**Pat Martens Memorial Student Prize in Maternal & Child Health Research** (Sponsored by CAHSPR Maternal & Child Health Theme Group)  
**Primary Healthcare Student Presentation Award** (Sponsored by CAHSPR Primary Healthcare Theme Group)  
**2015 - 2016 Canadian Harkness Fellow** (Announced by STEPHEN SAMIS, Vice-President, Programs, Canadian Foundation for Healthcare Improvement)  
**Health Human Resource Theme Group Awards** (Sponsored by CAHSPR Health Human Resources Theme Group)  

| 1:30pm – 2:45pm | CONCURRENT SESSIONS F  (Concurrent Sessions Guide – View pages 18) | Montreal Ballroom  
|----------------|------------------------------------------------------------------|-----------------  
| F1: Maternal Child Health & Mental Health | Fontaine C  
| F2: Knowledge Translation & Exchange | Fontaine D  
| F3: Primary Healthcare Linked with Secondary Care | Fontaine E  
| F4: Health Economics (Costs) | Fontaine F  
| F5: Quality, Safety & Performance Measurement and Chronic Disease Management | Fontaine G  
| F6: Pharmaceutical Policy II | Fontaine H  
| F7: PANEL – Long-Term Solutions: Fair and Sustainable Options for Financing Universal Long-Term Care in Canada | Mont Royal  

2:45pm – 3:15pm  BREAK  

3:15pm – 3:20pm  RAPID FIRE PRESENTATION – Factors associated with having or not having a family doctor  
Presented by Sylvie Provost, Medical Advisor, Montreal Public Health Department  

| 3:20pm – 4:25pm | KEYNOTE PRESENTATION  | Montreal Ballroom  
|----------------|-----------------------|-----------------  
| Is There A Future For Regionalization In Canada?  
Presented by Jean Louis Denis, École nationale d'administration publique (ENAP); Brian Postl, Dean of Medicine; Dean & Vice-Provost, Faculty of Health Sciences, University of Manitoba; Chris Power, CEO, Canadian Patient Safety Institute  
Building on recent collaborative work, Jean Louis Denis will review the changing landscape of regionalization across Canada over the last decade. Often seen as the de facto health policy in Canada, a variety of regionalization policies have been implemented across provinces. The plenary will address the hopes of regionalization, its key accomplishments and the main barriers it faces. This review will be concluded by outlining issues that ought to be addressed in the pursuit of the Triple Aim across regional territories. Our senior panelists will discuss issues and future directions as they relate to the dynamics of the provincial health system governance. The reform currently being implemented in Quebec will be specifically considered in light of the lessons learned. | Montreal Ballroom  

4:25pm – 4:30pm  CLOSING REMARKS & ADJOURNMENT  

Montreal Ballroom
ALAN KATZ

is the nominated principal investigator for research funding of over $3m and a co-investigator for over $10m worth of research funded by the Canadian Institutes of Health Research (CIHR), Research Manitoba, and the Heart and Stroke Foundation. He has extensive experience in clinical practice, primary healthcare research, quality indicators of care, service delivery models, and health reform initiatives; and has led numerous pieces of legislation, particularly in the areas of health and social protection. During his tenure as Representative to the Council of Europe’s Parliamentary Assembly from 1997 to 2007, he worked on the implementation of the European Social Charter. As the Minister of Health and Social Affairs from 1988 to 1991, he was the architect of various public health reforms and health system restructuring (the 1991 Hospital Act, additional coverage...). He was a member of the Economic and Social Council from 1994 to 1997 and an adjunct professor at the Paris 8 University from 1993 to 1997 and a consultant to the International Labour Office for which he carried out several missions relating to health and social protection policies in Africa. Locally elected from 1977 to 2008, he served various terms in local authorities. He launched the GIP SPSI and in a 2001 report, he noted the lack of understanding regarding the French cooperation activities in the areas of health and social protection. He has held various leadership positions in institutions and associations, in particular as chairman of the French Hospital Federation from 2004 to 2009. He is President of the Institut des Hautes Études de Protection Sociale (Institute of Higher Learning in Social Protection Studies). Barrister at the Paris Bar, he was a partner of the Jacques Barthélémy social law firm and an associate professor at Nantes University (Faculty of Law) until 30 September 2009, when he was appointed head of business forecasting for the Regional Health Agency of Île de France. Moreover, he has held the position of Director General of the Regional Health Agency of Île de France since April 2010.

JEAN LOUIS DENIS

is Full Professor at the École Nationale d’Administration Publique (ÉNAP) and holds the Canada research chair on governance and transformation of health care organizations and systems at ENAP. He is a visiting professor at Euromed Management (Marseille) and researcher at the Institut de recherche en santé publique de l’Université de Montréal. He pursues research on governance and change process in health care organizations and systems. His current research looks at integration of care and services, health care reforms, medical leadership and leadership in professional organizations, strategies for health care improvement and the role of scientific evidence in the adoption and implementation of clinical and managerial innovations. He is a member of the Royal Society of Canada, fellow of the Canadian Academy of Health Sciences and was chair of the advisory board of CIHR’s Institute of Health Services and Policy Research (2009-2012). He was the founding academic coordinator of the FORCES/EXTRA initiative from 2003 to 2007, a training program which aims at developing Canada’s health managers’ competencies in research use. Recent papers have been published in Journal of Health Politics, Policy and Law, Organization Science, Milbank Quarterly and Administration and Society. He was the principal investigator of a CIHR team grant on the theme of Health system reconfiguration (2008-2013). From March 2015, he is appointed as visiting professor at the Department of Management, King’s College London.
JEAN FREDERIQUE LEVESQUE joined the Bureau of Health Information in March 2013 as Chief Executive. Prior to his arrival in Australia, Dr. Levesque held senior positions responsible for publicly reporting information about the Canadian health system. He is a member of the Strategic Analytic Advisory Committee of the Canadian Institute of Health Information. He was previously Scientific Director, Analyses and Evaluation of Health Systems at the National Institute of Public Health and the inaugural Deputy Commissioner, Performance Appraisal and Analysis at the Health and Welfare Commission in Quebec. In 2011-12, he was a Visiting Academic at the University of Melbourne. Dr. Levesque's research focuses on healthcare performance, particularly in terms of how different models of care impact on patient outcomes and experiences of care, and on the analysis of Primary Care Reform. Dr. Levesque is a Conjoint Professor at the Centre for Primary Health Care and Equity of the University of New South Wales. He is a Fellow of the Royal College of Physicians of Canada and has a Doctorate in Public Health, a Masters in Community Health and a medical degree from the University of Montreal, Canada.

ANTONIA MAIONI holds a cross-appointment as Professor in the Department of Political Science and the Institute for Health and Social Policy at McGill University. She teaches in Fundamentals of Medicine & Dentistry in the Faculty of Medicine and in the International Masters in Health Leadership program in the Desautels Faculty of Management, and is a member of the Research Group in Health and Law in the Faculty of Law. She is a member of the Research Council of the Canadian Institute for Advanced Research (CIFAR) and the College of Reviewers for the Canadian Institutes for Health Research (CIHR). She holds a B.A. from Université Laval, an M.A. from the Norman Paterson School of International Affairs at Carleton, and a Ph.D. from Northwestern University. She has held visiting appointments at Columbia’s Mailman School of Public Health, Harvard’s Center for European Studies, Duke University, and the European University Institute. Professor Maioni’s research has been supported by CIHR, SSHRC, and the Max Bell Foundation. Her most recent publications include Health Care in Canada (Oxford University Press, 2014).

KJELD MOLLER PEDERSEN is professor of health economics and health policy at the University of Southern Denmark. Apart from his academic career he has spent four years as CEO for a county health service and nine years as an executive vice president of the LEGO Group. He has been member of several government committees. In 2002-2003 he chaired a government advisory commission on the future organization of the Danish health care system, and is currently a member of an expert committee that advises government on hospital investments. He is a member of several boards, e.g. chairman of the board the National Research Centre for the Working Environment, Statistics Denmark, and chairman of the board for the Epilepsy Hospital Filadelfia. He has written or co-authored 19 books, 55 book chapters, and 100 scientific articles, and has published articles in newspapers and specialized journals. His research interests include the evaluation of health, economic evaluation, health insurance, transaction costs economics applied to health economics and the design and evaluation of health care systems and health care reforms. He has also published extensively on Danish health policy issues.

BRIAN POSTL – Dr. Brian Postl’s five-year term as Professor and Dean, Faculty of Medicine, began July 1, 2010. Dr. Postl was additionally appointed Dean, Faculty of Health Sciences and Vice-Provost (Health Sciences) effective February 1, 2014, and his term was extended by two years to 2017. Dr. Postl is a graduate of the University of Manitoba. He received his doctor of medicine degree in 1976 and the Royal College Fellowship in Community Medicine and in Pediatrics in 1981 and 1982, respectively. He was the founding president and CEO of the Winnipeg Regional Health Authority (WRHA), a position he held for 10 years. Dr. Postl has served as head of Pediatrics and Child Health and as head of Community Health Sciences at the University of Manitoba. He has also served as director of the J.A. Hildes Northern Medical Unit, a division of community and northern medicine, and as director of the Faculty of Medicine’s community medicine residency program. His research, published works and professional involvement focus on Aboriginal child health, circumpolar health and human resource planning. His contributions in these areas, combined with his experience as a visiting pediatrician to communities in northern Manitoba and Nunavut, contributed to him earning the Canadian Association of Pediatric Health Centre’s Child Health Award of Distinction in 2006 and the Inter-Professional Association on Native Employment’s Champion of Aboriginal Employment award in 2007. Dr. Postl serves on a number of committees and boards of provincial and national associations, foundations, institutes and other organizations. He was inducted as a fellow in the Canadian Academy of Health Sciences in 2011 and invested in the Order of Manitoba in 2012. In June 2014, Dr. Postl was appointed chair of Research Manitoba (RM), a new research funding organization with a $17-million budget in 2014/15. It brings together four major provincial research funding programs under one umbrella.

CHRIS POWER – What began as a desire to help those in need 30 years ago has evolved into a mission to improve the quality of healthcare for all Canadians. Chris Power’s journey in healthcare began at the bedside as a front-line nurse. Since then, she has grown into one of the preeminent healthcare executives in Canada. Her experiences, her success, and her values have led her to the position of CEO of the Canadian Patient Safety Institute. Previously, Chris served for eight years as president and CEO of Capital Health, Nova Scotia, with an annual operating budget of approximately $900 million, and 12,000 staff. Under Chris’s leadership Capital Health achieved Accreditation with Exemplary Status in 2014 with recognition for 10 Leading Practices. Chris holds a Bachelor of Science in Nursing from Mount Saint Vincent University and a Masters in Health Services Administration from Dalhousie University. She is a Certified Health Executive with the Canadian College of Health Service Executives, and holds a Fellowship in Management for Executive Nurses from the Wharton School, University of Pennsylvania. In 2003, she received the Award for Excellence from the Halifax Progress Club. She was named one of Canada’s Top 100 Most Powerful Women in the Public Sector Category three years in a row from 2007/2009. In 2010 she was named one of the Top 50 CEOs in Atlantic Canada. Chris is also involved in a number of collaboratives with the Canadian Foundation for Healthcare Improvement. She also holds significant governance roles including Co-Chair of HealthCareCAN, Chair of the Canadian Partnership Against Cancer, Canadian Institutes of Health Research Governing Council, and Board Member of Canadian Association for Health Services and Policy Research. Most recently Chris participated as a member of the federal advisory panel on healthcare innovation and through this role has gained even greater insight into the many pan-Canadian organizations that will be beneficial in forming partnerships, leveraging expertise and advancing the goals of CPSI. With all of the accolades and responsibilities, Chris has maintained her strong sense of self and credits her love of family, faith and her gift of singing for keeping her grounded.

JEAN ROCHON has worked in the field of training, research and public health. He served as Director of the Department of Social and Preventive Medicine and Dean of the Faculty of Medicine at Laval University. After heading a Commission of inquiry on health and social services, he worked with the World Health Organization (WHO). As a member of the Government of Quebec, he was the Minister of Health and Social Services, Minister of Research, Science and Technology and Minister of Employment, Social Solidarity and Labour. He holds a law degree (LL.B) from the University of Montreal, a medical degree (MD) from Laval University and a doctorate in public health (DrPH) from Harvard University. He is Professor Emeritus at Laval University and works as a consultant with the National Public Health Institute of Quebec (INSPG).
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Le jeudi 28 mai 2015 – 13 h 30 – 14 h 45 SÉANCE F

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<td>Keeping Family Physicians in the Loop: The receipt of discharge summaries after hospital admissions in Ontario</td>
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<td>A Mixed Methods Study: Examining the Relationship between Therapeutic Self-Care and Adverse Events for Home Care Clients in Ontario, Canada</td>
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<td>Modèles et innovations en soins de santé primaires : qu'est-ce qui fonctionne, de quelle manière, pour qui et que nous réserve l’avenir ?</td>
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Poster Presentations
At-a-Glance

Présentations d’affiches
en un coup d’œil
## Poster Presentations - At-a-Glance – Day 1
**Tuesday, May 26, 2015 | 9:45am – 11:00am**

Présentations d’affiches en un coup d’œil – Jour 1  Le mardi 26 mai 2015 | 9 h 45 – 11 h 00

Presentations are listed in the language in which they will be presented / Les exposés seront inscrits au programme dans la langue de leur présentation

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LISA DOLOVICH  OPEN co-lead, Research Director, Associate Professor, OPEN (Ontario Pharmacy Research Collaboration), McMaster University |
| 20      | A How-To Guide for Planning Hospital-to-Home Care Transition Interventions in Older Adults: Findings and Implications of a Realist Synthesis  
ANUM KHAN PhD student, University of Toronto |
| 16      | A New Service Delivery Model to Improve Access to Orthopedic Surveillance for Children with Cerebral Palsy (CP)  
KAREN HURTUBISE PhD student, Université de Sherbrooke |
| 34      | A Resilient Nursing Workforce: The Impact of Policy Over Time  
MARY CREA Statistician, McMaster University |
| 40      | A Study of Low Acuity Emergency Department Use in Regina, Saskatchewan: Incidence, Implications and Intervention  
TARA TODD Student (MPP), Johnson-Shoyama Graduate School of Public Policy |
| 30      | A survey tool to assess long term care resident experience  
SHAILEISH NADKARNI Vice President, Service and Operations, National Research Corporation Canada |
| 2       | A systematic review of primary care interventions to improve transition of youth with chronic conditions from paediatric to adult healthcare  
JASMIN BHAWRA Clinical Research Project Coordinator, The Hospital for Sick Children |
| 1       | Assessing Health System Value in Upstream Health Interventions: A Case Study of Cardiac Rehabilitation and Prevention  
CAROLINE BECK Student, Johnson-Shoyama Graduate School of Public Policy, University of Regina |
| 15      | Changing the Service Delivery Model to Meet Rehabilitation Needs of Young Children (0-3 years): Impact on Service Wait-times and Staff Perceived Performance  
KAREN HURTUBISE PhD student, Université de Sherbrooke |
| 36      | Comprehensive Primary Care Physicians: Who are they and whom do they serve?  
RICK GLAZIER Senior Epidemiologist, ICES |
| 27      | Cost-effectiveness analysis of a two-dose HPV vaccine using the CRMM-HPVMM microsimulation model  
SAIMA MEMON Analyst, Canadian Partnership Against Cancer |
| 33      | Cost-Utility Analysis of Therapeutic Drug Monitoring for Asparaginase in Pediatric Leukemia  
MEERA RAYAR Resident, Hospital for Sick Children |
| 24      | Creating Partnerships for Change: A Proposal to Study Multi-stakeholder Collaboration Towards Organizational Innovations to Promote Access to Primary Health Care for Vulnerable Populations  
EKATERINA (KATYA) LOBAN PhD student, McGill University |
| 32      | Drug Use Among Seniors on Public Drug Programs in Canada, 2012  
JEFF PROULX Program Lead, CIHI |
| 22      | Engaging patients on social media platforms: exploring health and information exchange processes  
CLAUDIA LAI Doctoral Candidate, Institute of Health Policy Management and Evaluation, University of Toronto |
| 9       | Examining interventions to address the transition gap: A systematic review of youth to adult mental health services  
MARK EMBRETT Doctoral Candidate, McMaster University |
| 7       | Geriatric Syndromes Predict Postdischarge Outcomes Among Older Emergency Department Patients: Findings from a Multinational Cohort Study  
ANDREW COSTA Assistant Professor | Schlegel Chair in Clinical Epidemiology & Aging, McMaster University |
| 18      | Human development focusing on access to health care of South Asian immigrants living in the Greater Toronto Area (GTA)  
S. M. TARIQUL ISLAM Sessional Instructor, Laurentian University |
| 3       | Implementing a new school-based occupational therapy service delivery model: What do stakeholders say about access, service quality, and sustainability?  
CHANTAL CAMDEN professeure adjointe, Université de Sherbrooke |
| 42      | Inequality by Race/Ethnicity in Survival Improvement of Children with Acute Lymphoblastic Leukemia in the United States and Canada  
LINWEI WANG Master Student, School of Public Health, University of Alberta |
| 38      | Integrating Health Technology Reassessment into a Complex Healthcare System: Diverse Perspectives from Stakeholders in Alberta Health Services  
LESLEY SORIL PhD Student, University of Calgary |
| 4       | Le raisonnement clinique des ergothérapeutes en Soutien à domicile : importance des aspects administratifs et organisationnels dans le choix des interventions offertes aux clients  
ANNIE CARRIER Ergothérapeute, Université de Sherbrooke |
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<td>NANCY MATTHEW-MAICH  Professor, Mohawk College</td>
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<td>GRACE MOE  Executive Director - Strategic Planning &amp; Special Projects, Westview Primary Care Network/Westview Physician Collaborative</td>
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<td>HASU GHOSH  Post-Doctoral Fellow/ Part-time Faculty, Carleton University, University of Ottawa</td>
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<td>MINGKAI PENG  Statistical associate, University of Calgary</td>
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<td>GREG MCCOMB  Senior Economic Analyst, Patented Medicine Prices Review Board</td>
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<td>AMÉDÉ GOGOVOR  Étudiant-chercheur au doctorat, Université McGill</td>
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<td>JOSÉE G LAVOIE  Associate Professor, University of Manitoba</td>
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A1 HEALTH HUMAN RESOURCES / RESSOURCES HUMAINES EN SANTÉ

A1.1 Conceptualizing regulated health professionals’ competence in the workplace

Presented by LEIGH CHAPMAN
Doctoral Student, University of Toronto, Lawrence S. Bloomberg Faculty of Nursing

This presentation will offer the Boyatzis (1986) model of effective performance as an alternative to the prevailing individualized view of competence in a contemporary healthcare context. Boyatzis’s (1982) model of effective performance positions competence as one component influencing effective behaviour, along with job demands and organizational context. Boyatzis, an organizational theorist and management expert, conceptualizes competence as contextually-based and shaped by other organizational factors in effecting an individual’s behaviour. Boyatzis initially tested his model empirically and theoretically to support the role of competencies in influencing managers' behaviour in a variety of workplace settings. In theory, the Boyatzis model provides a framework of the behavioural manifestations that result from the relationship between an individual’s competencies, job demands and organizational environment. Application of this model in a healthcare environment with regulated health professionals offers a more contextual conceptualization of competence in the workplace. This presentation will describe a doctoral research study which will explore how a Canadian academic health sciences centre operationalizes regulatory competency assessment in human resource management processes. This thesis research will use the Boyatzis model to elucidate constructs which impact behavior in the workplace at the level of the individual and organization. By advancing a theoretical model from organizational science in a healthcare context, it is anticipated that this study will offer an alternative perspective to prevailing conceptualizations of competence. Specifically, the Boyatzis (1986) model of effective performance offers a theory of the way in which competencies can be operationalized in a workplace context. Theoretical and conceptual support for Boyatzis’ model may provide an alternative, more contextually-based view of competencies through a confirmatory theoretical analysis. It is anticipated that the study findings will challenge current conceptualizations of competence that are assessment-based, individualistic, and acontextual and provide an alternative understanding of competence. This work will elaborate emergent alternative conceptualizations of competence and facilitate organizational practices and human resource management processes impacting regulated health professional employees.

Co-Author(s): Sioban Nelson, University of Toronto / Brian Hodges, University Health Network / Lianne Jeffs, St. Michael’s Hospital

A1.2 British Columbia’s Health Care Worker Influenza Control Policy: A collaborative human resources/labour relations solution to a health care challenge

Presented by MATT PRESCOTT
Executive Director, Communications, Health Employers Association of BC (HEABC)

Vaccinating healthcare workers against the flu reduces transmission to patients; however, healthcare workers have had relatively low vaccination rates. To protect patients, BC health employers introduced a policy in 2012/13 requiring health care workers to get a flu shot or wear a mask while in patient care areas. The policy working group followed a collaborative and phased approach to policy development and implementation. Employers were involved in policy development and early feedback from workers and unions resulted in a phased approach with the first year focusing on education and voluntary compliance rather than enforcement. Further union consultation after the first year resulted in additional adjustments related to reporting and identification requirements, and expansion to include visitors. The goal was to develop a policy that protects patients and is supported by employers and healthcare workers. Consistent implementation of the policy province wide was also a key factor to success. In the first year of mandatory compliance, 73 – 82 per cent of BC healthcare workers got the flu shot – a 25–40 per cent increase from historical rates, depending on health sector and setting. Incidents of non-compliance have been low due to the achievement of relatively high immunization rates: effective communication and education; public awareness and support; and, coordinated and consistent policy implementation. The policy was grieved by one union; however, careful and thorough policy development resulted in the arbitrator affirming that the policy is a lawful exercise of employers’ management rights, allowing employers to fully implement the policy, including disciplinary action for non-compliance. BC’s mandatory healthcare worker influenza vaccination program – the first in Canada – is now being adopted in other jurisdictions across Canada. After many years of relatively low healthcare worker influenza vaccination rates, BC implemented a mandatory vaccination/masking policy, resulting in a significant increase in vaccination rates. A collaborative and consistent approach to policy development and implementation has helped employers and healthcare workers to protect our most vulnerable residents from influenza.

Co-Author(s): Leslie Graham, Durham College / Brenda Gamble, University of Ontario Institute of Technology / Helene-Marie Goulding, University of Ontario Institute of Technology / Evelyn Moreau, University of Ontario Institute of Technology / Harmeet Nanner, University of Ontario Institute of Technology

A1.3 An interactive learning experience for learners and practitioners to enhance collaborative practice across disciplines and jurisdictions

Presented by BRENDA GAMBLE
Associate Professor, U of Ontario Institute of Technology

Develop, produce and evaluate simulated learning models (SLM[s]) for educational instruction in the classroom, clinical setting and/or continuing education (CE) to support the acquisition and development of interprofessional (IP) competencies (role clarification, team functioning, collaborative leadership, interprofessional communication, interprofessional conflict resolution and patient/client/family/community-centred care) to enhance collaborative practice. We have conceptualized IP learning as an interactive activity involving; exposure didactically to IP competencies, immersion in the classroom (using SLMs) and the clinical setting, and mastery of IP competencies into professional practice. The Points for Interprofessional Education System framework is used to measure the quality of the learning activity (SMLs). We will conduct a pre/post-test using a self-administered electronic validated questionnaire to determine learners' attitudes toward IP learning prior and after the application of the SMLs. Data analysis will include non-parametric analysis. Focus groups (instructors/learners) will be used to determine the appeal of the SMLs as a learning activity. In consultation with educators and practitioners, informed by the literature and real life experiences we have produced and beta tested video 4 video-tape SLMs. Working collaboratively with university and college based Nursing, Medical Laboratory Sciences, and Allied Health (Kinesiology and Public Health) programs, we are currently implementing the SMLs as an IP learning tool in the classroom during the Winter 2015 term. The sample includes 4 classrooms with approximately 250 learners overall enrolled in either year 2 or 3 of their programs. Data collection and analysis will be completed by March 2015. We will report on the development and the impact of the SMLs as an educational tool for the acquisition and development of IP competencies. IP learning is iterative and requires life long learning. It is anticipated that the successful application of SMLs will enhance the educational experience for learners and better prepare them for their clinical practicums and professional practice. SMLs can be used for CE to update and refresh practitioner skills.

Co-Author(s): Sioban Nelson, University of Toronto / Brian Hodges, University Health Network / Lianne Jeffs, St. Michael’s Hospital

A1.4 Nurse-Led Care Transitions Interventions: A Strategy to Improve Health System Integration and Performance

Presented by MADELYN LAW
St. Michael’s Hospital Volunteer Association Chair in Nursing Research, St. Michael’s Hospital

To better understand under what circumstances nurse-led care transition strategies enhance health system integration and performance, including outcomes and experiences of complex elderly patients. Component 1: An extensive and structured literature search is completed and evidence synthesis is currently in progress to identify in what circumstances specific nurse led care transition interventions with complex elderly patient population are effective. Component 2: To determine the feasibility of implementing nurse led care transition interventions with complex elderly patients a modified Delphi consensus technique will be used with a panel of experts. Component 3: we will explore how best to enhance care transitions of the elderly patient population and their caregivers by identifying the current state, organizational readiness, barriers and facilitators, components of the interventions and associated measures and outcomes of participating sites. Results from Component 1 and Component 2 will be reported. An integrated knowledge translation approach will ensure the successful uptake of our results improving the health of elder Ontarians as they transition within and across health care settings and home, in addition to improving the well-being of their families and caregivers.
A2.4 Are There Long-term Academic Benefits of Full-Day Kindergarten? A PATHS Equity for Children Project

Co-Author(s): Nathan Nickel, University of Manitoba/ Manitoba Centre for Health Policy / Dan Chateau, University of Manitoba/ Manitoba Centre for Health Policy / Pat implementation should weight the costs of this program against the limited long-term academic benefits. Our findings indicate no apparent benefits of universal FDK, and no significant differences in equity between the FDK and non-FDK children for any of the outcomes. Our objective was to use population-level data from Manitoba to determine whether FDK results in better long-term academic outcomes. We examined provincial reading and numeracy assessments in grades 3, 7, and 8 and a performance index in grade 9 for students in two Manitoba school divisions between 1999-2011.

A2.2 Policy Options for Moving Team Based Primary Health Care Forward: Lessons from a Comparative Policy Analysis of Three Provinces

Presented by SABRINA WONG Professor, UBC

The Canadian First Ministers agreed >10 years ago that team-based care is central to primary health care (PHC) reform; Substantial funds were committed. We examined: 1) how different policies across British Columbia, Alberta and Saskatchewan conceptualize team-based care; and 2) how policies guide the implementation of team-based PHC service delivery. We conducted a comparative policy analysis across these three provinces to examine the relationships and processes involved in implementation of team-based PHC care. Coding of the publicly available provincial, regional, and primary care organization policies was completed using NVivo. Three provincial policy synthesis consisting of themes were created from our analyses. The syntheses were validated and policy options for implementing team-based care were provided by key informants (n=29) across the provinces. A majority of representatives (n=15) from provincial health ministries, health regions, professional associations and service providers identified the top priority policy options. Six themes formed the policy syntheses: variation in conceptualization and composition of teams, financing of team-based care, billing and funding of team-based care, lack of system alignment to support team-based care; scope of practice, regulation and liability; and the need for a consistent approach to measuring the performance and outcomes of team-based care. There is a clarity of defining team composition and roles of members. Guidance on several aspects of team care is missing. Four policy options were prioritized through the roundtable for align health system goals, policies, workforce and structures; develop appropriate and sustainable compensation models; invest adequate resources to support system change; and integrated collaborative practice metrics in PHC performance monitoring and evaluation. The lack of clarity and guidance likely contributes to inconsistencies across the system when implementing team-based care. The policy options contained inherent conflicts and trade-offs and critical factors for implementation. Our results suggest a strong recommendation to present the four options as a package to prevent policy-makers from “cherry picking”.

A2.3 Measuring Health Research Funding Impact in Ontario: The Health System Research Fund (HSRF) Impact Assessment Framework

Presented by MICHAEL HILLMER Senior Research/Planning Advisor, Ontario Ministry of Health and Long-Term Care

(1) To demonstrate the impact of research projects funded by the Ontario Ministry of Health and Long-Term Care’s (MOHLTC) Health System Research Fund (HSRF) on health policy and practice and (2) To document the practical application of a conceptual framework in measuring different domains of research impact. The Canadian Academy of Health Sciences’ (CAHS) health research impact framework (n=29) was used to quantify the longitudinal effect of HSRF-funded projects on Ontarians’ health system transformation. Two performance measurement tools were developed to capture these outcomes from the funded recipient and knowledge user perspective. Both tools are survey questionnaires administered annually. A mixed methods design was used to evaluate the impact of HSRF investments thorough the 5 CAHS domains (advancing knowledge, informed decision-making, capacity building, health impact, and broad socio-economic impacts). Two reviewers independently coded qualitative and quantitative data from the HSRF impact tool using Nvivo. Coding of the publicly available provincial, regional, and primary care organization policies was completed using NVivo. Three provincial policy syntheses consisting of themes were created from our analyses. The syntheses were validated and policy options for implementing team-based care were provided by key informants (n=29) across the provinces. A majority of representatives (n=15) from provincial health ministries, health regions, professional associations and service providers identified the top priority policy options. Six themes formed the policy syntheses: variation in conceptualization and composition of teams, financing of team-based care, billing and funding of team-based care, lack of system alignment to support team-based care; scope of practice, regulation and liability; and the need for a consistent approach to measuring the performance and outcomes of team-based care. There is a clarity of defining team composition and roles of members. Guidance on several aspects of team care is missing. Four policy options were prioritized through the roundtable for align health system goals, policies, workforce and structures; develop appropriate and sustainable compensation models; invest adequate resources to support system change; and integrated collaborative practice metrics in PHC performance monitoring and evaluation. The lack of clarity and guidance likely contributes to inconsistencies across the system when implementing team-based care. The policy options contained inherent conflicts and trade-offs and critical factors for implementation. Our results suggest a strong recommendation to present the four options as a package to prevent policy-makers from “cherry picking”.

A2.4 Are There Long-term Academic Benefits of Full-Day Kindergarten? A PATHS Equity for Children Project

Presented by DAN CHATEAU Associate Professor, Senior Research Scientist, University of Manitoba, Manitoba Centre for Health Policy

Despite the implementation of full-day kindergarten (FDK) in several Canadian provinces, there is little evidence on the long-term outcomes associated with this program. Our objective was to use population-level data from Manitoba to determine whether FDK results in better long-term academic outcomes. We examined provincial reading and numeracy assessments in grades 3, 7, and 8 and a performance index in grade 9 for students in two Manitoba school divisions between 1999-2011. In School Division A (SDA), FDK is targeted in the lowest SES schools; in School Division B (SDB) FDK was gradually introduced universally. SDA FDK students were matched using propensity scores with students in an adjacent school division with similar SES but no FDK, in SDB a stepped-wedge design was used. Logistic regressions accounted for confounders including classroom effects and sex. The Kakwani Progressivity Index (KPI) determined how FDK affected equity. There were 224,544 children in FDK and 869,193 non-FDK matches in SDA, depending on the outcome examined; numbers in SDB ranged from 335,707 (FDK) and 222,475 (non-FDK). Including interactions, 35 comparisons were examined in SDA and 24 in SDB. None of the outcomes examined in SDB showed statistically significant effects of FDK that were robust to unmeasured confounding. In SDA there were only 3 statistically significant and robust findings of benefits of FDK, all related to math. KPIs for FDK and non-FDK students demonstrated inequities in outcomes associated with SES, however there were no significant differences in equity between the FDK and non-FDK children for any of the outcomes. Our findings indicate no apparent benefits of universal FDK, and limited benefits from targeted FDK, specifically long-term improvements in numeracy for low-income girls. No reductions in inequity were found. Decisions regarding FDK implementation should weight the costs of this program against the limited long-term academic benefits.
A3 PRIMARY HEALTHCARE: REFORM AND PERFORMANCE / SOINS DE SANTÉ PRIMAIRES : RÉFORME ET RENDEMENT

Fontaine E

A3.1 Does Having A Usual Family Medicine Physician Influence Hospitalization And Emergency Department Visit Rates?
Presented by YVONNE ROSEHART Program Lead, Canadian Institute for Health Information

To evaluate the impact of continuity of care with family physicians on hospitalization rates for Ambulatory Care Sensitive Conditions and emergency department visit rates for Family Practice Sensitive Conditions. To illustrate how patient level physician billing data can be linked with hospital data to follow patients through the health system. Using 2007-20012 patient-level physician billing (PLPB) data from Alberta and Saskatchewan, a patient-provider usual provider continuity (UPC) index was calculated. The PLPB data was then linked with the Discharge Abstract Database (DAD) and The National Ambulatory Care Reporting System (NACRS) to identify hospitalizations for Ambulatory Care Sensitive Conditions and ED visits for Family Practice Sensitive Conditions. Cost estimates for ACSCs and FPSCs were calculated from the Canadian MIS Database. Regression analyses were conducted to identify any association between continuity of care and ACSC and FPSC related-visits. Patients and provider characteristics were examined for possible associations with continuity. 14,767 and 6,389 patients were hospitalized for an ACSC in Alberta and Saskatchewan respectively. Those hospitalized for an ACSC tended to be older (ages 65+) and living in rural areas. 289,278 and 17,978 patients visited an ED for a FPSC in Alberta and in Saskatchewan and Regina respectively. These patients were more likely to be younger and living in rural areas. One of the key predictors of hospital use for ACSCs and FPSCs is continuity of care with a family physician. As continuity of care increases, the odds of being hospitalized for an ACSC or visiting an ED for a FPSC decreases. Other factors associated with ACSC hospitalizations and FPSC visits include age and rurality. Additionally, health status is associated with hospitalization for ACSCs. High continuity of care positively affects the health of patients and our health care system. As health care delivery evolves, it will be important to look at the importance of the patient-family physician relationship and its impact on preventing the unnecessary use of hospital services for ACSCs and FPSCs.

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A3.2 Paying for Primary Care: Payment Reform and Primary Care Physician Behaviour in Ontario
Presented by RAISA DEBER Professor, University of Toronto

The Ontario government introduced several alternative approaches to fee-for-service (FFS) payment for primary care physicians (PCPs), including age-sex adjusted capitation (CAP). The Ontario government implemented initiatives to avoid sicker more complex patients, which tend to be less remunerative. This study analyzed whether this occurred. We conducted a series of studies using patient and PCP level administrative data (1999/00 – 2010/11) from the Institute for Clinical Evaluative Sciences to analyze changes in patient cost and case-mix across payment models in Ontario. Our data captured all Ontarians and PCPs in FFS, enhanced-FFS and CAP payment models during the study period. To ensure our findings were robust we analyzed PCP characteristics associated with selection into different payment models, rather than those controlled for in our analysis of the impact of changes in payment incentives. In our studies we used both non-parametric (conditional) and parametric methods (multinomial selection models). Analysis is ongoing, but our results demonstrate that there were differences in cost and case-mix across payment models. PCPs in CAP models were more likely to have healthier, wealthier and lower cost patients than PCPs in FFS models. While there is evidence that PCPs did alter the composition of their rosters, the majority of the differences observed across payment models were a result of PCPs selecting payment models based on pre-existing patient and practice characteristics. PCPs in CAP models were also less likely to enroll sicker/higher-cost patients, but continued to treat these patients off-roster. These findings suggest that PCPs did respond to changes in payment, and while there was evidence that PCPs did alter the case-mix of their patient rosters following a switch to CAP, much of the observed differences existed prior to reform.

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A3.3 The impact of Quebec primary healthcare (PHC) reform on continuity of care
Presented by PIERRE TOUSIGNANT Consultant, Public Health, Montreal

This study answers the question: did PHC reform initiated in 2003 influence continuity of care for all users of care and for patients with chronic disease? We focused on the following reform elements: patient registration in FMGs (Family medicine groups) or as vulnerable and we use diabetes as tracer condition. We used administrative databases (ADB) describing medical services for Montrealers aged 20+ between 2000 and 2010. We developed new measures of continuity based on year-to-year follow-up with known providers distinguishing between the physician seen most often, known family physicians, known specialists, all known physicians. We analyzed users of care and diabetes divided into four exclusive groups where memberships remained the same for the whole period: registered in FMGs, registered as vulnerable, combined registration and not registered. Diabetes were identified with a validated algorithm using ADB. All results are controlled for age, morbidity (ACG-RUB) and socio-economic status. In users, continuity offered by all physicians increased for all registered groups especially after 2003 (range 64-82%). For diabetics this continuity was very high (range 84-89%) and stable. For the users registered in FMGs, continuity offered by known family physicians increased more than continuity offered by the physician seen most often, suggesting shared follow-up in FMGs. These findings are similar but the differences are less pronounced in diabetics. Users and diabetics not registered in FMGs showed decreases in continuity offered by all physicians (users 26% to 28% ; diabetics 46 to 51%) while the two other types decreased. High continuity was associated with reduced hospitalizations and visits to emergency. The PHC reform produced positive results regarding continuity of care especially in users and diabetes registered in FMGs where shared follow-up is favored. For users and diabetics, the source of continuity offered to registered patients shifts from specialists to family physicians while the reverse is true for patients not registered.

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A3.4 A conceptual framework for primary care performance measurement and reporting
Presented by JULIA LANGTON Research Associate, University of British Columbia

Primary care services are a vital part of a high performing health system yet performance measurement in primary care lags behind the hospital sector. Our objective is to develop a conceptual framework for primary care performance measurement and reporting. We reviewed existing national performance measurement systems, models of primary care service delivery, and best practice in performance measurement. We also sought input from a Pan-Canadian multi-disciplinary research team that includes senior primary care researchers, policy makers, and practitioners within Canada and internationally. Our proposed framework is designed specifically for primary care performance measurement and reporting based upon the strengths and limitations of existing systems, the nature of primary care service delivery, and the patient populations served by primary care. Many existing systems are not grounded in a framework and tend to focus on disease-specific measures or the average patient. This suggests that measurement systems may not be aligned with the patient populations served by primary care providers such as patients with multiple complex chronic conditions. This proposed framework is a matrix structure that measures primary care performance (e.g., access, continuity, coordination) by patient groups. The patient groups were selected to be relatively homogeneous in terms of health care needs ranging from those who require less complex care (healthy patients) through to those with the most complex primary health care needs (e.g., > 3 advanced chronic conditions). Population segmentation is an alternative to complex case-mix adjustment methods that are recommended when producing comparative performance information. Presenting performance information by patient subgroup is beneficial for quality improvement efforts so that clinicians and policy makers are aware of specific patient groups and types of care where efforts need to be targeted (e.g., geographical areas or health services with a higher proportion of complex, vulnerable patients).

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A4.1 Improving Care and Support for Unpaid Caregivers in Ontario: Findings from a Citizen Panel
Presented by MICHAEL WILSON Assistant Director, McMaster Health Forum

Despite their crucial role in caring for seniors, support for unpaid caregivers can be lacking, inconsistently available or not aligned to their values, needs and preferences. Our objective was to convene a panel of citizens to share their ideas and experiences related to improving care and support for unpaid caregivers. We convened a panel with a diverse group of 10 Ontario citizens. We recruited participants using explicit criteria from the AskingCanadiansTM panel, which aimed to ensure fair representation among all Canadians. Four challenges were consistently raised: 1) caregivers’ heavy burden can cause anxiety about its impact on their own and other’s health; 2) financial and employment impacts of caregiving are substantial; 3) many caregivers don’t know about available services or how to access them; and 4) caregivers’ roles are not fully recognized or supported. During the deliberations about the options, two values-related themes emerged with some consistency: 1) competence (i.e., educating and training unpaid caregivers to provide optimal care, and also to clearly define the scope of their duties) and 2) empowerment (i.e., supporting unpaid caregivers to become strong advocates for their loved ones and for themselves, and equipping them with practical tools to manage the complex care needs of their loved ones). Participants noted two initiatives that they thought could bring about change: 1) advocacy activities targeting health-system leaders and elected officials to implement necessary policies, programs and services; and 2) activities to promote public dialogue and experiential learning to build sensitivity to the needs of older adults and their unpaid caregivers.

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A4.2 The Relationship Between Multimorbidity and Causes of Hospital Admissions at 30 Days And One Year
Presented by ARLENE BIERMAN Professor, University of Toronto

Rates of hospital readmission increase with the number of comorbid conditions and comorbidities are often responsible for potentially avoidable readmissions. Thirty day readmissions are a common metric for hospital performance; understanding the care needed to reduce readmission rates. Using linked population-based administrative data from Ontario Canada from FY 2011 and 2012, a longitudinal cohort study of acute myocardial infarction (AMI), congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD) and hip fracture patients discharged after an index hospitalization determined disease-specific, discordant (readmission diagnosis related to index condition), and discordant (readmission diagnosis unrelated to index condition) causes of hospital readmission over the period of 30 days and one year. Multivariable regression models were used to assess the contribution of markers of patient complexity including multimorbidity to readmissions for discordant comorbidities. Cohorts included 29,607 admissions for AMI; 22809 for COPD; 20,095 for HF; and 12857 for hip fracture. Age, sex, and readmission rates varied across cohorts. There was a high burden of readmissions at all ages, for example, 18.5% admitted at 30 days and 37.5% at one year. Multivariable regression models were used to assess the contribution of markers of patient complexity including multimorbidity to readmissions for discordant comorbidities. Hospital admission rates associated increased readmissions at 30-days and one year as well as with an increased proportion of readmissions attributable to discordant comorbidities. After hospital admission for common conditions, discordant comorbidities are responsible for many hospital readmissions. The burden of discordant admission increases over a year. Patient-centered models of care to effectively manage multimorbidity are needed to reduce rates of avoidable hospitalizations among older patients with multimorbidity and complexity who comprise the majority of patients admitted for these conditions.

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A4.3 An evaluation of the experiences of Parkinson Society Saskatchewan members and their caregivers
Presented by TAMARA CHAMBERS-RICHARDS WRTC Studenthip, University of Saskatchewan

Parkinson's is a progressive neurodegenerative disease with no known cure that affects as many as 100,000 Canadians. Experiences of Parkinson’s Society Saskatchewan (PSS) members and their caregivers were evaluated to determine the non-profit organization’s achievement of its mandate of improving quality of life through advocacy, education, research and support services. Saskatchewan people with Parkinson's (PWP) and their caregivers were surveyed online and in print through an adapted questionnaire developed by the PSS’ counterpart in British Columbia. A semi-structured interview guide was used to conduct four in-depth interviews of PSS members who had direct involvement in the organization. Four focus groups, each with ten to fifteen PWP and their caregivers, were conducted in urban and rural Saskatchewan communities. Data were collected from September to December 2013. Descriptive statistics were used to analyse the survey data. The audio-taped key informant interviews and focus group discussions were transcribed and thematic analyses were undertaken. A total of 40 questionnaires were completed, with 23 from PWP and 17 from caregivers. A total of 52 participants contributed to the focus group discussions, PWP found it difficult to get dressed (71%), walk (71%), and do basic (61%) and heavy (61%) activities of daily living (ADLs) and instrumental activities of daily living (IADLs) on their own. Access to Parkinson-specific therapy (e.g. swallowing and walking) (77%), and a multidisciplinary movement disorder clinic (40%) were the greatest needs identified by PWP. Service supports and improved access to neurologists were the greatest needs identified by caregivers. Service improvement themes included expansion of services for highly progressed patients, enhancing advocacy for increased neurologists and dissemination of research findings, care support, additional support groups, and increasing the number of health professionals. There are a number of opportunities for the PSS to expand its mandate. These include establishing networks of allied health care professionals specializing in the care and management of PWP, disseminating information on successful treatment innovations, and engaging health ministries on behalf of PWP for long-term care support.

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A4.4 Predictors of six-month mortality subsequent to chronic dialysis initiation among an older adult population
Presented by JAMES WICK MSc Student, University of Calgary

The initiation of chronic dialysis is a common treatment for kidney failure, with increasing incidence amongst older adults in recent years. Early mortality after dialysis initiation is common, especially among older adults. We sought to determine predictors of all-cause mortality following chronic dialysis initiation in an older adult population. We linked administrative data sources to identify a cohort of older adults (age 65+) in southern Alberta who began chronic dialysis between May 2003 and March 2012. The potential predictors were described overall, and by outcome status. We used Cox regression to determine predictors of all-cause mortality within six months after dialysis initiation. Models were adjusted for demographic characteristics, comorbid conditions, pre-dialysis care, initial dialysis modality, and measures of health system usage. Patients were censored at outmigration, kidney transplant, death, or study end. Backward elimination of non-significant predictors created a parsimonious model. 1,077 older adult patients initiated chronic dialysis during the study period (59.1% male, mean age 75.3), of whom 194 (18.0%) died within six months of initiation. In the multivariate model significant predictors of 6-month mortality were: age >75y vs. 65-74y (Hazard Ratio [HR]: 1.40; 95% CI: 1.04-1.89); cancer (HR: 1.57; 95% CI: 1.17; 2.10); congestive heart failure (HR: 1.49; 95% CI: 1.10-2.02); dementia (HR: 1.57; 95% CI: 1.07-2.44); liver disease (HR: 3.37; 95% CI: 1.59-5.70); and prior emergency department use (HR: 12.78; 95% CI: 1.78-97.17). Factors associated with a reduced risk of mortality were initial peritoneal vs. hemodialysis (HR: 0.35; 95% CI: 0.18-0.67); pre-dialysis care (HR: 0.44; 95% CI: 0.33-0.59) and diabetes (HR: 0.68; 95% CI: 0.51-0.92). Patient demographics, comorbidities, pre-dialysis care, dialysis modality, and health system use are associated with risk of early all-cause mortality after chronic dialysis initiation in older adults. These results will be used to develop a clinical risk prediction tool for early mortality in older adults, facilitating patient and clinician decision making.

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A5.1 Modelling the retirement timing of Canadian nurses using a panel survey
Presented by LADY JOSEF BOLONGAITA PhD Student, University of Toronto

An aging population typically increases the need for nurses; however, nurses are also aging as 40% of today's nurses will be retiring over the next 15 years. Due to the negative impact of a nursing shortage, there is a need to identify factors that influence the decision of nurses to work. This study aims to establish the importance of health and job characteristics on nurses' decisions to retire. The study sample consists of nurses who are at least 50 years old in the Survey of Labour and Income Dynamics, which is a longitudinal survey. Since health impacts the decision to work and work impacts health, I am using a two-stage residual inclusion model. The first stage identifies factors that are related to self-assessed health, I will then take the residuals from the first stage and use it as an explanatory variable in the second stage, a mixed logit model that includes the factors that determine labour force participation (working fulltime, part-time or retired) of nurses. My preliminary findings show that health plays an important role in the retirement timings of nurses – the worse the health status is, the more likely a nurse is to retire. As for job characteristics, sector of employment (hospital, community, long term care or non-health sector), unionization, and having employer based pension affect the decision to retire, while shift type (regular days, nights or irregular) does not. The study's findings will be used to inform programs and policies aimed at retaining late career nurses.

Co-Author(s): Audrey Laporte, University of Toronto / Raisa Deber, University of Toronto

A5.2 The Impact Of Legislation On Expanded Scopes Of Practice: Prescribing by Optometrists and Pharmacists and Test Ordering by Physiotherapists in Ontario
Presented by IVY BOURGEAULT CIHR Chair in Gender, Work and Health Human Resources, University of Ottawa

Our project focused on a policy analysis of the recently implemented scope of practice changes for pharmacists, optometrists and physiotherapists. The purpose of this project was to identify activities, strategies and collaborations taking place at these various levels in preparation for the implementation of these new regulatory changes. The approach to this policy analyses addressed the educational, regulatory, practitioner and overall system implications, both real and perceived, of Bill 171 and Bill 179. The methods included (a) an environmental scan and a review of available documents from these professions pertaining to these Bills, (b) key informant interviews with stakeholders within and beyond these professions across Ontario to more fully describe current activities and perceptions, and (c) a survey of practitioners regarding their attitudes and practices related to the regulatory changes. The overarching theme was that regulatory changes seem to be more prescriptive and theoretical than practical. For pharmacy and optometry including drug lists rather than categories are considered too specific for a self-regulating health profession with professional standards and a college whose mandate is to protect the public and regulate professionals. In the case of physiotherapy, it was clear that the expanded scope of practice under Bill 179 was not entry-level to practice scope, and as such, the university programs were not planning any significant alteration in curriculum. Some institutions were planning to provide continuing educational courses that would be related to the new controlled acts. Overall, most expressed concern with the length of time from proclamation to making changes in practice. All professions have been pro-active with respect to regulatory changes and have been diligent in planning for the consequent changes in education, assurance of public safety, and encouraging members to react positively to these changes. Generally the professions are enthusiastic about regulatory change but uncertain about actual implications.

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A5.3 Part-time Nurse Faculty Intent to Remain Employed in Academia
Presented by ERA MAE FERRON Project Coordinator, Public Services Health & Safety Association

Retaining qualified part-time nurse faculty in academia is a key component to manage the overall shortage of nurses. The objective of this study was to test and refine a model of part-time nurse faculty intent to remain (ITR) employed in the academic community. This study used a cross-sectional survey design. A total of 282 part-time nurse faculty employed within Ontario, Canada colleges or universities were invited to participate. Survey instruments and items measured demographic, workplace, nurse responses to the workplace, and external variables. The survey was tested for feasibility prior to administration. Survey administration followed the Tailored Design Method (Dillman et al., 2009); Eligible participants were contacted up to 5 times over a 10-week period. Correlation and multiple regression analyses were conducted using data from 119 respondents (47.5% true response rate). Seven variables were found to influence ITR. The resulting model indicated that the older the part-time nurse faculty member, the lower the level of ITR and the more years worked in the organization, the higher the level of ITR. The more opportunities perceived to exist outside of the employing organization, the higher the level of ITR. In the workplace, the more support from the leader, the more formal or informal recognition received, and the more fair work procedures were perceived to be, the higher levels of part-time faculty ITR. Additionally, the more satisfied part-time faculty were with their job overall, the higher level of ITR. Job satisfaction also functioned as a mediating variable. To encourage part-time faculty to remain employed in academia, leaders should focus on enhancing overall job satisfaction. Effective strategies may include formal or informal acknowledgement of good performance, consistent verbal and behavioural support, and procedural decisions (such as performance evaluations and pay raises) made in a fair manner.

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A5.4 Diversity in Health Human Resources – Working with Employers towards Integration of Internationally Educated Nurses (IENs) into the Workforce
Presented by DINA IDR ISS-WHEELER Research Coordinator, McMaster University

To create research-based resources and work with employers to navigate the regulatory system, locate assessment and bridging programs, enhance retention and achieve successful workforce integration of IENs. Innovative and web-based resources will be featured; results of the evaluation presented and future directions resulting from project outcomes will be introduced. A mixed-methods approach to data collection included quantitative on-line surveys and qualitative interview and survey methods with relevant stakeholders (IENs, employers, educators, regulatory bodies). Outcome and process measures include analysis of website use, participation in workshops, and results of the online surveys and interviews. The resources were created based on research findings to provide easy, accessible information for employers and stakeholders involved in hiring and integrating IENs into the workforce. Employers were engaged in the development, creation and ongoing evaluation of the innovative resources to validate the products’ relevance to their needs. Collaboration among key stakeholders (government, healthcare organizations, community agencies, regulatory bodies, educational institutions, nursing organizations) is essential to facilitate recruitment, integration and retention of IENs. Outcomes of this research include: Employer Web Guide (ien.oha.com); print copy of the IEN Employer’s Guide, and Workshops. These products highlight leading practices which are shared across the province and country to illustrate unique ways employers have embraced diversity. There is a need to provide healthcare organizations with leading human resource management practices and strategies, and help them understand the value of IENs and the key issues affecting IEN recruitment and retention. Issues and strategies presented are relevant to Ontario and other provincial and international jurisdictions struggling with nursing shortages and trying to capitalize on potential sources of workforce supply. IENs bring experience, ideas, and unique cultural knowledge, language, and communication skills to healthcare organizations. With proper resources and increased awareness, employers can complement their hiring practices to include IENs. Ultimately, effective and efficient workforce integration of IENs will lead to provision of quality care in a diverse Canadian population.

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A6 HEALTH CARE COSTS AND CHRONIC DISEASE / LE COÛT DES SOINS DE SANTÉ ET DES MALADIES CHRONIQUES

A6.1 A cause for discomfort – cost and use of healthcare by Ontarians with chronic pain
Presented by MARY-ELLEN HOGAN PhD Student, Leslie Dan Faculty of Pharmacy, University of Toronto

Chronic pain affects more people than heart disease and diabetes combined. We aimed to determine healthcare use and cost in cohorts of Ontarians with and without chronic pain using administrative data as part of larger project to estimate the total direct medical cost attributable to chronic pain. We conducted a retrospective cohort study from September 2000 to December 2011. Subjects with and without chronic pain were identified from a chronic pain question in three cycles of the Canadian Community Health Survey: Cycle 1, 2000/01; Cycle 2, 2003/04; Cycle 3, 2009/10. These data are linked to Ontario administrative healthcare data. The number of physician visits, hospital stays and all publicly funded healthcare costs were totalled for one year following the subject's survey date. Costing followed methods established by the Canadian Agency for Drugs and Technology in Health and the Health System Performance Research Network. The sample included 100,651 aged 12 and over. Chronic pain was reported in 20% of respondents. The cohort with chronic pain had an average age of 55 years compared to 45 in the cohort without chronic pain and they were more likely to be female (61% versus 53%). They had greater morbidity as measured by the Adjusted Clinical Groups system (3.7 versus 2.8 collapsed Aggregated Diagnosis Groups). The pain cohort had more physician visits per year (16 versus 10 in the group without pain) and 26% of patients with pain had at least one hospital stay versus 14% without pain. The mean annual cost of all healthcare in the group with chronic pain was $4,770 (CAD $2013) versus $1,940 in those without (all p<0.01). The prevalence of chronic pain in Ontarians is high. Patients with chronic pain have greater morbidity, more physician visits and are more likely to be hospitalized than those without chronic pain. Healthcare costs in those with chronic pain are more than twice that of patients without chronic pain.

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A6.2 Long-term physician costs associated with obesity
Presented by MUSTAFA ORNEK PhD Candidate, McMaster University

Cost of obesity studies traditionally had short-term perspective on costs. We estimate the long-term physician cost of obesity to the health care system in Ontario using linked administrative data and novel econometric techniques. This study is unique in the literature by its utilization the available long-term administrative cost data at McMaster University. We link the Canadian Health Insurance Plan from 1999 to 2009. The former provides the information on height and weight and socio-demographic attributes of the individuals, and with the latter we matched the physician service utilizations of these individuals from Ontario. We use non-parametric and semi-parametric regression methodologies to investigate the relationship between the total annual average physician costs and obesity category (BMI) categories. Additionally, we present the dynamics of annual physician costs per BMI category over 11 years by adopting generalized linear regression method. Our results show that in terms of higher physician costs, obesity is less of a concern for males than females. For males, obesity is associated with higher costs only at older ages, but for females higher BMI is associated with higher physician costs in all age groups. Moreover, our results show that for both genders morbid obesity is an apparent issue and associated with high physician costs. Annual regression results show that the cost difference between normal weight individuals and overweight or obese individuals is growing over time, indicating that low short-term cost differences may in fact be considerably higher over time. Considering the fact that the utilization rates and the average physician costs among females are consistently higher than males, a policy intervention that aims to manage the physician billings should prioritize the obesity management in female population. As for morbid obese individuals, more focused approach is the most appropriate.

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A6.3 Healthcare costs for 17 chronic conditions in Ontario
Presented by WALTER WODCHIS Associate Professor, University of Toronto

The high and growing cost burden of chronic conditions is a highly cited feature of most western countries. The objective of the present study was to estimate the incremental costs associated with 17 common chronic conditions using matching methods allowing for direct comparison of these costs. A population-based, retrospective cohort of all individuals in Ontario with at least one of 17 common chronic conditions as of April 1, 2011 was identified (n=7,548,806). Examples of the 17 conditions included renal, cardiovascular, pulmonary, cancer and mental health conditions. For each condition, affected individuals were first matched to individuals without such condition according to age, sex, community residency and then propensity scores based on rurality, John's Hopkins ACGs, income, and provincial region. Differences in healthcare cost between cases and matched controls were then calculated and presented as the attributable cost associated with each condition over a one-year period. For each condition a 10 percent random sample was selected for preliminary analyses resulting in sample sizes ranging from 1,247 for acute myocardial infarct to 317,822 for osteoarthritis. Renal failure had the highest incremental average total system cost difference compared to controls of $8,433 per year, followed by CHF ($6,788) and dementia ($5,732). Osteoarthritis was associated with lowest incremental total cost ($264/year) while patients with osteoporosis had average annual costs that were comparatively slightly lower (-$510/year) than matched patients from the cohort. For most conditions hospital care costs contributed the largest proportion of incremental cost difference except for conditions like long-term care and rheumatoid arthritis (medications). Costs adjusting for days alive were qualitatively similar to total system costs for most conditions. This study provides the first comparative total one year health system and sector-specific incremental cost differences for 17 common chronic conditions allowing for explicit knowledge about which conditions cost the most to treat. Variation in average costs was marked. Comparatively lower costs for individuals with osteoporosis was somewhat surprising.

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A6.4 Projection of health care costs at the end-of-life: An exploratory cost analysis by health care sectors in Canada, from 2015 to 2031
Presented by AMY T.M. HSU Research Fellow, The Ottawa Hospital Research Institute

As the population ages, planning for care at the end-of-life (EOL) becomes a central component in health system budget planning. The aim of this study was to project health care costs at the EOL, and examine the impact of demographic changes on expenditures in various health care sectors. A population-based cohort of decedents was created from Ontarians over 20 years old who died between April 1, 2010 and March 31, 2013. Using a set of linked, health administrative databases, we estimated health care cost in the last year of life for each decedent, across various health sectors, including: hospitalizations, long-term care (LTC), home care, complex continuing care (CCC), and physician services. Generalized linear models were used to predict health care costs in the last year of life, controlling for age, sex, marital status, health status, place of death, rurality of residence, and year of death. Mortality was simulated using Statistics Canada’s Microsimulation Population Health Model (POHEM). Average costs, by age and sex, from the Ontario population were then applied to simulated Canadian deaths from 2015 to 2031. Preliminary results revealed the total cost of EOL care among Canadians adults could increase by 32.8% over the next 15 years, from an estimated $6.7 billion in 2015 to $8.9 billion in 2031. This is equivalent to an average increase of 1.9% per year. The largest increases were in acute care ($1.2 billion), followed by LTC ($309 million). Results from our sensitivity analysis suggest projected costs may vary by ±5% per year, depending on life expectancy assumptions. Projections of health care expenditure at the EOL offer useful information for health system planning. Results from this short-term projection suggest that demographic changes will not inflict significant rises (<2% annually) to overall health care costs at the EOL among Canadians.

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**A7 PANEL / PRÉSENTATION EN PANEL**

**Wednesday, May 27, 2015 – 10:00am - 11:15am SESSION B**

**Le mercredi 27 mai 2015 – 10 h 00 - 11 h 15 SÉANCE B**

### B1 PHARMACEUTICAL POLICY / POLITIQUE PHARMACEUTIQUE I

#### B1.1 Exploring the effect of cost on adherence to prescription medicines from the patient’s perspective

**Presented by LAURIE GOLDSMITH Assistant Professor, Simon Fraser University; ASHRA KOLHATKAR UBC Centre for Health Services and Policy Research**

While prior work has indicated that cost-related non-adherence (CRNA) to prescription drugs exists for many Canadians, we know little about the experience of patients who report CRNA. To learn more about these experiences, we conducted the first (to our knowledge) qualitative examination of CRNA in Canada. This qualitative study was designed to provide an in-depth understanding of the CRNA experience and to ground this within the complexity of medication adherence. We conducted semi-structured, in-depth interviews with adults with experience with CRNA in Vancouver and Prince George, British Columbia. Participants were purposefully recruited through posters in community settings and health care settings, and online and newspaper advertisements. Our initial sampling criteria used key characteristics commonly identified with CRNA in previous research; we refined our purposefully sampling criteria as we learned more about CRNA. We conducted thematic analysis and explicated relationships between central and supporting themes. We interviewed 20 men and women of a various ages, income, health conditions, and health insurance status. Significant CRNA examples existed across all incomes and insurance status; being of low income or not having adequate insurance was particularly challenging. Participants recounted decision-making using a variety of factors (e.g., health condition, belief in the particular medicine, side effects, cost, provider relationship), with the algebra often varying by drug type within the same individual. Participants also mentioned the importance of trust and faith in all providers and services and the relationship between those feelings and CRNA decisions. The link between cost and prescription adherence is often moderated by a number of factors including the quality of relationships with providers and the system as a whole. This study broadens and deepens our understanding of how CRNA works on its own and in relationship to other patient experience issues and to health care system design. There appear to be multiple typologies of CRNA, with each typology having different policy implications.

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#### B1.2 Elderly patients’ risk of receiving potentially inappropriate prescriptions: a population-based study of prevalence and determinants in British Columbia, Canada

**Presented by STEVE MORGAN Professor, University of British Columbia**

Studies of inappropriate prescribing in Canada seldom adjust for potentially relevant medical diagnoses. We sought to address this gap while studying socio-demographic factors associated with exposure to potentially inappropriate prescriptions (PIPs) among elderly British Columbians. We used population-based, de-identified health datasets for 2011. We classified PIP exposures for persons over age 65 using the 2012 Beers criteria. To account for cases where drugs may be warranted given patient health status, we implemented the Beers criteria with adjustments for relevant medical diagnoses as well as the dose and duration of drug use. We ran logistic regressions to study the determinants of exposure to PIPs, including a range of socio-demographic, health status, and health system variables. Crude rates of exposure to PIPs in 2011 were 43.0% for elderly women and 34.8% for elderly men. Factors associated with higher risk of PIP exposure include low-income, poor health status, rural dwelling, concomitant drug use, living in a long-term care facility, and receiving care from multiple (5+) doctors in the year. Women of Chinese ethnicity and living in a neighbourhood with a significant share of population (20% or more) of Chinese ethnicity were at lower odds of PIP exposure than other women. After adjusting for these and other explanatory factors, women had 19% higher odds of PIP exposure than men. Much more needs to be done to improve the quality of prescribing medicines to elderly patients in BC, as one in three BC seniors received a potentially inappropriate prescription in 2011. Women are at particularly high risk, even after adjusting for factors that contribute to the risk of inappropriate prescribing.

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B2.1 Impact of Telehomecare on patients’ quality of life and disease-management skills

Presented by SONYA CRESSMAN Health Economist, The Canadian Centre for Applied Research in Cancer Control

Scientific advances have led to the discovery of novel treatment approaches with high prices. The cost to publicly fund cancer drugs may threaten the sustainability of drug budgets. There is fear that health benefit gains are diminishing over time while the economic evidence to support funding decisions is limited. To assess the additional costs and benefits gained from oncology drugs over time, we used treatment protocols and efficacy results from the US, Food and Drug Administration records to calculate cost-effectiveness ratios for drugs approved to treat first and second-line metastatic or advanced breast, colorectal and non-small cell lung cancer between the years 1994-2013. We assessed reimbursement recommendations reached by Health Technology Assessment agencies in the UK, Australia and Canada. Cost-effectiveness ratios were calculated on a per-patient basis using the survival and efficacy outcomes and were extremely costly, often triple the costs of drugs approved in previous years. Over time, the effectiveness gains have increased for some cancer indications; however, for other indications (non-small cell lung and second-line colorectal cancer) the magnitude of gains in effectiveness decreased. Reimbursement recommendations for drugs with the highest cost-effectiveness have been the most inconsistent. Evaluation of the clinical benefits that oncology drugs offer as a function of their cost has become crucial, and for some clinical indications, incremental health benefits are diminishing over time. There is an urgent need for more economic evidence from oncology drug trials and systematic processes to inform funding decisions.


B1.3 A time-trend economic analysis of cancer drug trials

Presented by GREG MCCOMB Senior Economist, Patented Medicine Prices Review Board

This analytical report analyzes the recent trends in prescription drug expenditures in a select number of Canadian public drug plans and provides insight into the factors that have impacted expenditure levels in 2012/13, as well as it monitors the changes in the pricing and reimbursement for the same year. The report employs a cost driver model that quantifies the contribution of the various effects that drive change in drug expenditures. Four broad categories of effects are considered: demographic effects, volume effects, price effects and drug-mix effects. Important sub-effect are also analyzed. The main data source for this report is the National Prescription Drug Utilization Information System Database, CIHI database. The results are presented for a select number of public drug plans with available data: Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia and Prince Edward Island and Health Canada’s Non-Insured Health Benefits (NIHB) drug plan. The study focuses on the cost levels and drivers in 2012/13 fiscal year and provides a retrospective look at trends since 2008/09. The rates of change in drug expenditures have been declining in recent years, with expenditures in 2012/13 up just by 0.6%. The low rates of change were driven by ample opposing “push” (positive) effects and “pull” (negative) effects which nearly offset each other in a relatively low net change. On the one hand, price effects had an important “pull” effect on drug cost levels, with generic price reductions and generic substitution resulting in important savings in 2012/13. On the other hand, demographic, volume, and drug-mix effects had important “push” or positive effects on drug cost levels, which off-set most or all of the cost saving effects of generic substitution and price reduction discussed above. For biologics, rapid growth since 2007/08 in three therapeutic classes has driven growth in the cost saving effect of generic price reforms and the ‘patent cliff’ may taper off as policies and the market environment evolve, and the long term trend driven by the push effects may resume, with positive rates of growth in public drug plans that may reach double digits rates.

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B2 CHRONIC DISEASE MANAGEMENT I / GESTION DES MALADIES CHRONIQUES I

B2.1 Impact of Telehomecare on patients’ quality of life and disease-management skills

Presented by VALERIA RAC Associate Program Director, Director Clinical Research Division, THETA Collaborative

Telehomecare was introduced in Ontario in 2007 to patients with chronic obstructive pulmonary disease (COPD) and heart failure (HF). Literature suggests it might improve their quality of life and self-management; however results are not conclusive. This study evaluates impact of Telehomecare on patients’ quality of life, disease-management skills and satisfaction.

During the program participation, COPD and HF patients transmit their health data via remote monitoring devices on a daily basis, and have weekly consultations sessions with designated nurses to discuss their health goals. Prospectively enrolled patients (COPD: n=19 and HF: n=22) were recruited between June to August, 2014 and administered telephone surveys at baseline, one, two and three months after Telehomecare program enrollment. Five validated questionnaires were used to capture the patients’ quality of life (EQ-5D, SF-12), program satisfaction (CSQ-8), Telehomecare perception (TMPO-7) and self-management skills (Stanford Self-Efficacy Scale-33). Descriptive statistics was used to summarize survey responses. Overall, both COPD and HF patients reported high satisfaction and positive perception of the program which remained consistent across the time. Compared with COPD patients, there was a slight trend in improvement in several components of self-management skills (exercising, disease and breathing management, depression management, communication with physician, participating in social activities) with time among HF patients. HF patients also showed higher physical and mental composite scores compared with COPD patients. Health profile did not differ significantly between the two groups at baseline; however HF patients reported fewer problems related to self-care and mobility and anxiety/depression with time. HF patients reported higher scores on visual analogue scale at all-time points in comparison to COPD population. These results suggest that Telehomecare has a wide acceptance among patients and has a more positive impact on HF patients’ disease management skills and quality of life.

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B2.2 Implementation and evaluation of an integrated interdisciplinary primary care program for the management of low back pain

Presented by SARA AHMED Associate Professor, McGill University

An interdisciplinary team approach is recommended for individuals with low-back pain (LBP) lasting longer than 6 weeks with standard treatment. The objective of this study was to evaluate the implementation process and impact of a novel 6-month integrated interdisciplinary program on primary care services and patient reported outcomes. Individuals with LBP ≤ 1 year were referred to the program by their primary care physician (PCP) from four health regions. The program includes: six months of early intervention and prevention, evidence-based management of chronic pain including self-management support delivered by a physical therapist, physician, nurse, and psychologist, and follow-up by the PCP. Changes in the Brief Pain Inventory (BPI) intensity and interference scale, Patient Health Questionnaire (PHQ-9), Short-Form 12 physical (PH) and mental health (MH) scale, and self-efficacy scale were evaluated between baseline and 6 months. The StarT Back was completed at baseline to evaluate prognostic risk for poor outcomes. To date 197 individuals were accepted in the program, 38 dropped out before the end of the 6-month period, and 70 completed the 6-month intervention. The average age was 51 (SD 17), and 71% of participants were women. Moderate to severe risk of chronicity (StarT Back scale) was present in 75% of patients. At 6 months there was significant and clinically meaningful mean change on the BPI intensity (2.3, confidence interval (CI) = 1.8-2.8) and interference (2.8, CI = 2.1-3.4) scales, PHQ-9 (3.2, CI=1.8-4.6), SF-12 PH (6, CI=4-9), and MH (4, CI=2-7). There were no significant or meaningful improvements on BPI interference, BPI intensity change scores between moderate and high risk (3.3, CI=2.4-4.1) and high (3.1, CI=1.5-4.6) prognostic risk as compared to low risk (1.6, CI=0.3-3.6). BPI intensity change scores were similar across all prognostic groups. Preliminary results suggest that program is associated with improvements in pain intensity, physical and mental health function, and depression. Further analyses are planned to evaluate the implementation of the program and the long-term impact of the program on return to work and reduction of costs associated with LBP.

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B3.2 First contact access to family physicians for patients requiring narcotics. Findings from the MAAP-NS: Models and Access Atlas to Primary Care

Presented by MARIE-FRANCINE LANGLOIS Professor of Medicine, CHUS - Université de Sherbrooke

Until 2014, separate Prevention, Diabetes, Cardiac rehabilitation and Smoking cessation programs existed in the 7 community health centers (CSSS) of the Eastern Townships. Our objective was to design an integrated framework for the prevention and management of cardio-metabolic chronic diseases (CMCD) in primary care.

We evaluated these programs to identify local and regional successes and gaps: medical charts of a random sample of 1118 patients who participated in CMCD programs between 04/2012-04/2013 were audited and satisfaction questionnaires were distributed to patients attending one of the programs and health professionals of all CSSS. A multidisciplinary working group, with representatives from the whole continuum of care piloted the development of the integrated care framework which addresses the prevention and management of the entire CMCD spectrum. They used the expanded chronic care model as a framework, evidence-based best practices, and above mentioned evaluations. Satisfaction of patients was high in general. Health professionals’ confidence level to help patient with lifestyle modification is 71%. Among the patients participated in more than one program during our reference year and 31% participated in more than one program after 12 months during the reference year. Only 3 of 1118 patients were acceptable 33 days (11-88) except for training in cardiac rehabilitation (152 days (104-233) probably because of closed groups (2-3/yr in most CSSS). Only 51% of patients had BMI or waist circumference measurement documented and 38% documented physical activity counselling. Technical quality indicators of monitoring were higher than those involving prescription or target achievement (ex: only 41% of diabetes with A1c<7%).

Our integrated framework was designed to address the gaps identified: intervention on all patient risk factors, core lifestyle group teaching, open groups for training in rehabilitation, care protocols for nurses with medical orders to help achieve targets, and support for self-management. This should improve accessibility and quality of care.

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B3.1 Access to Primary Health Care and Utilization of Walk In Clinics and Emergency Rooms in Ontario

Presented by MICHAEL GREEN Associate Professor, Queen's University

Canada ranks poorly in same or next day access to primary health care (PHC) and has high rates of utilization of emergency rooms (ERs) and walk in clinics. This study examined barriers to accessing PHC and reasons for use of ER and walk in clinics as reported by patients. Data were obtained from the Primary Care Access Survey, a random dial telephone survey of Ontario adults between 2006-2010 (N=38,795). Questions included self-reported healthcare utilization, access to, and barriers for, accessing PHC, and reasons for use of ER and walk in clinics. Data were pooled into calendar years to assess trends over time. A disaggregated analysis for sex differences was included. Differences between patients self-reporting being rostered (formally enrolled) with a family physician (FP) working in a reformed PHC model (RCM) and those who did not were examined (97.4% vs 82.4%). Of all respondents reported having a FP; 15% of patients with a FP reported difficulties making timely appointments when sick. The mean wait time for an appointment when sick was 3.6 days, but 20% of respondents reported waits over a week. About 22% of adults reported using an ER and walk-in clinic in the previous year. Convenience (31%) and lack of availability of their regular FP (41%) were the most common reasons for use of walk in clinics. In contrast, perceived need for ER services due to the type or severity of illness was the most common reason for going the ER (63.5%) followed by lack of availability of FP (16.2%). These statistics did not change meaningfully over the 4-year time period. While access to a regular source of PHC is high, timely access when sick remains a problem. The impact of improving access to PHC on ER utilization is uncertain, as most patients report using the ER for reasons other than difficulty with accessing their usual source of care.

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B3.2 First contact access to family physicians for patients requiring narcotics. Findings from the MAAP-NS: Models and Access Atlas to Primary Care Providers in Nova Scotia Study

Presented by EMILY GARD MARSHALL Assistant Professor, Dalhousie University Family Medicine

Objectives: As part of the Models and Access to Primary Care Providers in Nova Scotia (MAAP-NS) study this analysis is the first population study exploring access to care for patients who require narcotics, physician and practice characteristics associated with acceptance of these patients, and their ethical and policy implications. Approach: A 3 item survey was developed to collect provider, practice and access to primary care data for all family physicians and nurse practitioners (here presenting physician-only data) in Nova Scotia. Researchers telephoned each office during regular working hours and conducted the survey with the staff member who answered the phone between October 2013 and June 2014. Provider and practice demographic data (e.g., provider age and gender, size and composition of the practice, acceptance and process for new patients, including whether they would accept a patient requiring narcotics, and availability for patient care) were collected. Results: Responses were collected for 84% (n=589) of eligible family physicians. Few currently accept any new patients (9.2%, n=54); though many (40.4%, n=238) have exceptions (e.g., family members of patients or a "case-by-case" basis). A quarter (25.6%, n=91) of physicians who reported accepting patients unconditionally or by exceptions reported having a FP; 15% of patients with a FP reported difficulties making timely appointments when sick. The mean wait time for an appointment when sick was 3.6 days, but 20% of respondents reported waits over a week. About 22% of adults reported using an ER and walk-in clinic in the previous year. Convenience (31%) and lack of availability of their regular FP (41%) were the most common reasons for use of walk in clinics. In contrast, perceived need for ER services due to the type or severity of illness was the most common reason for going the ER (63.5%) followed by lack of availability of FP (16.2%). These statistics did not change meaningfully over the 4-year time period. While access to a regular source of PHC is high, timely access when sick remains a problem. The impact of improving access to PHC on ER utilization is uncertain, as most patients report using the ER for reasons other than difficulty with accessing their usual source of care.

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B3.3 Reconciling the downsides of screening: Mothers’ experiences with false positive newborn screening results for cystic fibrosis

Presented by ROBIN HAYEEMS Scientist-track Investigator; Child Health Evaluative Sciences Member; Assistant Professor, Centre for Genetic Medicine Hospital for Sick Children Research Institute; Institute of Health Policy Management and Evaluation University of Toronto

A downside of population screening is the generation of false positive screening results. We sought to understand how mothers interpret the false positive experience in the context of newborn screening (NBS) for cystic fibrosis (CF). NBS is a longstanding population screening program that enables early identification and treatment of affected infants. In NBS for CF, many infants with false positive results are identified to be carriers of one CF mutation. This may be relevant to parents’ future reproductive decisions and is sometimes considered a secondary benefit of NBS. As part of a longitudinal mixed-methods cohort study of NBS for CF, we surveyed mothers of infants with false positive results within 3 months of birth (time-1; T1) and one year later (time-2; T2). Participants who agreed were also interviewed. We present descriptive and qualitative thematic analyses. We report on completed surveys from 134 of 245 mothers (55%) at T1 and 98 of 214 (46%) at T2 as well as 31 T1 interviews. Quantitatively, majorities agreed to feeling informed (T1:95%, T2:86%) and relieved (T1:91%, T2:83%) about their baby’s result; and minorities agreed that learning about a false positive (T1:32%; T2:40%) or carrier result (T1:4%; T2:3%) was a disadvantage of NBS. Qualitatively, mothers identified their false positive experience as highly significant. They appreciated the key information interviewers provided, analysis of administrative data on PC capacity and utilisation, and, within the two clinics, analysis of practice, patient and practitioner surveys. Although there was a 35% increase in capacity for AH GP services following the intervention, the increase was confined to metropolitan areas. Nevertheless, within the previously under-served semi-rural parts of the catchment, there was a 400% increase in the utilisation of AH deputising services. Over half of deputising visits were provided to patients in residential aged care facilities. One of the two funded semi-rural clinics withdrew from the program, and the other took over 6 months to employ any AH staff. Once AH services commenced, nearly all were for minor non-urgent presentations. Only 6% of patients attending the clinic would have considered seeking care at an ED. Logistic, cultural and organisational barriers prevented implementation of the ED liaison position. SEML's intervention served as a creative attempt at improving AH PC capacity. While meso–organizations like Medicare Locals have potential in modifying the system of care, identifying benefit for self (reproductive and otherwise), and identifying benefit for others. These findings suggest significant tolerance for false positive NBS results. They also identify ways in which this burden is made tolerable. Notably, reproductive benefit is only one way; systems of care that help to mitigate burdens, and an ethic of care for others, are also important.

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B3.4 Expanding after hours primary care services in a disadvantaged region in Australia: Insights for policy and practice

Presented by GRANT RUSSELL Head of School of Primary Health Care, Monash University

Like Canada, Australia has ongoing challenges with after-hours (AH) availability of primary care (PC) services. The nation’s 61 regional PC organisations (Medicare Locals) are trialling a range of innovations to improve AH health care delivery. This paper evaluates an AH intervention set in one of these Medicare Locals. Our mixed method evaluation was set in the South Eastern Melbourne Medicare Local (SEML), a socio-demographically disadvantaged region with a population of 800,000. SEML’s AH intervention comprised a) active recruitment of general practices to offer additional services between 6 and 10PM; b) expansion of existing medical deputising services; c) funding for longer opening hours in two semi-rural general practices; and d) an AH general practitioner liaison position in an regional Emergency Department (ED). SEMML’s AH intervention was implemented in 18 AH practices in the local region and was rolled out between 2012 and 2014. Our mixed method evaluation of the AH intervention included an impact evaluation of the AH intervention and an embedded qualitative study which explored experiences with the intervention. Our study established that AH services lead to a small, but statistically significant rise in the number of people seeking AH services, as well as fewer inappropriate ED presentations for minor and non-urgent illnesses. Participants were enthusiastic about the AH services, with strong views that they were a vital service, although uptake was low. AH services were most advantageous for patients with chronic illness. Patients generally viewed EDs as a last resort. The intervention was well received by EDs, which consistently reported better than expected uptake. AH services also had some unintended positive effects, with better patient flow and reduced ED waiting times. Our study highlighted the need for ongoing research into AH services to inform policy and practice, and the need for robust impact evaluations to better understand the effects of AH services.
Inflammatory bowel disease (IBD) is a chronic condition with increasing pediatric incidence. Transition from pediatric to adult care may be associated with disruption in specialized care. This study explored the impact of the transition to specialized care on adult care among pediatric-onset IBD patients. A population-based retrospective cohort study identified all children diagnosed with IBD 1994-2008 and treated by pediatric gastroenterologists from within Ontario health administrative data. Self-reported case series analyses compared health services utilization in the 2 years before and after transfer to adult gastroenterologists, with a 6-month wash-out period. Outcome evaluated included ED-related visits, specialty department (ED) utilization, outpatient visits, and hospitalization utilization. Incidence rate ratio (IRR) in the post-transfer was compared to pre-transfer periods using Poisson regression analysis (adjusted for sex and income quintile). Analyses were stratified by IBD type: Crohn's disease (CD) and ulcerative colitis (UC). 718 patients were included in the study (481 CD, 208 UC, 29 IBD type unclassifiable). ED utilization was higher after transfer for both CD (IRR 1.65, 95% CI 1.40-1.94) and UC (IRR 2.39, 95% CI 1.87-3.05). Hospitalization rates increased post-transfer (CD: IRR 1.37, 95% CI 1.04-1.83; UC: IRR 1.00, 95% CI 0.78-1.29). Sensitivity analysis revealed similar results when only the first year post-transfer period was assessed. In the largest study to date examining the transfer from the pediatric to adult IBD care, health services utilization increased significantly in the two years after transfer. Understanding causation and rigorously evaluated transition programs may decrease the cost of caring for patients with IBD.

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Presented by PAUL KURDYAK Director, Health Outcomes and Performance Evaluation Research Unit, Centre for Addiction and Mental Health

Schizophrenia patients have very high rates of early readmission after being discharged from a psychiatric inpatient unit. Whether timely physician follow-up care following discharge reduces early readmission for schizophrenia patients is unknown. We assessed the impact of physician follow-up visits within 30 days of discharge, on readmission rates over the subsequent six months (i.e. between 31 and 210 days post-discharge) among schizophrenia patients. We conducted a population-based cohort study of patients with a diagnosis of schizophrenia discharged from a psychiatric inpatient unit between 2006 and 2011 in Ontario, Canada. We included patients who were discharged from a psychiatric hospitalization with a diagnosis of schizophrenia. Patients were classified into one of four groups based on the follow-up they received within 30 days of discharge: no follow-up (referred group) or follow-up by: a primary care physician (PCP) only; a psychiatrist only; and both a PCP and a psychiatrist. The main outcome measure was psychiatric readmission within 31 and 210 days post-discharge. Relative rates (aRR) were adjusted for age, sex, neighbourhood income quintile, number of previous psychiatric hospitalizations and ED visits, severity of psychiatric symptoms, and level of psychosocial functioning at hospital discharge. There were 19,244 unique patients discharged with a diagnosis of schizophrenia during the study period. Among the 6,706 (34.8%) with no physician visit within 30 days post-discharge, 1,711 (25.5%) were readmitted within 30 days post-discharge. Readmission rates were lower among those who had a physician visit by a PCP only (22.2%; aRR 0.88, 95% confidence interval (CI): [0.81-0.96]), a psychiatrist only (21.6%; aRR 0.84, [0.77-0.90]), and both a PCP and a psychiatrist (21.2%; aRR 0.82, [0.75-0.90]). Schizophrenic patients are at high risk of early readmission after discharge from a psychiatric hospitalization. Yet, more than 1 in 3 patients with schizophrenia was not seen by a physician within 30 days of discharge. Timely follow-up care is important to reduce early readmissions and improve outcomes in this high-risk group.

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B5.2 Are home visiting programs for at-risk children effective at reducing population level health and social disparities? A PATHS Equity for Children project  
Presented by MARIETTE CHARTIER Research Scientist, Manitoba Centre for Health Policy, University of Manitoba

The objective of this study is to determine the effectiveness of a home visiting program for at-risk families in decreasing inequities in rates of immunization and of children being taken into care between socioeconomic groups in urban settings in Manitoba. Home visiting program data were linked to de-identified administrative data housed at the Manitoba Centre for Health Policy (MCHP). Depending on the indicator, 1,549-2,646 program and 2,609-3,676 comparison children were included. Propensity scores and inverse probability of treatment weights were used to address the selection bias inherent in delivering a voluntary program. Using risk ratios (RR) and risk differences (RD), we measured the gap between children living in the highest income areas and each group of at-risk children (program and comparison). We then tested whether these differences in these groups changed over time. Statistically significant differences were found between the RRs and RDs by program group for immunizations of one year olds (RR – program: 0.90, comparison: 0.87; RD – program: -0.08, comparison: -0.11) and two year olds (RR – program: 0.79, comparison: 0.72; RD – program: -0.14, comparison: -0.19). Differences were also found between program groups for being taken into care for one-year olds (RR – program: 16.1, comparison: 19.9; RD – program: 0.09, comparison: 0.11) and two year olds (RR – program: 19.7, comparison: 23.2; RD – program: 0.13, comparison: 0.15). Concentration curves will also be presented to demonstrate whether these results are consistent across methods for measuring disparity in a population.

Gaps in immunization and being taken into care rates were significantly narrower for children who had received home visiting services than those who had not. These findings suggest that the home visiting program as implemented in Manitoba narrow the gap between at-risk children and children living in the wealthiest areas.

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B5.3 Improving access to primary health care for vulnerable populations: A typology of components of organizational interventions to inform decision-making  
Presented by JEANNIE HAGGERTY Associate Professor, McGill University

1) To present a typology of organizational interventions improving access to primary health care (PHC) for vulnerable populations  
2) To show how this typology is used by six groups of health professionals, administrators, researchers, decision-makers and patients in designing an intervention to meet local access needs. As part of the IMPACT research program, we conducted a scoping review of the published literature and an environmental scan (using an online survey) to identify organizational interventions aiming to improve access for vulnerable populations. An inductive analysis of the components of access-related interventions, which were then classified using a theoretical model of dimensions of access to PHC (Levesque 2013). This typology was shared with the groups of PHC stakeholders, three in Canada and three in Australia, each mandated to design, implement and evaluate an innovative intervention addressing local access priorities. A total of 1016 articles were included from the scoping review and the environmental scan identified 251 unique interventions from 20 countries. The inductive analysis resulted in the identification of 48 components of organizational interventions. Studies and environmental scan entries described complex interventions generally made up of various components combined in different ways. Interventions were usually comprised of components from more than one dimension of access to PHC. The typology was shared in diverse settings in different phases of the implementation process, from design to implementation to program evaluation. The components of the typology were also used to improve the intervention and to evaluate the impact.

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B6 HEALTH ECONOMICS / ÉCONOMIE DE LA SANTÉ  
Fontaine H

B6.1 Is the National Surgical Quality Improvement Program Cost-effective? A Systematic Review  
Presented by KEDNAPA THAVORN Scientist, Ottawa Hospital Research Institute

Postoperative adverse events increase hospitalisation length of stay and healthcare costs. This study systematically summarizes the effectiveness and the cost-effectiveness of the National Surgical Quality Improvement Program (NSQIP), an intervention for measuring and reporting surgical outcomes, on the risk of hospital-acquired infection (HAI). We included all studies assessing the effectiveness or the cost-effectiveness of NSQIP compared to usual care or no intervention in all patients admitted for elective operations. We searched the following electronic databases from inception to August 31, 2014 using medical subject headings and text words related to HAI and NSQIP: MEDLINE, EMBASE, Cochrane Database of Systematic Reviews, and EconLit. We also searched for grey literature from abstracts/proceedings from conferences, reference lists. Studies are screened, abstracted, and assessed independently by two reviewers. Any conflicts were resolved through team discussion. The methodological quality of included studies was appraised. The outcomes of interest were the proportion of patients experiencing HAIs and an incremental cost-effectiveness ratio. The search strategy generated 916 references. Of these, only two articles reporting the cost-effectiveness of NSQIP were included. The first study assessed the cost-effectiveness of implementing NSQIP in one academic center in the US and showed that NSQIP was cost-effective from the payer perspective, with an incremental cost-effectiveness ratio of $25,471 and $7,319 per event avoided for the first and second years of implementation, respectively. The second study estimated the value for money of implementing NSQIP in British Columbia and demonstrated that NSQIP implementation led to cost savings because the program saved patient days and improved access to surgical procedures. The study also reported that a reduction in these negative outcomes due to NSQIP could reduce 15,545 patient days across the province in one year. Postoperative adverse events occur too commonly and contribute greatly to our increasing healthcare costs. NSQIP appears to be a cost-effective intervention for improving the safety of surgical care. This presentation will also discuss the effectiveness of NSQIP in reducing risk of HAIs and the methodological quality of included cost-effectiveness studies.

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B6.2 The Interpretation of Health Care Need Among the General Public: An Empirical Investigation using a Discrete-Choice Approach

Presented by JEREMIAH HURLEY Professor, McMaster University

The purpose of this study is to investigate empirically how the public interprets the concept of health care need, and specifically to test support among the general public for each of three commonly cited definitions of need: need as a person's baseline health status; need as a person's ability-to-benefit (ATB); and need as the amount of resources required to exhaust a person's ability-to-benefit (RREB). This study uses a discrete-choice experiment, supplemented with qualitative data derived from written responses to open-ended survey questions and from de-briefing interviews conducted with a sample of participants. Quantitative analysis of DCE responses uses a rank-order, latent-class discrete-choice model; analysis of the qualitative data uses descriptive and interpretive thematic coding of written and verbal responses. The most consistent finding is that among members of the public baseline health is the dominant factor for determining need. In contrast, the relationship between need and each of ATB and RREB varied among participants. One pattern emphasized the idea of compensation when judging need individual with less than any single definition found in the literature, and that processes for eliciting the views of the public to inform resource allocation should avoid using general phrases or principles, such as “allocation according to need,” which the public may interpret quite differently than health analysts.

Co-Author(s): Emmanouil Mentzakis, University of Southhampton / Michel Grignon, McMaster University

B6.3 Canadians’ polarized constructs of need: Qualitative analysis of responses to a population-based discrete-choice experiment

Presented by DEIRDRE DEJEAN Professor, McMaster University

Our objective in this study was to understand how Canadians identify and rationalize “the neediest individual” when they are given quantitative information about individuals’ relative baseline health, ability to benefit, and health care resources required to exhaust benefit. This was the qualitative component of a mixed-methods discrete choice experiment (DCE) study. The DCE survey was administered on a Canada-wide community-based sample (n = 349). The qualitative component was conducted on subset of individuals from Hamilton. We qualitatively analyzed 291 text responses made by (n=53) survey participants, and conducted in-depth debriefing interviews with 22 participants. We coded all text and transcripts descriptively (e.g., for choices and stated reasons) as well as interpretively (e.g., for unconventional reasoning, values expressed, etc.). Data were analyzed for characteristic patterns of reasoning and choices in the experiment, as well as any external considerations respondents raised. Respondents understood the DCE, and made carefully reasoned choices. They used a range of approaches to identify individuals in “greatest need.” Respondents polarized between two characterizations of need: need as representing the most tractable cases. This is, given the constraint of limited resources, one segment of the sample argued that those whose health can be improved upon relatively easily, efficiently, or inexpensively are those most in need. Conversely, the other segment argued that the neediest are those whose health is more difficult, inefficient or expensive to improve. The two characterizations draw upon fundamentally different values and ways of thinking about need. Respondents sometimes embellished the experimental scenarios with imagined factors to help determine need and make difficult choices. Lay people in Canada seem divided between two essential, conflicting, meanings of “need” for scarce resources. Each has directly opposing implications for technical efficiency, triage ethics, and so forth. Some people resist reductive choices, and strive to consider more factors than baseline health, ability to benefit, and resources required.

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B6.4 Cost-Utility Analysis of Robotic-Assisted versus Open Radical Prostatectomy in Patients with Clinically Localized Prostate Cancer in Ontario

Presented by XUANQIAN XIE Health Economist, Toronto Health Economics and Technology Assessment Collaborative, Leslie Dan Pharmacy, University of Toronto

To assess the cost-effectiveness (i.e. incremental cost per QALY gained) of robotic-assisted radical prostatectomy (RARP) versus open radical prostatectomy (RP) in patients with clinically localized prostate cancer in Ontario. The analysis was conducted from the perspective of the Ontario Ministry of Health and Long-Term Care. We identified patients who received RP or RARP in Ontario since 2004 using the Prostate Centre Database at University Health Network and the Institute for Clinical Evaluative Science (ICES) databases. The SAS macro developed by the ICES was used to estimate the healthcare cost. We also included in the analysis, the costs of purchasing and servicing the da Vinci Surgical System® and its disposables. We used mixed models and propensity scores matching approach to compare QALYs and cumulative costs between the two treatments in QALYs gained and $6,077. The difference in change in utility at 1 year (relative to baseline) between the two groups was small (±0.002). Predicted QALYs at year were slightly higher for RARP than for open RP (0.943 versus 0.942). The corresponding incremental cost-effectiveness ratio (ICER) was $10.8 million per QALY gained. ICER remained high even after performing sensitivity analysis with scenarios favoring RARP. Using conventional methods, observed health benefits for RARP are low, and there are significant marginal costs. Thus, RARP does not appear to be cost effective. Expanding access to minimally invasive surgery and clinician preference are factors that are not incorporated in our analysis.

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B7 Improving care for older adults and individuals with dementia in the French and Canadian health care systems: insights and challenges in evaluating policy interventions

Améliorer les soins dispensés aux personnes âgées et aux personnes atteintes de démence dans les systèmes de soins de santé canadiens et français : perspectives et défis en matière d’évaluation des politiques

Moderated by ERIN STRUMPF, McGill University

Presented by MICHEL GRIGNON, McMaster University; YANN BOURGUEIL, L’Institut de recherche et documentation en économie de la santé; HOWARD BERGMAN, McGill University; ISABELLE VEDEL, McGill University

Internationally, clinicians and policymakers alike are interested in developing capacity to meet the needs of older adults and individuals with Alzheimer’s and related disorders. Effective action requires quantifying the magnitude of the challenge, developing effective interventions, and evaluating their implementation. Dr. Grignon will discuss estimates of the prevalence and cost of dementia across Canadian jurisdictions and internationally. Dr. Bourguel will present the evaluation of a policy experiment underway in 9 pilot regions in France to improve pathways of care for the elderly (PAERPA). Dr. Bergman and Dr. Vedel will present an evaluation of Collaborative Care Models implemented in primary care teams in Ontario and Quebec to improve care for older persons with Alzheimer’s disease and related disorders. Research approaches, data access and financing, and interactions with decision makers and health professionals will be compared and contrasted across these projects and jurisdictions.
C1 AGING / VIEILLISSEMENT

C1.1 Distribution and Utilization of Palliative Care Across Ontario’s Health Care Settings: A Retrospective

Presented by PETER TANUSEPUTRO Research Fellow, Bruyère Research Institute

The objective of this research study was to use health administrative databases to understand the distribution and utilization of palliative care across Ontario’s health care settings and in particular within the continuing care sector (home care, long-term care, rehabilitation, and complex continuing care). All deaths occurring in the Registered Persons Database between April 1, 2010 and March 31, 2012 for Ontario were captured. For each decedent, we retrospectively examined the provision of palliative and non-palliative health care services 3, 6, and 12 months prior to death using administrative data from the Institute of Clinical and Evaluative Sciences (ICES). Analysis included examination of health care utilization and costs of decedents receiving and not receiving palliative care across health settings. Regional differences and socio-demographic characteristics were also examined. About 60% of decedents used home care in their last year of life and 25% used long-term care. Among 92,276 decedents receiving palliative care (52% of all decedents), an average of 35 days of palliative care was delivered in the last year of life. A significant proportion received care for less than 7 days, and had care initiated less than 7 days prior to death. Home care and inpatient acute care contributed the largest number of palliative care days delivered (44.2% and 37.5%, respectively). Total health care cost among those receiving palliative care was higher than those who did not; this can largely be explained by palliative care being captured using claims of health care use, which is in turn what contributes to total costs. This study helps to unpack palliative care delivery and utilization across Ontario’s health sectors. The findings of this study will allow policy makers to better understand the state of palliative care delivery in Ontario and to inform ongoing policy initiatives to improve care at the end of life.

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C1.2 Values Talk about Patient Care Transition Policy: what values are informing the policy discourse?

Presented by KIMIA SOROURI Student Researcher, McMaster University

Patient care transitions are a prominent area of health policy development in Canada. Health policy is value-laden, but these values are largely implicit. In this presentation, we will elucidate the values informing current policy discourse on patient care transitions and how values-based tensions are addressed. We analyzed 16 health policy documents published in Ontario during the five-year period 2007-2012. The documents were selected to reflect a range of health sector perspectives, including patient groups, think tanks, professional associations, and government reports addressing policy analysis and recommendations regarding patient care transitions. Our analysis involved both a descriptive analysis of values language within and across policy documents and an ethical analysis of emerging values-based tensions, including how such tensions were addressed within the document. Values such as efficiency, quality of care, patient autonomy, equity, accessibility, accountability, and transparency were commonly identified in the documents. However, for the most part, these values were not defined and were not used consistently across the documents. Efficiency and quality of care were often presented together as important policy goals. However, in some policy documents, these were presented as complementary and mutually supporting; in others, they were presented as trade-offs. The importance of an integrated health system was underscored in all policy documents. However, the goals of integration and the means of achieving them varied across the documents. Our analysis demonstrated that although there is alignment in what values were relevant to talking about patient care transitions, there was less alignment in how these values were defined and how they informed meaningfully the development of policies to improve patient care transitions. Clarity about these underlying values will be important for developing policies regarding patient care transitions that are not only practicable but also coherent from a values perspective.

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C1.3 L'intervention d'autonomisation des personnes en perte d'autonomie liée au vieillissement

Presented by ANNIE TESSIER professionnelle scientifique, Institut national d'excellence en santé et en services sociaux


C1.4 Burden of treatable symptoms at end of life in nursing home residents: Relation to modifiable features of work environment

Presented by MATTHIAS HOHEN Alberta Innovates Health Solutions Post-Doctoral Fellow, University of Alberta

1. To describe trajectories of burdensome symptoms in nursing home residents in the last year of life. 2. To develop a rating of burdensome symptoms and of questionable practices at end of life 3. To develop, in partnership with stakeholders, a set of recommendations for action Trajectories of six symptoms (dyspnea, pain, pressure ulcers, urinary tract infections, challenging behavior, delirium) 2008 – 2012 were assessed using longitudinal resident data (RAI-MDS 2.0). Modifiable organizational context was assessed using the Alberta Context Toolkit. Participants included 2635 residents with dementia, 1012 without dementia. Context scores were obtained from 1381 front line care staff in a stratified random sample of 36 nursing homes in Alberta, Manitoba, and Saskatchewan. All residents received assessments in each quarter of the year before death. We used hierarchical mixed model, repeated measures regression, to simultaneously evaluate effects of time, dementia, and context on symptom trajectories. In the last quarter before death, the most frequent symptoms were challenging behavior (dementia) and delirium (non-dementia). In both groups the least frequent symptom was urinary tract infections. Except for challenging behaviour, the prevalence of all symptoms for residents with or without dementia significantly increased as death approached. In facilities with more favorable context, residents experienced significantly fewer of most symptoms. Symptoms (e.g., pain, delirium, aspiration, dry mouth, etc.) were rated for burden by a group of experts and practices (e.g., antipsychotic use without psychosis, physical restraint use, feeding tube use, hospital and emergency department transitions, etc.) were rated for appropriateness. Both, symptoms and practices, were assessed for their prevalence based on our data, and experts rated whether associated costs were high, moderate or low. Symptom burden increases as end of life approaches but differs between high and low context facilities and between residents with and without dementia. These data are being used in Delphi panels with key policy stakeholders to generate priority focus areas for quality improvement in long term care facilities.

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C2 ABORIGINAL (PRIMARY HEALTHCARE & ACCESS AND EQUITY) / AUTOCHTONES (SOINS DE SANTÉ PRIMAIRES & ACCÈS ET ÉQUITÉ)  

Fontaine D

C2.1 Negotiation, Reciprocity and Reality: the experience of collaboration in the “Innovation in Community-based Primary Health Care (CBPHC) Supporting Transformation in the Health of First Nation and rural/remote communities in Manitoba (iPHIT)” program of research

Presented by WANDA PHILLIPS-BECK Nurse Research Manager, First Nations Health and Social Secretariat of Manitoba

iPHIT is collaboration between University of Manitoba, the AMC and 8 First Nations (FN) in Manitoba. We aim to understand what elements of health/system communities perceive as important; utilize this knowledge to document/build CBPHC models; test these model(s) for effectiveness and ultimately, improve the scope and delivery of CBPHC. The 5 year project seeks to 1) inform ethical guidelines for FN ethical principles by: joint planning of research project; creating joint Indigenous and University co-lead research teams; engaging & ongoing collaboration with communities; community support and formation of Local Advisory Committees; establishing a unique role for the Nurse Research Manager; hiring and building skills locally (Local Research Assistants); FN controlled data management; creating sub-research teams and community involvement in data collection, validation, analysis & interpretation. Through the collaboration we have learned the benefits of reciprocal relationships and on-going communication, and these factors are crucial for the success of research project. There is greater awareness of the use and benefits of research in FN communities; communities have begun to take action on what they have learned through the research project; and there is greater willingness from all partners to listen, understand, and utilize respectful approaches in working together. We have also learned that strong leadership is crucial; clear and regular communication is paramount, roles and responsibilities are sometimes fluid, but yet still need to be clearly defined; “community engagement” is not well understood by academia and; most importantly negotiation & reciprocity is absolutely critical for the duration of the project. This presentation will describe the partnership and collaborative approach to the program of research. We will share our experiences and lessons learned; of negotiating and pioneering new research arrangements and the realities of applying the principles self-determination to research.

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C2.2 The Health Status of Canada’s First Nations Population: Re-conceptualizing determinants of health

Presented by ROBERT NESDOLE Biostatistician/Epidemiologist, Queen's University

Identify critical differences surrounding the key determinants of health articulated by the Public Health Agency of Canada (PHAC) and the cultural knowledge of First Nations people expressed by the Four Worlds International Institute for Human and Community Development (Four-Worlds) and their model of 14 determinants of health and well-being. A First Nations worldview was used to deconstruct, compare and contrast philosophies underpinning the key determinants of health developed by the PHAC and the ontological perspective expressed by the Four-Worlds model of 14 determinants of health and well-being. Multiple sources of academic and grey literature were used to provide context and identify factors contributing to existing health disparities found within First Nations populations. Critical insights gleaned from comparisons between the PHAC’s determinants of health and the Four-Worlds model were then developed to inform public health services for Canada’s First Nations population. Comparing the Four-Worlds 14 determinants of health with the PHAC’s key determinants of health reveals subtle yet important differences in philosophies. First Nations philosophy is grounded in the human context interconnected and interdependent with the natural world, integral to First Nations identity and health. In contrast, the key determinants of health model focuses on the interaction of the human and the environment; leaving out the importance of life based on stewardship of the land and harmony with the earth. Examination of the philosophical divergence between the PHAC’s key determinants of health and the worldview embedded in the Four-Worlds determinants of health and well-being model highlights factors including colonization, racism, marginalization and underfunding of First Nations programs, contributing to health inequities experienced by First Nations people. Public health programs in Canada may inadvertently marginalize and fail to meet the needs of First Nations people due to differing underlying philosophies. Incorporating the Four-Worlds model within the context of public health services may facilitate a deeper understanding of social determinants of health of First Nations populations.

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C2.3 Aboriginal Health Policy-An Analysis of Ontario’s Aboriginal Healing and Wellness Strategy, 20 Years Later

Presented by CHRISTINA HACKETT PhD Student, McMaster University

Significant health disparities exist between Aboriginal and non-Aboriginal Canadians. Ontario’s Aboriginal Healing and Wellness Strategy (AHWS) marks the first provincial Aboriginal-specific health policy in Canada. This presentation provides an explanatory analysis of AHWS’s development process, highlighting strategies for development of Aboriginal-specific health policy across provinces currently void of these policies. Ontario’s AHWS was chosen for analysis as it was the first Aboriginal-specific health policy implemented at the provincial level. Using John Kingdon’s multiple streams framework, events catalyzing the AHWS’s development in Ontario from 1982 to 1997 are analyzed. Academic and grey literature, and a media scan were used to identify focusing events and public sentiment towards issues that created a policy window, which shaped the AHWS’s development. A policy legacy framework was used to provide an overview of the historical, institutional factors that preceded the AHWS, at the federal and provincial levels. The AHWS, along with the subsequent establishment of the First Nations Health Authority (FNHA) in BC indicate the presence of a new policy path in Aboriginal health policy. Factors that facilitated the ability to create the AHWS in Ontario were: A sympathetic political climate across provincial government ministries. Aligning Aboriginal health issues with issues holding prominence in the general public as well as in political arenas. Formalization of the inherent Aboriginal right to self-government and healthcare service ownership by the provincial government. A process of true consensus reflecting epistemological compromise in understanding the medical and Aboriginal and non-Aboriginal ways of knowing and communicating. The anticipation and navigation of potential political factors that would impede policy implementation in Aboriginal settings. Awareness of Aboriginal and non-Aboriginal political climates along with the precedents of the AHWS in ON, and now the FNHA in BC, can inform strategies for discovering and mobilizing around future windows of opportunity for Aboriginal health policy. Without Aboriginal health policy implemented at the provincial level, at which operational decisions about healthcare delivery are made, systemic barriers remain for equitable access to healthcare for Aboriginal populations.

C2.4 First Nations and the Health Service Divide Beyond Medicare: Provincial and Federal Coverage for the Diagnosis and Treatment of Sleep Apnea

Presented by GREGORY MARCHILDON Canada Research Chair and Professor, Johnson-Shoyama Graduate School of Public Policy, University of Regina

Within provinces, coverage for all non-medicare services is bifurcated, with one regime for eligible First Nations and another for all other provincial residents. This health service divide and its implications are examined in depth through a case study of diagnostic and treatment services for sleep apnea in Saskatchewan. In 2014, based upon an extensive secondary and qualitative research, the researchers prepared and conducted detailed key informant interviews as follows: Health Canada administrators and service providers (3) of First Nation health services in Saskatchewan for sleep apnea treatment and diagnostic services covered under the non-insured health benefits (NIHB) program; Provincial program administrators (4) of an extended health benefits program covering some sleep apnea services known as Saskatchewan Aids for Independent Living (SAIL); and Physicians (3) providing sleep apnea services in Saskatchewan to provincial residents with and without registered Indian status. The results demonstrate the major differences in coverage for diagnostic and treatment protocols as well as service coverage and timeliness, with some negative results for the registered Indian portion of the provincial population. This case study also illustrates the ways in which services for defined populations such as registered Indians can be excluded from provincial coverage for medicare. Based on this evidence, the researchers propose various policy options that could potentially address the current service divide. By providing a window on non-Canada Health Act services, this case study suggests the need for a review of the differences in coverage for diagnosis and treatment of multiple conditions that can have a major impact on the health of at-risk populations, especially First Nation groups in Canada.

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C3.4 Should I Stay or Should I Go? Factors Associated with Family Physicians’ Decision to Quit New Primary Care Teams in Quebec

Family Medicine Groups (FMGs) aim to enhance access and coordination of care. The roles of nurses in these multidisciplinary teams suggest that benefits of team-based primary care may be concentrated among vulnerable patients. We evaluated the impacts of FMGs on service use and costs among patients with multimorbidity. We used a 5-year post-enrollment longitudinal dataset of patients affiliated with either a Family Medicine Group (FMG) or a Family Medicine Group without an FMG (FMG). Given the voluntary nature of FMG enrollment, we adjusted for baseline differences between FMG and non-FMG enrollees using propensity scores based on patients’ characteristics and health care utilization data in the two years preceding registration as vulnerable. Multivariate difference-in-differences regressions were used to estimate the average treatment effect of FMGs on health care utilization and costs for patients with multiple chronic conditions (n=244,274) compared to patients with no comorbidity (n=334,559). Five years of follow-up period in the regression allowed us to evaluate the effects of FMGs on service use and related costs. Results suggest that the impacts of FMGs vary depending on whether patients have multiple chronic conditions. The FMGs reduced the number of emergency department (ED) visits and the number of hospitalizations for patient without multimorbidity. Among patients with multiple chronic conditions, enrollment in a FMG increased the number of ED visits and hospitalizations over the five years of follow-up. Similarly, FMGs decreased the costs of ED visits and hospitalizations for patients without multimorbidity, but increased those costs for patients with multimorbidity. The FMGs’ effect on the use of ambulatory services and related costs is similar irrespective of multimorbidity status. FMGs appear more effective at reducing health care utilization and costs among less complex patients than among those with multimorbidity. Reductions in ED and hospital utilization and costs suggest better quality and coordination of care among patients without multimorbidity. Our conclusions were based by chronic conditions and identifiable in administrative databases.

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C3.3 Factors Associated with Patient Experience in Ontario’s Family Health Teams (FHTs)

Presented by DANIEL MCMURCHY President, Dale McMurchy Consulting

In 2008, the Ontario Ministry of Health and Long Term Care (MOHLTC) provided an opportunity to assess and improve patient experiences. We undertook an evaluation of Family Health Teams (FHTs) that identify their successes and shortcomings. It sought to provide the MOHLTC with an opportunity to assess achievements, support performance improvement, and provide a measure of accountability to stakeholders. A mixed-method approach was applied to examine performance in >100 FHTs. Patient, provider and organizational surveys, as well as site visits, were conducted. Results indicate that the majority of FHTs had high performance in terms of patient experience, patient satisfaction and related costs. Results suggest that the impacts of FHTs vary depending on whether patients have multimorbidity. Our findings provide evidence that FHTs are effective in improving patient experiences and reducing health care costs.

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C3.2 La qualité des soins est-elle meilleure dans les nouveaux modèles de soins pluridisciplinaires au Québec? Une étude du respect des lignes directrices de trois maladies chroniques en groupes de médecine de famille (GMF)

Presented by MAMADOU DIOP Agent de recherche, Direction de santé publique de Montréal

Nous avons évalué l’effet des groupes pluridisciplinaires en première ligne, en l’absence d’incitatifs financiers liés au paiement à la performance, sur le respect des lignes directrices pour les soins aux patients. Spécifiquement, nous avons mesuré l’effet des GMF sur le respect des recommandations de pratique basées sur des données d’un échantillon de cohortes inclus les personnes suivies des groupes de médecine de famille (GMF). Nous avons comparé les patients dans un modèle primaire de médications chroniques retenues pour lesquelles le respect des lignes directrices était mesuré dans notre banque de données médicale administratives : diabète, MPOC ou insuffisance cardiaque. Notre échantillon compte 242 450 patients inscrits comme vulnérables. Des indicateurs de respect des lignes directrices spécifiques à chaque maladie chronique ou décritvrant les proportions de cibles atteintes ont été construits. En utilisant un score de propension qui corrige le biais de sélection, nous avons évalué l’effet des GMF sur le respect avec des régressions multivariées et des doubles différences. Nous avons constaté que les patients inscrits dans un modèle primaire de médications chroniques au sein d’un GMF présentaient une meilleure adhérence dans le respect des lignes directrices après l’inscription comme patient vulnérable auprès d’un médecin traitant. Cependant, nous constatons qu’il n’y a pas d’effet positif décelable des GMF sur le respect des lignes directrices pour les maladies chroniques considérées. Les patients suivis en GMF présentent une moins grande amélioration de l’adhérence aux recommandations de prescriptions de médicaments relativement aux patients inscrits auprès d’un médecin non GMF. Par ailleurs, rien n’indique un effet des GMF sur le respect des lignes directrices en lien avec les consultations, puisque les augmentations surviennent dans les deux groupes de façon semblable. Dans le contexte actuel, les GMF ne semblent pas avoir d’effet spécifique sur le respect des recommandations évaluées. Nous appliquons ce résultat par l’hypothèse que l’inscription auprès d’un omnipracitien est synonyme d’une prise en charge des patients indépendamment du modèle d’organisation.

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C3.1 Do multidisciplinary primary care teams impact health care utilization and costs for patients with multiple chronic conditions? Evidence from Quebec’s Family Medicine Groups

Presented by ERIN STRUMPF Research Assistant, McGill University and Direction de santé publique de Montréal

In Quebec’s primary care teams (Family Medicine Groups – FMGs) decision to quit New Primary Care Teams in Quebec

The role of nurses in these multidisciplinary teams suggests that the benefits of team-based primary care may be concentrated among vulnerable patients. We evaluated the impacts of FMGs on service use and costs among patients with multimorbidity. We used a 5-year post-enrollment longitudinal dataset of patients affiliated with either a Family Medicine Group (FMG) or a Family Medicine Group without an FMG (FMG). Given the voluntary nature of FMG enrollment, we adjusted for baseline differences between FMG and non-FMG enrollees using propensity scores based on patients’ characteristics and health care utilization data in the two years preceding registration as vulnerable. Multivariate difference-in-differences regressions were used to estimate the average treatment effect of FMGs on health care utilization and costs for patients with multiple chronic conditions (n=244,274) compared to patients with no comorbidity (n=334,559). Five years of follow-up period in the regression allowed us to evaluate the effects of FMGs on service use and related costs. Results suggest that the impacts of FMGs vary depending on whether patients have multiple chronic conditions. The FMGs reduced the number of emergency department (ED) visits and the number of hospitalizations for patient without multimorbidity. Among patients with multiple chronic conditions, enrollment in a FMG increased the number of ED visits and hospitalizations over the five years of follow-up. Similarly, FMGs decreased the costs of ED visits and hospitalizations for patients without multimorbidity, but increased those costs for patients with multimorbidity. The FMGs’ effect on the use of ambulatory services and related costs is similar irrespective of multimorbidity status. FMGs appear more effective at reducing health care utilization and costs among less complex patients than among those with multimorbidity. Reductions in ED and hospital utilization and costs suggest better quality and coordination of care among patients without multimorbidity. Our conclusions were based by chronic conditions and identifiable in administrative databases.

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C3.4 Should I Stay or Should I Go? Factors Associated with Family Physicians’ Decision to Quit New Primary Care Teams in Quebec

Presented by MEHDI AMMI Assistant Professor, Carleton University

Despite great enthusiasm for new inter-professional primary care teams (PCTs) among policy-makers, the evidence concerning their impacts is relatively scarce with respect to the retention of health professionals. This project addresses the gap in evidence by examining the factors associated with family physicians’ decision to quit Quebec’s primary care teams (Family Medicine Groups – FMGs). We rely on an administrative database constructed specifically to evaluate the effects of FMGs. The database contains information on about 5,000 FMG and non-FMG general practitioners (GPs) from 2000-2010 across the entire province of Quebec. Among the 906 FMG physicians, about 15% quit these organizations after five years of follow-up. We first consider the different cross-sections (i.e., each of the 5 years of follow-up) independently and use multivariate logistic regressions for the decision to quit FMG (binary outcome: quitting or staying). We then take advantage of the longitudinal nature of our dataset and use fixed effect logistic regressions with panel robust standard errors. The characteristics associated with the decision to quit that we consider include physician demographics, physician practice location, the quantity and quality of their activity, and the characteristics of their patient’ roster: Preliminary results from cross-sectional analysis show that among demographics, only experience consistently appears as a determinant: younger GPs quit more than their more senior colleagues; physicians with larger share of vulnerable patients quit more and indirectly (it reduce the are of vulnerable patient FMG. Having a higher share of the practice in in private setting reduce quitting, while a higher share of the activity in emergency room increase dropout from FMG. Our preliminary results also show that physicians who quit FMGs see less patients and do less visits than those who remain in FMGs. It is not clear however that these results are a direct consequence of FMG participation. Further analysis will be made to estimate more comprehensive longitudinal models.Policy and research attention is currently focused on the recruitment in and the expansion of PCTs. It is however important to make sure GPs do not leave these structures. A better understanding of the factors associated with the quitting decision will help policy-makers to develop strategies to improve retention in these new structures.

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C3 PRIMARY HEALTHCARE AND NEW MODELS / SOINS DE SANTÉ PRIMAIRES ET NOUVEAUX MODÈLES Fontaine E
C4 QUALITY, SAFETY & PERFORMANCE MEASUREMENT AND PRIMARY CARE / QUALITÉ, SÉCURITÉ ET MESURE DU RENDEMENT ET SOINS PRIMAIRE

C4.1 Estimating organ donor potential: a comparable tool to track performance, identify gaps and help save lives

Presented by CHRISTINA LAWAND Senior Researcher, Canadian Institute for Health Information

Organ donation saves lives, but in Canada, there is a shortage of available organs for transplant. The purpose of this study is to estimate how many people who die in Canadian hospitals are clinically eligible to become organ donors and how effectively health systems across the country convert potential donors into actual donors. Administrative data on more than 100,000 hospital deaths a year in Canada were used for this study. The two main data sources for analysis were CIHI's Hospital Morbidity Database (HMDB) and the Canadian Organ Replacement Register (CORR). Donor potential was estimated by identifying patients who died in acute care hospitals from several severe injuries (e.g. brain injury or other conditions associated with donation), who were mechanically ventilated, and who had no medical contraindications. While there are data limitations, the methods used for this study have the benefit of being comprehensive, i.e. (Canada-wide coverage), economical and repeatable over time. Even after adjustments were made to provide more conservative estimates, results show no more than 1 in 3 potential donors in Canada became actual donors of transplanted organs. If Canada were to realize its full potential an additional 3,500 solid organs a year could be available for transplant. The study found a two-fold difference between provinces in conversion of potential donors into actual donors. The study also identified two important categories of under-used potential donors: patients with cardio-circulatory deaths (vs. brain deaths) and older patients (ages 60+). A regression analysis found teaching hospitals were significantly more likely to convert potential donors than community hospitals, and that patients who died during the day were more likely to become donors than those who died at night. Results show a wide variation in practice of deceased donation in Canada, with room to significantly improve donation from cardio-circulatory deaths and older donors in particular. Leading countries have focused on these two areas to improve the supply of available organs. The way hospital care is organized can also influence donation.

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C4.2 Do patients attending different models of primary care in Winnipeg differ in complexity?

Presented by ALAN KATZ Professor, University of Manitoba

To describe the complexity of patients attending 5 different models of primary care delivery in Winnipeg. This cohort study uses de-identified administrative data housed at the Manitoba Centre for Health Policy. We assigned 626,264 Winnipeg residents to the primary care provider (family physician or nurse practitioner) that provided the majority of their care over three years. The providers were grouped into one of five models of care: academic teaching units, fee-for-service (FFS), Pay-for-performance FFS, community health centers and access centers. Complexity was defined by percentage of patients in the model who fit in one of eight categories. There was significant variability in the proportion of patients with each of the complexities between models. Children in care varied from 1.9 to 14.4% in different models; having a teen mother varied from 5.6% to 21.5%; living in social housing having given birth varied from 2.6 to 20.3%; being on income assistance varied from 71.1 to 42.4%; being diagnosed with major mental health diagnosis varied from 9.1 to 12.1%; being new to the province varied from 1.7 to 8.5% and having high residential mobility varied from 12.1 to 31.6%. Community centers had the highest complexity rates for six complexes. FFS had the highest percentage of newcomers and access centers the highest percentage mental health diagnoses. While these results confirm a clinical meaningful difference in complexity between patients receiving primary care through different models of care organization and delivery, some of the findings are surprising. These findings are important in determining ideal panel sizes and funding for alternate funding models for primary care providers.

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C4.3 An Examination of Two Alberta Strategic Clinical Networks Through a Knowledge Translation Lens

Presented by KELLY MRKLAS KT Implementation Scientist, Alberta Health Services

Within health sectors across the globe, there is intensified focus on patient safety and quality improvement. In 2012, Alberta created Strategic Clinical Networks (SCNs) to translate evidence into improvements. This study used a knowledge translation (KT) lens to examine two of Alberta's SCNs and determine how evidence informed QI innovations, how stakeholders were engaged, to identify barriers and facilitators to knowledge uptake/engagement and how these were addressed by SCNs. A comparative case study method was used, offering multiple lenses for understanding KT structures and processes. Participants were recruited through SCN membership lists and their contacts with an extended community of QI innovation end-users. Data were collected using iterative document review, observation of SCN meetings and individual interviews, comprising SCN leaders, SCN core committee members, clinicians, support staff and other organizational and community members. Coding and thematic analysis was undertaken using an analytic filter that included a taxonomy of barriers and facilitators for knowledge use, theory-based domains and the KTA cycle. NVivo 9 was used to manage, index and theorize findings. An integrated cross-case report of two SCNs produced a rich, robust picture of KT within SCNs. Key themes were engagement (levels and barriers/facilitators), knowledge to action mechanisms, implementation (evidence integration, project- and SCN-level implementation strategy, links to engagement, implementation planning and teams) and a summary of key early indicators of SCN success. Engagement was identified as a pervasive overarching theme linked to each of the other key themes. Implementation teams were identified as an area for future development to plan, implement and sustain improvements. The need for focus on questions of mutual interest and extending into collaborative efforts to align with business cycles to facilitate sustained improvements. SCNs were identified positively by participants as 'clinical innovation machines' and successes were described as process, patient, and system outcome focused. Use of a KT lens to examine SCNs provides insights into how evidence is translated into practice and helps to inform the development and maintenance of future KT and implementation efforts.

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C4.4 Risk Communication and Values Clarification in Primary Care: A Descriptive Study

Presented by HOLLY WITTEMAN Assistant Professor, Université Laval

To assess patient perceptions of risk communication and values clarification in primary care, including whether patients perceive that clinicians: (1) discuss risks and benefits during consultations, (2) use numerical estimates to describe risks and benefits, and (3) ask patients about what is important to them. We invited clinicians and patients in 4 university-affiliated family medicine clinics to participate in this mixed-methods observational study in summer 2014. During 4-5 consecutive days in each clinic, we collected written questionnaires from participating clinicians and patients prior to consultations assessing subjective numeracy (confidence with numbers) and decision-making style preferences (physician-led, shared, or patient-led). Patients completed a second questionnaire immediately after their consultation about their perceptions of the visit, including whether or not the clinician discussed risks and benefits, if so, whether they used numbers, and whether or not they had been asked about what was important to them. Of the 1,044 eligible, 69/72 clinicians (97%) and 218/309 patients (71%) participated. Clinicians were 37 physicians, 28 residents, 8 nurses and 1 nutritionist. Patients were 27% men and 73% women with median age 39 (range 16-81) and a broad range of educational attainment. Patients and clinicians differed in their decision-making style preferences (Fisher's Exact p<.001), with patients' dominant preference being patient-led (58%) versus clinicians' dominant preference for shared (65%). According to patients' post-visit reports, decisions were taken during 57% of consultations. Clinicians discussed risks and benefits in 78% of visits and asked patients what was important to them in 66% of visits. Within consultations in which risk-benefit discussions occurred, clinicians used numbers in 34% of visits. Primary care clinicians and patients want patients to participate actively in health-related decisions. This study suggests that there is room for improvement in help achieve such active patient participation in decision-making by improving communication about risks, benefits, use of numbers and what is important to patients.

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C5 QUALITY, SAFETY & PERFORMANCE MEASUREMENT
QUALITÉ, SÉCURITÉ ET MESURE DU RENDEMENT

C5.1 Do indicators of health system performance for older adults change over time? An analysis of multiple frailty cohorts
Presented by SIMA GANDHI Epidemiologist, Institute for Clinical Evaluative Sciences; SUSAN BRONSKILL Scientist & Program Lead, Institute for Clinical Evaluative Sciences
Older adults represent a growing population in Ontario and in recent years important health system investments have been made to address their needs. By profiling a series of health system performance measures over time across different cohorts of frail older adults, this study examines subgroup-specific impacts of these investments. This population-based, retrospective study used linked health administrative, demographic, and health-related databases to identify older adults, aged 66 and older in Ontario, Canada, between 2002/03 and 2012/13. We identified thirteen relevant cohorts of older adults based on clinical comorbidity, functional characteristics, care setting and historical health system costs. We compared 14 health system performance indicators of system access, effectiveness, safety, and health status within cohorts over time and across cohorts. Changes over time were tested in separate linear regression models, using time as the independent variable. In 2012/13, 1,762,417 community-dwelling older adults were identified; 36% were in two or more cohorts. The largest cohort was the morbidity burden cohort (23%); while the behavioural symptoms cohort was smallest (0.3%). From 2002/03 to 2012/03, hospitalization rates decreased (216 to 192 per 1,000 population, p<.0001), as did primary care visit rates (6357 to 4864 per 1,000 population, p<.0001). Hospital readmissions remained stable (113 to 115 per 1,000 population, p=.11). Within-year variation in rates of emergency department visits was nearly three-fold between the high CHESS (1628 per 1,000 population) and older adult cohorts (580 per 1,000 population). High variability was found for preventable ED visits and hospitalizations while access to a usual provider of care demonstrated least variation across cohorts. This study confirms the heterogeneity of older adults in Ontario and highlights the value of identifying key subgroup(s) when comparing and contrasting performance indicators. Findings provide a foundation to examine future impacts of investments in the older adult population in Ontario.
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C5.2 Experiences of an emergency department visit among patients aged 75 and over
Presented by JANE MCCUSKER Principal Scientist/Professor, St. Mary’s Research Centre/McGill University
To describe the experiences of an emergency department (ED) visit among patients aged 75 and over who are discharged home from a metropolitan, university-affiliated hospital serving a multi-ethnic population. We recruited a cohort of patients aged 75+ at an ED visit: A proxy family member informant was recruited if patients were cognitively impaired; or medically unstable and not interviewed in a telephone interview conducted a few days after the visit (median=5, range=1 to 31 days) and included questions on 16 potential problems with care received during the visit. Three problem experience scales were constructed based on multiple correspondence analysis and thematic analysis: personal quality of care (8 items), waiting times (3 items), and discharge information (5 problems). High users reported more problems. The follow-up interview. The mean age of the sample was 83.0, 72% were female, 51% were born in Canada, 39% were on stretchers, 39% had a proxy informant and 88% had a family doctor. 24% were receiving homecare services. The mean problem experience scores were lower (better) for personal quality of care (mean 1.78 potential problems = 21%), compared to waiting time scores 15.3 (50%) and discharge information scores 2.5 (50%). No patient characteristics predicted personal quality of care or discharge information. Stretcher patients and those who were ISAR positive reported fewer waiting time problems (p<.01). Participants report more problems over longer waiting times and lack of discharge information, compared to personal quality of care. More problems with waiting times are reported by lower quality, ambulatory patients, suggesting that the ED appropriately prioritizes care of higher risk patients.
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C5.3 High Users of Acute Care Services - Who Are They? Assessing Variability across Canada
Presented by JOSEPH AMUAH Project Lead, Indicator Research and Development, Canadian Institute for Health Information
Research indicated that a small proportion of the population uses a large percentage of healthcare resources. There is no pan-Canadian indicator of high users of inpatient acute care services. A comparable pan-Canadian indicator is being developed to monitor provincial/territorial/regional variations in high users of inpatient acute care services. Data from the Discharge Abstract Database, the Ontario Mental Health Reporting System, the Hospital Morbidity Database, and the National Ambulatory Care Reporting System from 2012-2013 were linked to identify patients that made use of inpatient acute care services across Canada. Patients were followed-up over a period of one year to identify patients with repeat hospitalizations and their cumulative length of stay (LOS) over the follow-up period. Consultation with expert advisors and exploratory analyses were conducted to determine a threshold of repeat hospitalizations and cumulative LOS to classify patients as high users of inpatient acute care services. Provincial rates of high users ranged from 4.1% in Ontario and Nova Scotia to 5.4% in PEI; health regional rates varied from 3.1% to 6.4%. Variations may be attributable to differences in service delivery, alternative level of care designation, data collection, and patient characteristics. Overall, high users tend to be patients older than 65 years (65.2%). The top 5 reasons for admission included mental health (12.4%), palliative care (5.8%), COPD (5.6%), heart failure (5.6%) and respiratory disease (5.3%). These indicators are indicative of high users of acute care services from both an effectiveness (repeat hospitalizations) and efficiency (cumulative LOS) lens. This indicator can help policymakers and health-care planners to identify populations at risk and design strategies or community programs to potentially reduce high intensity use of acute care services.
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C5.4 The Influence of Primary Care, Specialist, and Home Care Services utilization on Emergency Department use among Home Care Clients
Presented by ANDREW COSTA Assistant Professor, Schlegel Chair in Clinical Epidemiology & Aging, McMaster University
Home care clients are prevalent and at high risk for emergency department (ED) use. Little population-level research has examined the determinants of ED use among home care clients. Our objective was to examine the influence of primary care, specialist, and home care services utilization on ED use after adjusting for person-level risk factors. A population-level cohort study was conducted on long-stay, community-dwelling older adults in Ontario, Canada, between 2002/03 and 2012/13. We identified thirteen relevant cohorts of older adults based on clinical comorbidity, functional characteristics, care setting and historical health system costs. We compared 14 health system performance indicators of system access, effectiveness, safety, and health status within cohorts over time and across cohorts. Changes over time were tested in separate linear regression models, using time as the independent variable. In 2012/13, 1,762,417 community-dwelling older adults were identified; 36% were in two or more cohorts. The largest cohort was the morbidity burden cohort (23%); while the behavioural symptoms cohort was smallest (0.3%). From 2002/03 to 2012/03, hospitalization rates decreased (216 to 192 per 1,000 population, p<.0001), as did primary care visit rates (6357 to 4864 per 1,000 population, p<.0001). Hospital readmissions remained stable (113 to 115 per 1,000 population, p=.11). Within-year variation in rates of emergency department visits was nearly three-fold between the high CHESS (1628 per 1,000 population) and older adult cohorts (580 per 1,000 population). High variability was found for preventable ED visits and hospitalizations while access to a usual provider of care demonstrated least variation across cohorts. This study confirms the heterogeneity of older adults in Ontario and highlights the value of identifying key subgroup(s) when comparing and contrasting performance indicators. Findings provide a foundation to examine future impacts of investments in the older adult population in Ontario.
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C.6.1 A Comparison of Comorbidity Measures for Predicting Healthcare Utilization in Cancer Patients

Presented by LISA LIX Professor, University of Manitoba

Cancer patients often have multiple comorbidities as pre-existing conditions or consequences of their cancer. The impact of comorbidity on the healthcare system may be large, but not equivalent across conditions. Our purpose was to compare the performance of comorbidity measures for predicting healthcare utilization in populations with diagnosed cancers. Data were from the Manitoba Centre for Health Policy and included cancer registry, hospital discharge abstracts, physician billing claims, and prescription drug databases. The study compared 4 comorbidity measures: Charlson index, Elixhauser index, Chronic Disease Score, and number of diagnoses, number of prescription drugs, and Johns-Hopkins Aggregated Diagnostic Groups. Healthcare utilization measures included hospitalization, number of physician visits, and number of prescription dispensations one year following cancer diagnosis. Generalized linear regression models were used to assess comorbidity measure discrimination, prediction error, and reclassification performance. For breast (n=8486), colorectal (n=7903), lung (n=8689), and prostate (n=7423) cancers, three-quarters of the cohort were hospitalized within one year following cancer diagnosis and they had an average of 13 physician visits and 26 prescriptions. For hospitalization, the Elixhauser index improved discrimination (c-statistic) between 1.2% (prostate) and 3.5% (colorectal) over a base regression model containing socio-demographic and cancer treatment variables; other comorbidity measures resulted in smaller improvements and the reductions in prediction error and reclassification were modest. For physician visits, the number of diagnoses performed best for all but colorectal; improvements in prediction (R-square) ranged from 3.2% (lung) to 81.5% (prostate). For prescription dispensations the Chronic Disease Score performed best, with R-square improvements ranging from to 42.6% (lung) to 328.7% (breast). Comorbidity is an important predictor of healthcare use in cancer patients, but not all measures have equivalent performance; the choice depends on the utilization measure and cancer type. Cancer registries do not contain comorbidity information; linkage with administrative databases ensures that comorbidity is included in population-based healthcare studies.

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C.6.2 Quality of Hospital Discharge Abstract Database over Time

Presented by JASON JIANG MSc Student, University of Calgary

To assess the trends of validity of hospital discharge abstract databases (DAD) in recording comorbid conditions from 2002 to 2014, and to investigate factors associated with validity. We hypothesized that the validity of DAD increased over time. We used the DAD with a clinical database: Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease (APPROACH). APPROACH contains data on nearly all patients receiving cardiac catheterization in Alberta and the data is directly entered when clinicians see patients. In DAD we defined 11 chronic conditions using validated ICD-9-CM/ICD-10 coding algorithms (hypertension, hyperlipidemia, diabetes types 1 and 2, heart failure, peripheral vascular disease, cerebrovascular disease, pulmonary disease, malignancy, liver disease and gastrointestinal disease). We used the APPROACH data as “gold standard” and calculated sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for 11 conditions. Overall 60543 patients were linked between DAD and APPROACH. Of 11 conditions, only hypertension and type 2 diabetes had increasing sensitivity from 2002 to 2014 (hypertension: 63.6% - 84.5%, type 2 diabetes: 64.2% - 90.9%). Sensitivities of remaining conditions showed no clear trend. Specificity was high (>90%) and consistent from 2002 to 2014 with the exception of hyperlipidemia (84.1% - 95.8%). PPV for heart failure declined from 2002 to 2014 (heart failure: 49.16% - 38.21%, liver disease: 36.6% - 20.0%). PPVs of the remaining 9 conditions followed no obvious trend. NPV was consistently high (>85%) for 9 conditions except for hypertension (40% - 70%) and hyperlipidemia (20% - 40%). Increased sensitivity was only seen in 2 conditions. Our findings do not support the hypothesis that case identification is improving due to better coding conditions over time. For most conditions assessed in this study, data quality has not affected the reliability of trend analysis and disease surveillance using this DAD.

Co-Author(s): Cynthia Beck, University of Calgary / Matthew James, University of Calgary / Mingshuan Lu, University of Calgary / Hude Quan, University of Calgary

C.6.3 The Flow – An innovative application developed by the McGill University Health Center allowing patient-centered communication by physicians and nurses using their personal smartphones

Presented by AUDE MOTULSKY Post-Doctoral Fellow, McGill University

The Flow application was developed in 2013 by the McGill University Health Center. It allows for protected and tracked communication among clinicians using their personal smartphones. The objective of this study was to describe the application, how it is used and the potential benefits according to users. The data collection consisted of a case study including the two pilot intensive care units (ICU) where the technology was implemented at the Montreal Children’s Hospital. Data from multiple sources were gathered to allow for a comprehensive description of the case. Qualitative data consisted of think-aloud observations of the technology as used by typical users, interviews with champion users and focus groups with users. Journal of entries from the Flow app were retrieved for one month. Content analysis and social network analysis were performed per unit to give a detailed description of usage patterns. The app was used by 245 clinicians in a 12-month period. In October 2014, a mean number of 10 and 6 unstructured messages (flows) were written per patient per day by clinicians on the neonatal and pediatric ICUs, respectively. 68% of all flows were entered by physicians. Messages were categorized per system according to a structure defined by clinicians. The app was predominantly used to standardize the handoff process by generating a paper patient list with the last entry per category. Clinicians perceived this technology as easy to use and having the potential to improve the accuracy of the communication during handoff. Push notification features and targeted group communication were requested by users. Concerns about interoperability with the hospital electronic patient record were voiced. This case study gives a detailed description of an innovative app developed internally with minimal resources. It reveals promising avenues to take advantage of the “informal” use of smartphones by clinicians in many settings by integrating their use into clinical practice and electronic patient record systems.

Co-Author(s): Aude Motulsky, McGill University / Jean-Pierre Cordeau, McGill University Health Center / Jorge Pomalaza, McGill University Health Center / Jeffrey Barkun, McGill University Health Center / Robyn Tamblyn, McGill University

C.6.4 Strengthening Public and Patient Involvement in Health Technology Assessment

Presented by JULIA ABELSON Professor, McMaster University

Efforts to produce a comprehensive, evidence-informed framework to guide public and patient involvement (PPI) in organizations conducting health technology assessment (HTA) have been rare. This presentation will share the inputs to and product of such an effort, carried out in collaboration with Health Quality Ontario (HQO) and the McMaster Health Forum. The framework development process was informed by the deliberations of HQO’s Public Engagement Subcommittee, and by the outputs of an independently-funded research team working together with the committee. The following evidentiary sources informed the committee's deliberations: i) a website scan of international HTA organizations’ PPI practices; ii) a comprehensive review of published reviews, empirical and conceptual literature about PPI in HTA; iii) key informant interviews in the field of PPI and HTA; and iv) a dialogue of key provincial, national and international stakeholders convened by the McMaster Health Forum in May 2014. The presentation will focus on the final framework produced from this work which includes the following core elements: i) the articulation of the underlying principles, values and goals for PPI in HTA (e.g., democratic/procedural, instrumental, and developmental); ii) the establishment of a common language to support PPI efforts (e.g., clarifying the meanings of terms like “patients and stakeholders,” and levels of involvement); iii) the description of a flexible array of approaches that can be used depending on the type and phase of the HTA process (e.g., who to involve, using which mechanisms and at what stages of the HTA process); and iv) supports for monitoring the quality and impacts of PPI on HQO’s HTA decision-making processes. This public and patient involvement framework has been developed for implementation in Ontario’s HTA decision-making process. However, the core elements of this framework are broadly applicable to organizations that carry out HTA activities in Canada and around the world as well as other health system organizations pursuing health quality agendas.

Co-Author(s): Irfan Dhalla, Health Quality Ontario / Frank Wagner, University of Toronto Joint Centre for Bioethics / Deirdre DeJean, McMaster University / Sarah Soraveld, McMaster University / Sophie Petersen, Health Quality Ontario / Francois-Pierre Gaut, McMaster Health Forum / John Lavis, McMaster University / Mitzi Giacomini, McMaster University
C7 Knowledge Translation Across Health Disciplines: Lessons on Successful Engagement and Meaningful Impact. An SWG-Led Panel

Application des connaissances dans toutes les disciplines de la santé : enseignements sur la participation réussie et les incidences véritables. Dirigé par le GTE

Presented by ERICA BRIDGE, Graduate Student, Brock University; SCOTT MITCHELL, Director, Knowledge Transfer - Canadian Mental Health Association Ontario; ARIELLA LANG, Nurse Researcher, Victorian Order of Nurses; FRANCE LÉGARE, Professor, Department of Family Medicine - Université Laval

Knowledge translation is a complex process that includes the synthesis, dissemination, exchange, and ethically-sound application of information. In healthcare, the exchange of knowledge contributes to the provision of effective health services to strengthen the health system and improve population health. Evidence-based research can successfully inform practice and policy; however the process through which this is achieved is often complex and unclear. This session will focus on learning how evidence from different healthcare disciplines is effectively communicated to various stakeholders in order to encourage practice development and policy-making. This year’s conference theme is “Learning from each other: Across disciplines, jurisdictions, and generations.” Knowledge translation in health services is a topic of great importance and interest to students, researchers, decision-makers, policy-makers, funders and knowledge users, yet the concept is often poorly understood. By sharing experiences across disciplines, we can all optimize our chance of successfully disseminating our research. The goals of this SWG-led panel session are to: a) provide a basic understanding of the elements that support knowledge translation; b) understand how to foster an environment for knowledge translation; c) learn to communicate in a globalized context with policy-makers, decision-makers, and knowledge users using effective knowledge translation tools; and d) understand the facilitators of and barriers to knowledge translation for health services and policy researchers. The goals will be explored using examples from the following disciplines: a) mental health, b) long-term care, c) infectious diseases, and d) primary care. While targeted at students, the session is open to all conference participants who are interested in an educational discussion with practical implications in this emerging field. Session Overview This panel session features four panel members and a moderator, who will be contacted upon confirmation of abstract selection. The panelists will be experts in their field and will each represent one of the above-mentioned disciplines, thereby presenting a more holistic view of knowledge translation. 1) Introduction The session will begin with a CAHSPR Student Working Group (SWG) member introducing the panelists and moderator, and providing our rational for the session. 2) Panelist Presentations Each panelist will give a 15-minute presentation during which they will be asked to address the following questions: A) What is knowledge translation? Panelists will present a brief overview of what knowledge translation means in their respective disciplines. They will also highlight key players involved in the knowledge translation process. B) What are the common knowledge translation techniques working in your discipline? Panelists will present key knowledge translation tools used in their area, describe how these tools are selected, and elaborate on the steps involved in the knowledge translation process. Panelists will be asked to illustrate their points through real-world examples. C) Are there any concerns and pitfalls for young health policy researchers to avoid? Panelists will offer additional insight to young researchers by speaking to some knowledge translation successes and failures they have experienced or observed. 3) Question and answer period and additional learning. The moderator will lead a discussion and will field questions from the audience to the panelists.

Wednesday, May 27, 2015 – 3:15pm - 4:30pm SESSION D
Le mercredi 27 mai 2015 – 15 h 15 – 16 h 30 SÉANCE D

D1.1 A population-based examination of interventions near the end-of-life and their effect on location of death

Presented by SARAH BEACH Research Assistant, The Ottawa Hospital Research Institute

To systematically examine the predictors of location of death, with focus on physician home visits in the last year of life. This population-based study describes where Ontarians died and indicates potential effects of home-based interventions at the end-of-life. Using population-based health administrative databases, this retrospective cohort study identified all deaths in Ontario from April 1, 2010 to March 31, 2013. Health care use in the last year of life and location of death were examined. Among 264,755 decedents, 45.7% died within an acute care hospital, 7.7% in complex continuing care, and 174% in long-term care (LTC). Twenty-nine percent of the population died outside of these institutions. A slight shift away from institutional deaths was observed from 2010 (54.4%) to 2013 (51.9%). Adjusting for age, sex, income quintile, rurality, number of chronic conditions, and rostering to a family physician, receiving palliative home care was associated with a 64% reduction in risk of dying in an institution (not including LTC). The same model, adjusting for home care, showed that having one physician home visit was associated with a 55% decreased risk of institutionalized death. Unrostered patients were associated with a 30% higher risk of institutionalized death. Although location of death is related to severity of illness, it is also associated to health system factors, including factors affecting home care and physician visits. Less than one-third of the population, however, received palliative home care or physician visit in their last year of life, indicating large room for improvement.

Co-Author(s): Peter Tanuseputro, The Bruyère Research Institute / Mathieu Chalifoux, The Institute for Clinical Evaluative Sciences / Doug Manuel, The Ottawa Hospital Research Institute

D1.2 Places of care: A Population-based examination of predictors to where people spend their last days of life

Presented by PETER TANUSEPUTRO Research Fellow, The Bruyère Research Institute

To determine the number of days spent by Ontarians in health care institutions during the last 30 and 90 days prior to death. Using the Ontario Registered Persons Database, we identified all registered deaths between April 1, 2010 and March 31, 2013. For each decedent, it was determined how many days were spent in acute care, complex continuing care (CCC), rehabilitation, and emergency room facilities in the 30 and 90 day prior to death. A total of 264,755 deaths occurred during the study period. On average, in the last 90 and 90 days of life, a total of 9 and 16 days were spent in acute care, CCC, emergency rooms, or rehabilitation, respectively. Analysis from multivariable models that adjusted for age, sex, income quintile, rurality, number of chronic conditions, and rostering to a family physician, receiving palliative home care was associated with 7 less days in institutions and physician visits by 3 to 7 less days (for 1+7+ home visits, respectively), during the last 90 days of life. Less than one-third of the population, however, ever received palliative home care or a physician visit in their last year of life. Ontarians spent a significant amount of time in institutions at the end-of-life. Decreasing time in institutions was associated with been rостered to a primary care physician, receiving physician home visits, and palliative home care. This study points to how changes to service provisions can potentially reduce time spent within institutions at end-of-life.

Co-Author(s): Sarah Beach, The Ottawa Hospital Research Institute / Mathieu Chalifoux, The Institute for Clinical Evaluative Sciences / Hsien Seow, Department of Oncology, McMaster University / Douglas Manuel, The Ottawa Hospital Research Institute

D1.3 Trends in staffing in Ontario’s Long-Term Care Homes: Are there differences by profit status and chain ownership?

Presented by AMY T.M. HSU Research Fellow, The Ottawa Hospital Research Institute (OHRI)

Ontario has the highest proportion of for-profit operated long-term care (LTC) homes in Canada. Increasingly, these are also operating as members of a multi-facility chain. However, the association between chain operation and staffing levels has not received as much attention in empirical research as profit status, and existing evidence has been inconclusive about its implication on quality of care. Using longitudinal data (1996-2011) obtained from Statistics Canada’s Residential Care Facilities Survey, staffing levels were compared across five ownership types: for-profit chain-owned homes, for-profit independently-owned homes, not-for-profit chain-owned homes, not-for-profit independently-owned homes, and municipal homes. Our analysis revealed significant differences in staffing levels by profit status and chain membership. Specifically, we found for-profit LTC homes – especially those who were members of a chain organization – provided significantly (< 0.05) fewer hours of direct care as well as nursing care per resident day than other types of providers, after adjusting for differences in residents care needs. Residents in municipal homes received an average of 20 minutes more of resident per day than for-profit chain homes. Moreover, municipal operators were able to achieve this by providing more hours of RPN care than other types of operators. Results presented in this paper signal a need for a better understanding of care delivery models, how more effective staffing “mix” is achieved among some homes (e.g. municipal homes), and its impact on resident outcomes. Finding from this study offers insights into concerns about inadequate staffing in Ontario’s LTC homes and has implications for other jurisdictions where an increasing presence of for-profit chain operators have been observed.

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D2.1 Association of hyperbilirubinemia guidelines with socioeconomic disparities in newborn follow-up

Presented by ELIZABETH DARLING Assistant Professor, Laurentian University

To determine whether implementation of universal bilirubin screening in Ontario was associated with improved rates of recommended follow-up care across socioeconomic status (SES). Design: Retrospective population-based cohort study using survey and health administrative data. Setting: 97 of 100 hospitals providing maternity care. Population: 733,990 newborns born at ≥35 weeks gestation discharged to home from hospital within 72 hours of birth between April 1, 2003 and February 28, 2011. Intervention: Implementation of universal bilirubin screening (occurred between 2007 and 2011 in 67 hospitals). Main outcome measures: Recommended follow-up care (i.e., physician visit within one calendar day after discharge for babies discharged ≤24 hours after birth, or physician visit one or two calendar days after discharge for babies discharged between 24-72 hours after birth). Implementation of the guidelines was associated with a modest increase in recommended follow-up from 2007 to 2011 (OR: 1.13 (1.05, 1.23)). There was a striking socioeconomic gradient in the crude percentage increase in recommended follow-up associated with guideline implementation (ranging from 0.3% in the lowest quintile to 29.0% in the highest quintile), with a significant interaction between guideline implementation and material deprivation status. Disparity in recommended follow-up increased following guideline implementation, with 40% of the crude increase attributable to the highest SES quintile and none to the lowest SES quintile. Implementation of universal bilirubin screening has had limited impact in ensuring timely follow-up for Ontario newborns. This represents an ongoing weakness in efforts to prevent severe hyperbilirubinemia, and illustrates how universal programs which fail to address root causes of disparities may improve overall population health outcomes but cause increased inequity.

Co-Author(s): Timothy Ramsay, Ottawa Hospital Research Institute / Doug Manuel, Ottawa Hospital Research Institute / Ann Sprague, BORN-Ontario / Mark Walker, Ottawa Hospital Research Institute / Astrid Guttmann, Institute for Clinical Evaluative Sciences

D2.2 Impact of the Healthy Baby Prenatal Benefit on Perinatal Outcomes: A PATHS Equity for Children Project

Presented by MARIETTE CHARTIER Associate Professor, Senior Research Scientist, University of Manitoba, Manitoba Centre for Health Policy

In Manitoba, low-income pregnant women are eligible for the Healthy Baby Prenatal Benefit (HBPB), an income supplement provided during the second and third trimesters of pregnancy. The objective of this study was to determine the impact of the HBPB on newborn outcomes and health equity. Data from the Manitoba Centre for Health Policy on Income Assistance (IA), HBPB, hospital births, and prenatal and maternal risk factors were linked to identify all women receiving IA during pregnancy giving birth in 2001/2002-2011/12 (N=14,591). Propensity score weighting was used to adjust for differences between treatment (receipt of HBPB; n=10,738) and control (no HBPB; n=3,853) groups. Logistic and linear regressions compared treatment and control groups on breastfeeding initiation, low birth weight, preterm birth, small- and large-for-gestational age (SGA, LGA), 5-minute Apgar scores, neonatal readmission, birth hospital length of stay, and to compare population inequities with and without the HBPB. Receipt of the HBPB was associated with statistically significant reductions in low birth weight (OR: 0.71; 95% CI: 0.63, 0.81), preterm (OR: 0.76 (0.69, 0.84)) and small-for-gestational age (OR: 0.90 (0.81, 0.99)) births and statistically significant increases in breastfeeding initiation (OR: 1.06 (1.03, 1.09)) and large-for-gestational age births (OR: 1.13 (1.05, 1.23)). For infants born vaginally, the HBPB was associated with shortened birth hospitalization length of stay (X=2.86, p<0.0001). Gamma sensitivity analysis found results for breastfeeding, low birth weight, preterm birth and length of stay were robust to unmeasured confounding. The disparity between infants born to low and high income women was reduced for low birth weight and preterm births (p<0.05). A modest income supplement during pregnancy was associated with improved birth outcomes for infants born to low-income women as well as reductions in inequities in health at birth. Placing conditions on income supplements to low-income pregnant women is not necessary to promote prenatal and perinatal health.

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D2.3 Determinants of pre-adolescent physical activity — a case for action on social determinants of health

Presented by KAMALPREET BANGA PhD Student, University of Saskatchewan

Childhood obesity, a precursor to adult obesity, increases the economic burden on the health care system. Optimal physical activity in children is important to prevent this epidemic. The study objective was to assess the role of socioeconomic status and socioeconomic status on physical activity in preadolescents. The Student Health Survey (2010/2011) was conducted to assess health status and risk behaviors of grades 5 to 8 students in Saskatoon Health Region. Multilevel binary logistic regression models tested the associations between physical activity (Kilocal/Day/kg/day (KDK)) and student-level covariates (i.e., age, gender, ethnicity, parent's employment status, parent's education level, socioeconomic status, self-reported Body Mass Index (BMI), self-rated health, and perceived number of friends), while accounting for clustering effects. Depreciation index based on neighbourhood social and material deprivation was used to assess socioeconomic status (SES), Adjusted odds ratios (OR) with 97.5% confidence intervals (CIs) and variance partition coefficients were computed. The cohort consisted of 4528 students; 51.4% were female, 9.8% self-identified as aboriginal, 23.2% belonged to least socioeconomically deprived quintile. Only 16.4% were optimally active (KDK>8). Factors associated with optimally active (KDK>8) included Aboriginal status (OR 1.85, 95% CI 1.22 – 2.82), being born in 2001/02-2011/12 (OR 4.57, 97.5% CI 3.01 – 6.92) and having many friends (OR 2.72, 97.5% CI 1.35 – 5.49). Physical activity levels were not optimal among most students, and were lower among Aboriginal and low income students. Population-level interventions designed to affect social determinants of health are critical in improving the childhood physical activity levels and predict better overall health in adulthood.

Co-Author(s): Sri Krishna Sai Modupalli, Assembly of Manitoba Chiefs Secretariat, Inc. / Cordell Neudorf, Saskatoon Health Region / Jennifer Cushon, Saskatoon Health Region / Daniel Fuller, University of Saskatchewan / Cheryl Waldner, University of Saskatchewan
D3 PRIMARY HEALTHCARE (CANCER, MENTAL ILLNESS, ALCOHOL) / SOINS DE SANTÉ PRIMAIRE (CANCER, MALADIE MENTALE, ALCOOL)

D3.1 Comprendre les déterminants du diagnostic précoce de cancer au Québec

Presented by MARIE-FRÉDÉRIC LÉVÉQUE, Université de Montréal / Pasquale ROBERGE, Université de Sherbrooke / Louise FOURNIER, Université de Sherbrooke / Pierre TOUSIGNANT, Université de Sherbrooke

L’objectif est de comprendre le rôle des facteurs personnels et de l’organisation du système de soins, en particulier l’affiliation à une source habituelle de soins de 1re ligne, sur le diagnostic précoce de cancer. Nous analysons de quelle façon l’expérience personnelle et l’expérience d’utilisation des services de première ligne influencent le choix de la « porte d’entrée » dans le processus d’investigation, le temps écoulé avant le diagnostic et la présence d’un cancer métastatique au moment du diagnostic. L’étude porte sur trois sites fréquents de cancer : sein, poumon, côlon-rectum. Cette étude exploratoire comporte une enquête auprès de 436 patients adultes atteints de cancer inscrits dans l’Scientific Registry quatrème métastases participe du Québec et une analyse d’entrevues auprès de 22 patients. L’expérience de soins auprès de la source habituelle de soins de 1re ligne exerce une influence, quoique faible, sur le choix de la « porte d’entrée » dans le processus menant au diagnostic du cancer et sur le temps écoulé avant le diagnostic. Nos résultats indiquent que, outre le site de cancer, le temps écoulé entre le début de la maladie et son diagnostic est un autre facteur susceptible d’accroître le risque d’avoir des métastases au moment du diagnostic initial. L’analyse qualitative indique que les facteurs personnels ont particulièrement déterminé pour expliquer les délais entre les premiers signes attribuables au cancer et l’investigation, et que l’organisation du système de soins expliquent les délais plus longs entre le début de l’investigation et le diagnostic. Cette étude permet d’identifier certains facteurs, tant au niveau de l’organisation du système de soins qu’au niveau de la sensibilisation du public qui permettraient d’améliorer le temps de réponse aux premiers signes et d’accroître le diagnostic de cancer, et ainsi réduire l’avancée du cancer au moment du diagnostic.

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D3.2 Primary care organizational characteristics supporting care for patients with mental-physical multimorbidity: a qualitative case study

Presented by MATTHEW MENEAR, Post-Doctoral Fellow, Laval University

Patients presenting with mental-physical multimorbidity are common in primary care, yet are often at risk of receiving suboptimal care. To inform future quality improvement initiatives, we aimed to explore primary care providers’ perceptions of the organizational characteristics of their practice settings that supported high-quality care for these vulnerable patients. Theory-based qualitative, embedded multiple case study with four primary care clinics within two health and social service centres (CSSSs) in Montreal, Quebec. Clinics were sampled purposively based on survey data from project “Dialogue” to ensure diversity in organizational characteristics of clinics (clinic type, mental health services). Primary care providers were recruited using snowball sampling and participated in semi-structured interviews informed by a conceptual framework drawn from the knowledge management literature. Complementary data was collected based on non-participant observations, analysis of documents and feedback from participants on preliminary results. A thematic analysis was conducted by an interdisciplinary team, facilitated by NVivo. Sixteen primary care providers from different professions (e.g. family physicians, nurses, psychologists) were interviewed. They identified four types of organizational characteristics enabling high-quality care for patients with mental-physical multimorbidity: structural, social, technological and epistemic characteristics. Structural enablers included the type of clinic (CLSC vs private clinic, teaching site), physician payment model (salary), availability of clinical supervision, and organization of workplaces. Social enablers included norms of trust and mutual support and teamwork being valued highly. Technological enablers included electronic medical records systems permitting timelier information sharing between clinicians, as well as web-based decision support systems. Epistemic enablers related to opportunities that allowed different types of professionals to exchange and apply knowledge, such as through interprofessional teamwork or case discussions involving primary care and mental health providers. This study identified several organizational characteristics in primary care settings that could be targeted in quality improvement efforts for patients with mental-physical multimorbidity. The influence of these characteristics is complex given their interconnected nature, but strategies seeking to make settings more knowledge-rich and collaborative should hold promise for improving care.

Co-Author(s): Anne-Marie Cloutier, The University of Montreal Hospital Research Centre / Pasquale Roberge, Université de Sherbrooke / Louise Fournier, Université de Montréal

D3.3 Effects of Family Medicine Groups on visits to the emergency department among diabetics in Quebec between 2000 and 2011: a population-based segmented regression analysis of an interrupted time series

Presented by RENÉE CHARLAND, Student, McGill University

Family Medicine Groups (FMG) were introduced in Quebec in 2002 to re-organize primary care practices and encourage team-based and inter-professional approaches to service delivery. We measured visits to the emergency department (ED) as a proxy for access to and quality of primary care, before and after the reform using an open cohort of individuals diagnosed with Type 1 and Type 2 diabetes. Administrative databases were used to derive the weekly rate of ED visits for acute diabetes complications between April 1, 2000 and March 31, 2012. We performed an interrupted segmented regression analysis to derive the estimated and extrapolated rates of visits in years following the introduction of the reform. We employed an outcome control series of diabetics visiting the ED to treat appendicitis to strengthen the study’s internal validity. After 9 years of reform implementation, we observed a reduction of 2.12 and 2.25 visits to the ED per 10,000 diabetics per week to treat acute diabetes complications in urban and rural areas, respectively. This accounts for approximately a 36% and 34% decrease in the weekly rate of visits in urban and rural regions, respectively. No change in the rate of ED appendicitis was observed by the end of the study period. Our results suggest that the decreases in the rate of ED visits are attributed to the implementation of the FMG model across the province. The reform may have a cumulative effect over time owing to greater patient and physician familiarity with the model and the growing number of FMG practices established over time. Evidence of these decreases despite the low-intensity nature of the FMG reform suggests the potential for this model to act as a future platform for implementing comprehensive care models for chronic disease management.

Co-Author(s): Amélie Quesnel-Vallee, McGill University / Jean-Frédéric Lévesque, Bureau of Health Information / Céline Plante, Institut national de santé publique du Québec / Philippe Gamache, Institut national de santé publique du Québec
D3.4 Utilization of Emergency Departments (ED) in Cancer Patients in Manitoba, Canada
Presented by MARK SMITH Associate Director, Manitoba Center for Health Policy

The journey of a cancer patient through the healthcare system can be complex. The purpose of this research was to investigate emergency department (ED) utilization among individuals with a cancer diagnosis to test for differences in ED use before and after diagnosis and to predict time to death. Data were from the Manitoba Centre for Health Policy and included cancer registry, hospital discharge abstracts, physician billing claims, ED visits, and vital statistics death records. The study cohort included adults (≥18 years) with selected cancer diagnoses (breast, colorectal, lung, and prostate) made between 2007 and 2011. Rates of ED utilization 1 year before and up to 2 years after diagnosis were compared between cancer patients and cancer-free individuals matched 1:1 on age, sex, and Charlson comorbidity score using generalized estimating equations. The impact of ED use on time to death was tested using a multivariate Cox proportional hazards regression model. When comparing ED utilization between breast (n=1549), colorectal (n=1295), lung (n=1383), and prostate (n=1194) cancer cases and their matches there were no significant differences for the year prior to diagnosis but elevated use for all sites in the one-month period before and after diagnosis, with relative risks (RR) from 1.44 (breast) to 4.12 (lung), and up to two years following diagnosis, (RRs of 1.18 (prostate) to 1.86 (lung)). ED use in the year prior to diagnosis was a significant predictor of time to death for colorectal (HR 1.38, 95% CI 1.03-1.86, 95% CI 1.01-1.12) and ED use in the year prior to death was significantly associated with time to death for breast (HR 1.20, 95% CI 1.10-1.31) and lung (HR 1.07, 95% CI 1.03-1.11). The pattern of ED utilization varies with the duration of time from diagnosis and the type of cancer. All cancer sites exhibited increased ED use around the time of diagnosis. Cancer patients may benefit from interventions to ensure ready access to emergency services following diagnosis.

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D4 CHRONIC DISEASE MANAGEMENT / GESTION DES MALADIES CHRONIQUES

D4.1 Health Services Utilization and Costs Associated with Co-Morbidity in Older Adults with Dementia
Presented by LAUREN GRIFFITH Assistant Professor, McMaster University

To describe health services utilization and associated costs over 5 years among a cohort of community-dwelling older adults with dementia in Ontario according to number of co-morbid chronic conditions. This study is part of a research initiative to develop and evaluate community-based management programs for specific chronic conditions, including dementia. We used administrative health data to identify all community-dwelling adults aged 66 and older with dementia as of April 1, 2008 (baseline). The use of health services covered under the provincial insurance program was obtained for 5 years following baseline. Physician and home care costs were calculated by multiplying service volumes (total visits or hours) by unit costs; acute care costs were calculated by multiplying per diem rates by total days from visit and length-of-stay data. To explore the extent to which service volumes changed in total costs over the 5 years, we held costs constant to 2012 dollars. There were 100,630 adults with dementia (mean age 81, 60.6% female). Only 4% had no co-morbidities; 59.6% had 3 or more. Use of all health services increased with the number of co-morbidities, showing a minimum two-fold greater use in those with 3 or more co-morbidities relative to those with none. Average annual per patient cost was stable overall follow-up but hospital length-of-stay declined, notably in those without co-morbidities. In 2008, average annual per patient costs tripled with co-morbidity but this gap narrowed by 2012 due to substantial decreases among those with high co-morbidity. Among those with no co-morbidity, home care and specialist visits were the largest contributors to overall costs. Among those with comorbidity, increased ED hospitalization to home care over follow-up. Home care was consistently the biggest cost driver in those with no or low co-morbidities while this shifted over time from acute care to home care among those with 3 or more co-morbidities. This may explain the annual average per patient cost reduction observed in those with high co-morbidity.

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D4.2 Health Services Utilization and Costs Associated with Co-Morbidity in Older Adults with Stroke
Presented by ANDREA GRUNEUR Assistant Professor, University of Alberta

To describe health services utilization and associated costs over 5 years among a cohort of community-dwelling older stroke survivors in Ontario according to number of co-morbid chronic conditions. This study is part of a research initiative to develop and evaluate community-based management programs for specific chronic conditions, including stroke. We used administrative health data to identify all community-dwelling stroke survivors aged 66 and older as of April 1, 2008 (baseline). Their use of health services covered under the provincial insurance program was obtained for 5 years following baseline. Physician and home care costs were calculated by multiplying service volumes (total visits or hours) by unit costs; acute care costs were calculated by multiplying per diem rates by total days from visit and length-of-stay data. To explore the extent to which service volumes changed in total costs over the 5 years, we held costs constant to 2012 dollars. There were 29,673 stroke survivors at baseline (mean age 78 years, 50.1% female). Nearly all had some co-morbidity and 74.9% had 3 or more. Use of all health services increased with co-morbidity. Average annual physician visits were two-fold greater, emergency department visits four-fold greater, and home care nursing visits five-fold greater in those with 3 or more co-morbidities relative to those with none; hospitalizations were more frequent and longer. Non-stroke related service use consistently drove overall service use, even among those without co-morbidities. Similar trends were observed across the 5 years. Per patient annual costs tripled with increasing co-morbidity but remained stable over time. The biggest cost drivers were hospitalizations, specialist physician visits, and home care but their relative contribution varied by degree of co-morbidity. Co-morbid chronic conditions were strongly associated with greater health service use and costs in this cohort, however, much of this use did not appear to be stroke-related. This demonstrates the importance of incorporating patient-centred, non-stroke oriented care into long-term stroke management programs.

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D4.3 Diabetes risk reduction in primary care: evaluation of the Ontario Primary Care Diabetes Prevention Program
Presented by MICHAEL HILLMER Director, Ontario Ministry of Health and Long-Term Care

1) To describe the impact of a primary care-based diabetes prevention program (PCDPP) implemented by the Ontario Ministry of Health and Long-Term Care; and 2) To model the potential impact of scaling up the program to the entire province using a validated population-based diabetes risk prediction tool. The PCDPP is based on international diabetes prevention trials and was implemented in six family health teams (primary care settings) over two years. Participants with pre-diabetes received intensive lifestyle training over 9 – 12 months. Body weight, physical activity, and healthy living knowledge were the primary outcomes measured in the program. Weight loss was modeled using multilevel mixed-effects linear regression. Participant demographics and body weights were used to generate a number needed to treat (NNT) value for the PCDPP intervention using the Diabetes Population Risk Tool (DProIT). In total, 1,916 adults were enrolled in the PCDPP from 6 primary care sites; participants' average age at baseline was 57 years (±70%). The regression model estimated a weight loss of 3.4 kg (or 3.9%) in females (n=959) and 5.1 kgs (or 5.1%) in males (n=408) at the 3rd month. Total estimated average weight loss at the 9th month was 5.3 in females and 5.9% in males.

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D4.4 Real-world effectiveness of stroke units in Ontario. A matched cohort analysis

Presented by PETROS PCHLAINOVGLOU Health Economist/ Post-Doctoral Fellow, THETA Collaborative, University of Toronto

Randomized trials have shown that Stroke Unit (SU) care increases the likelihood of survival and regaining independence compared to General Wards (GW) care. Whether the benefits predicted by trials are seen in real-world stroke care is less well understood. We examined the effectiveness of SU care as delivered in Ontario between 2002 and 2012. Effectiveness of SUs was evaluated using linked Ontario Stroke Audit (OSA) data and standard databases from the Institute for Clinical Evaluative Sciences (ICES). Stroke patients seen at a SU were identified and matched with controls (stroke patients not seen in SUs) using hard matching and propensity scoring. Effectiveness outcomes included death within 7, 30 days, and 1 and 2 years post discharge, dependency, institutionalization, acute care length of stay, and stroke-related readmission to hospital within 90 days after initial discharge. Methods were used that were reflective of the matched design; 3,743 patients receiving SU care were matched, 1,989 of whom could be matched to controls. The 7-day in-hospital death rate for SUs was 0.6% vs 1.7% for GWs (OR:0.36[0.17,0.70]); 30-day death rate was 2.6% vs 4.7% (OR:0.54[0.38,0.77]); 1-year rate was 11.6% vs. 16.0% (OR:0.67[0.56,0.81]); and 2-year rate was 18.0% vs. 21.7% (OR:0.78[0.67,0.92]). However, the 2-year mortality benefit for SUs was significantly smaller for patients from the most recent cohort (2010) compared to the earlier cohort (2002). We concluded that SUs were effective compared to GWs, with an advantage in SUs than in GWs (13.88 days [SD:23.74]) in VSUs vs. 13.66 days (SD:26.33) in GWs.p<0.05. No significant differences were found in post-discharge dependency, institutionalization and stroke-related readmission. After covariate adjustment, the analysis showed a clear mortality benefit of SUs compared to GWs. Death within 1 and 2 years of discharge was considerably lower in SUs than in GWs which was consistent with findings in the literature. However, the outcomes were sensitive to the inception cohort selection.

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D5.1 Implementing Accountability in Health Care: A National and International Perspective

Presented by RAISA DEBER Professor, University of Toronto

To examine strengths and weaknesses of various approaches to accountability being used across Canada and internationally, to determine whether findings of the sub-studies we conducted under our CIHR-funded PHSI (see Healthcare Policy special issue, 2014) apply in other jurisdictions, and to provide policy guidance about best practices. A synthesis of published and grey literature, plus key informant interviews (including with representatives from the former Health Council of Canada, and members of the Pan-Canadian Health Quality Council Collaboration), was used to ascertain what applicable our findings were to what was happening in other Canadian settings and international jurisdictions. Findings from using what worked (and how this varies by sub-sectors), what is (and is not) working well, and the lessons learned. Accountability forces providers to be aware of what they are doing; having good data to enable benchmarking and improvement is an important step forward. However, too extensive a reliance on performance measurement risks unintended consequences of marginalizing critical activities. Our respondents confirmed their jurisdictions placed increased emphasis on quality and performance, but primarily for what was easily measured; activities less easy to measure were often ignored. Multiple bodies often asked for similar information, but in slightly different forms, which can be expensive and divert resources from front-line care. Organizations tried to avoid being held accountable for outcomes they didn’t control, and to measure success in terms of doing (rather than preventing) things. For example, enabling transitions across care sub-sectors was often omitted from accountability systems. Our respondents confirmed the general findings held in their jurisdictions, but with some modifications, including access across sub-sectors. There was a general consensus that systems should move to streamline the current performance measures and look to introducing better measures that focus on system integration and support the goals of the system.

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D5.2 Measuring Patient Experience with Cancer Care Management: A Collaborative Survey Design Process

Presented by HEIDI AMERNIC Research Associate, Symptom Management, Cancer Care Ontario

Cancer patients experience a high symptom burden. An evaluation tool was required to assess patient experience with symptom reporting and management, and inform system and regional symptom level quality improvement. Patients were engaged as co-designers of the tool to ensure that indicators reflected patient priorities and person-centred practice. A working group comprised of stakeholders from Ontario’s Regional Cancer Centres was created. Participants included clinicians, administrators, researchers, and patient and family advisors. A multi-phase, rigorous, consensus-building process was employed to identify key domains and indicators. Survey questions were then designed and tested through a multi-stage process which included (1) Review of ‘sample data’ with the working group to assess usefulness of results; (2) Usability testing of survey questions with patient and family advisors using in-depth qualitative interviews; and (3) Revision, refinement, and approval of survey questions by working group members. Five key domains were identified, representing a person-centred approach to symptom management: (1) Patient understanding of the Edmonton Symptom Assessment System (ESAS) which is used to self -report symptoms; (2) Applicability of ESAS to patient symptoms; (3) Barriers to ESAS use; (4) Cancer care team response to patient symptoms; and (5) Patient self-management. Survey questions reflected key domains. Patient usability testing verified domains and ensured that questions were understood consistently by participants. Of primary importance to patients was that the survey not only reflected their experience, but that it was clear, concise, anonymous and voluntary. A written component was also added as patients valued an opportunity to contribute their unique experiences. Open-ended responses will also provide regions with valuable qualitative data. Engagement of researchers with multi-regional clinical, administrative, and patient stakeholders was critical to the survey design process. The process created a measurement tool that gives patients an opportunity to provide meaningful feedback, and also produces actionable data for symptom management quality improvement initiatives at both the regional and system levels.

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D5.3 Electronic health records and effects on patient care: what their users say

Presented by SUKIRTHA THARMALINGAM Benefits Realization Leader, Canada Health Infoway

To synthesize evidence on user perceptions of the effect that electronic health records (EHRs) have on patient care. EHRs are secure, integrated views of a person's medical records from all parts of the health care system (e.g. lab results, medication profiles, clinical reports, diagnostic images, and immunization history). Surveys of EHR users in 6 Canadian jurisdictions conducted between 2006 and 2014 (n=3,330) were synthesized using Infoway’s Benefit Evaluation Framework. Most surveys employed a common System and User tool to ask users a subset of a core set of evaluation questions. Outcomes have been rated as positive (>50% respondent satisfaction), negative (<50% respondent dissatisfaction), or mixed (other including neutral responses on a five point scale). Considerations while synthesizing findings from individual EHR evaluations include differences in timing from when the EHR system went live, deployment methods, solution attributes, respondent profile, and survey questions. There are over 70,000 active users of EHRs, almost a tenfold increase since 2006. Users tend to report improved patient information as a result – 5 of 5 evaluations asking such questions had positive ratings for availability (56%-87%) and completeness (57%-78%) of information. Likewise, 4 of 4 evaluations had positive ratings for improved information sharing among providers (68-92%). Of 5 evaluations assessing EHRs effect on clinical decision support, 3 had positive ratings (54%-77% neutral). In 3 of 4 evaluations positive ratings were seen for EHRs utility. Survival on productivity was neutral (56%-77%), quality of care (54-88%) and reducing duplicate tests (51%-90%). Other studies were negative or neutral. Less studied were care coordination and efficiency of accessing and ordering lab tests and diagnostic imaging. Surveys of EHR users in 6 Canadian jurisdictions generally report improved patient information and positive outcomes for patient care, with support tending to rise as users gain experience with EHRs. Variations in satisfaction based on other characteristics (e.g. deployment methods or respondent profile) offer insights for on-going and future implementations.

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D6.4 Measuring Inpatient Care Experiences  
Presented by MINGYANG LI Methodologist, Canadian Institute of Health Information  
Patients use a standardized questionnaire to provide feedback on the care they received during their in-hospital stay. The presentation describes three initiatives that support the use of the patient experience data in Canada: Evolution of the patient experience domains using mix-methods; A framework for pan-Canadian measures; and Single and composite measures informing quality improvement and benchmark reporting. Applied mixed-methods to revise the patient experience domains and definitions. The literature review, environmental scan and psychometric analyses were conducted to refine the domain names and definitions and develop an initial set of measures. The psychometric analysis was based on the 2013 pilot data (~1215 records) to gather insight on the internal consistency reliability and construct validity of the draft measures at the patient-level. Five jurisdictions, several experts, patient advocates and policy advisors reviewed the synthesis and provided feedback, using the Modified Delphi process. Further consultations were held with system-level decision makers to ensure accuracy, face-validity and reliability. Feedback gathered from consultations informed the refinement of patient experience domains from 12 to three broad categories: continuity of care; communication, participation and partnership; and physical comfort. Concepts important to patients and policy-makers were added in the form of seven sub-domains to guide the development of 10 composite and 8 single measures. Composite measures provide insight on aspects of care processes: coordination of service within hospital, communication with nurses and doctors, staff responsiveness and communication related to transitioning points. Single measures highlight the extent of information patients received about being admitted, getting a hospital bed, and the treatment to help them make informed decisions. The psychometric analysis highlighted high internal consistency reliability (alphas: 0.64-0.93) and acceptable construct validity (correlation: 0.24-0.63). Pan-Canadian patient experience measures will be used for comparative reporting that are intended for use by facilities for quality improvement and by jurisdictions for benchmarking. In 2015-2016, measures will be further validated using field test data.

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D6 PUBLIC HEALTH / SANTÉ PUBLIQUE

D6.1 Managing Fearbola - A public relations approach to global health policy  
Presented by MELODIE YUN-JU SONG PhD Student, McMaster University  
In 2014, Citizenship and Immigration Canada issued temporary VISA bans to incoming travelers from Ebola stricken counties. Outcries from WHO and the Canadian bioethics community deemed the decision xenophobic, unscientific, and a violation of International Health Regulations (Belluz, 2014). This research explores the use of public relations in managing a crisis in a global health context. Using a multiple-case embedded design, we explored the existing paradigms of public relations in contemporary practice in Canada. First, the researcher used content analysis to explore Canada's Ebola-related health policy response in the media (i.e., social media, news, archival transcripts, etc). Second, three in-depth interviews were carried out with PR practitioners working in a public institution, a private institution specializing in health policy PR, and an international non-profit organization (i.e., Public Health Ontario, Ward Health, Red Cross Canada). Third, a one-page survey on paradigms of PR and key challenges were handed out to practitioners working in the above organizations to gauge their perceptions of PR's function in the Ebola crisis. This research verified two propositions. First, by promoting a dialogical communication between Canadians' interests and that of the international global health community, PR professionals in the global health crisis have crucial roles in public health diplomacy, in particular the management and reputation functions in relationship building, reputation maintenance, and crisis response in public health. Second, using three popular paradigms in public relations, namely modernism, post-modernism, critical modernism, we identified that each paradigm has its unique contribution to a trans-national and time-space compressed issue in the global agora. Moreover, the case study research allows analytic generalizability of the results to be used to critically appraise past responses towards SARS, H5N1, and other infectious diseases in terms of its appropriateness to relationship management following policy implementation such as a VISA ban. It also highlights PRs contribution to building better diplomatic relations in an increasingly collaborative global environment. This is the first comprehensive inquiry that looks into a complex sociopolitical phenomena such as Canada's response to Ebola outbreak from a public relations perspective. Health policy makers are encouraged to collaborate with public relations professionals to appraise and evaluate Canada's reputation and relationship in response to global public health crises.

Co-Author(s): Alexandre Sevigny, McMaster University

D6.2 Factors Associated with Screening Mammography Participation among Canadian Women Aged 40 to 74 in 2012  
Presented by KARENA VOLESKY Graduate Student, Carleton University  
To report on the participation in screening mammography in Canadian women aged 40 to 74 in the two years preceding their participation in a 2012 national health survey. To determine whether there are differences in screening mammography participation by province/territories, socio-demographic, and lifestyle-related factors. Data from 18,312 women from the cross-sectional 2012 Canadian Community Health Survey were weighted to represent 7.6 million women aged 40 to 74 in the Canadian population. Descriptive statistics were produced, and logistic regression models were fitted to describe associations between participation in screening mammography and the identified factors. Odds ratios derived from these models, as well as their 95% confidence limits, were adjusted for age, marital status, and income. Participation in screening mammography in the two years preceding interviews was highest among women aged 60 to 69 (69.9%), followed by those aged 50 to 59 (62.8%), and those aged 70 to 74 (57.8%). Almost one-third of women aged 40 to 49 participated in screening mammography. Factors most strongly associated with participation in screening mammography, after adjustment for potential confounders, included: having a regular medical doctor (OR = 3.30, CI = 2.90-3.73), having had a Pap test in the last three years (OR = 3.47 CI = 3.18-3.79), and a physical check-up in the last year (OR = 3.06, CI = 2.30-4.08). Aside from age, recent participation in other preventive activities (i.e. Pap testing, and physical check-ups) were the strongest predictors of PR's function in the Ebola crisis. This research verified two propositions. First, by promoting a dialogical communication between Canadians' interests and that of the international global health community, PR professionals in the global health crisis have crucial roles in public health diplomacy, in particular the management and reputation functions in relationship building, reputation maintenance, and crisis response in public health. Second, using three popular paradigms in public relations, namely modernism, post-modernism, critical modernism, we identified that each paradigm has its unique contribution to a trans-national and time-space compressed issue in the global agora. Moreover, the case study research allows analytic generalizability of the results to be used to critically appraise past responses towards SARS, H5N1, and other infectious diseases in terms of its appropriateness to relationship management following policy implementation such as a VISA ban. It also highlights PRs contribution to building better diplomatic relations in an increasingly collaborative global environment. This is the first comprehensive inquiry that looks into a complex sociopolitical phenomena such as Canada's response to Ebola outbreak from a public relations perspective. Health policy makers are encouraged to collaborate with public relations professionals to appraise and evaluate Canada's reputation and relationship in response to global public health crises.

Co-Author(s): Alexandre Sevigny, McMaster University

D6.3 Reverse Gateways? The Impact of Medical Marijuana Legalization on Cigarette Smoking Among American Adults  
Presented by YUNA KIM PhD Student, University of North Carolina at Chapel Hill  
The reverse gateway theory suggests that some individuals begin cigarette smoking as a result of marijuana use. This study aims to analyse the effect of access to medical marijuana on cigarette use among American adults aged 18 and older, and examine how this effect differs by various demographic groups. Data from the Behavioral Risk Factor Surveillance Survey, Current Population Survey, and Tax Burden on Tobacco from 1994 to 2010 are combined into a pooled cross-sectional dataset. This study employs linear regression analysis (i.e., a difference-in-difference identification strategy that controls for fixed unobserved state characteristics) to estimate the probability that an individual smokes cigarettes as a result of the passage of medical marijuana legalization (MML). Regression models include controls for several observable individual and state-level characteristics. The sample is then stratified into various groups by sex, age, and race to examine whether the effect of MML varies by demographic characteristics. The sample consists of 1,655,578 person-year observations, of which 24% are current smokers. Preliminary results suggest there is no statistically significant relationship between MML and cigarette smoking in the overall sample. However, initial estimates suggest males experience a significant increase in the probability of cigarette smoking due to MML by 1.7 percentage points. Individuals aged 30-39 also experience a statistically significant increase in the probability of cigarette smoking by 1.7 percentage points. Accordingly, the preliminary results indicate that MML significantly increases the probability of cigarette use among males aged 40 and under by 1.7 percentage points. The initial estimates also point to potential differences by race/ethnicity, where the probability of cigarette smoking with MML increases among Latino individuals by 1.9 percentage points. The U.S. experience with medical marijuana sheds light on the potential negative externalities and health consequences associated with increased access to marijuana, namely increased cigarette smoking among adult males. Health policymakers should be cognizant of the potential for marijuana use to lead to cigarette use when implementing legalized marijuana policies.
E1 HEALTH REFORM II / RÉFORME DES SOINS DE SANTÉ II

E1.1 Should we pay family physicians to register unattached patients? The unintended consequences of financial incentives in Quebec’s access registries

Presented by JULIE FISON-LANIEL Research Assistant, McGill University and Direction de santé publique de Montréal

To facilitate access to primary care, especially for vulnerable residents, Quebec initiated centralized access registries for orphan patients (GACO) in 2008. We evaluated the GACOs performance in terms of referrals to family physicians by patient health status and investigated the role played by financial incentives for physicians. In 2011, a GACO policy change introduced a 1020 physician payment for each healthy patient registered and increased the payment for registering vulnerable patients from 1045 to 2095. To evaluate physicians’ responses to those changes, we used an economic model of physician behaviour and analyzed data from administrative reports from GACO’s information system (2008-2012). Methods: multivariate regressions for clustered panel data. We documented overall trends and regional variations in GACO performance in terms of the number of patients referred and the waiting time to referral. We estimated changes in performance by patient vulnerability status associated with changes in financial incentives. Since 2008, GACOs across the province of Quebec have enrolled and referred more and more patients. The number of physicians who register patients from GACOs has also grown. Meanwhile, the waiting time to referral to a family physician has increased over time. While half of Quebec’s health regions have reached a referral benchmark of nearly 60% of GACO-enrolled patients, the other half do not refer more than 65% of enrolled patients. After the GACO reform to physician payments, the average waiting time to referral increased more for vulnerable patients than non-vulnerable patients, a differential increase of more than 100 days. The number of patients referred through the GACOs increased over time for both groups, but it increased less for vulnerable patients than non-vulnerable. The 2011 GACO reform appears to have disadvantaged vulnerable patients in their search for a family physician. Concepts from health economics such as how physicians’ utilization maximization interacts with their selection of patients can help us understand the unintended consequences of the change to physician financial incentives.

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E1.2 Predictors of Employment and Income Assistance Usage in Early Adulthood across Type and Income Quintile

Presented by ELIZABETH WALL-WIELER Student, University of Manitoba

The objective of this study is to examine differences in predictors of early adult (18–25) Employment and Income Assistance (EIA) usage across income quintiles of the neighborhood an individual lives at age 18 and the type of EIA (General Assistance, Single Parent or Disability) that an individual receives. Linked administrative data housed at the Manitoba Centre for Health Policy was used to create a birth cohort of all born in Manitoba, Canada between 1979 and 1987 who lived in the province until their 26th birthday, and lived in an urbanized birth and to only 98 (N = 47,588). Predictors varying the predictors of family instability, mental and physical health. Odds ratios from logistic regression models were used to compare the importance of these predictors across income quintiles, EIA type and income quintiles within each EIA type. The objective of this study is to examine differences in predictors of early adult (18–25) Employment and Income Assistance (EIA) usage across income quintiles of the neighborhood an individual lives at age 18 and the type of EIA (General Assistance, Single Parent or Disability) that an individual receives. Linked administrative data housed at the Manitoba Centre for Health Policy was used to create a birth cohort of all born in Manitoba, Canada between 1979 and 1987 who lived in the province until their 26th birthday, and lived in an urbanized birth and to only 98 (N = 47,588). Predictors varying the predictors of family instability, mental and physical health. Odds ratios from logistic regression models were used to compare the importance of these predictors across income quintiles, EIA type and income quintiles within each EIA type. The objective of this study is to examine differences in predictors of early adult (18–25) Employment and Income Assistance (EIA) usage across income quintiles of the neighborhood an individual lives at age 18 and the type of EIA (General Assistance, Single Parent or Disability) that an individual receives. Linked administrative data housed at the Manitoba Centre for Health Policy was used to create a birth cohort of all born in Manitoba, Canada between 1979 and 1987 who lived in the province until their 26th birthday, and lived in an urbanized birth and to only 98 (N = 47,588). Predictors varying the predictors of family instability, mental and physical health. Odds ratios from logistic regression models were used to compare the importance of these predictors across income quintiles, EIA type and income quintiles within each EIA type.

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E2.2 The health and health services utilization of Canadian Veteran in Ontario: Development and early results of the first population-based resource using validated algorithms to identify disease prevalence and health service utilization was conducted with stakeholders from the health funding agency, school boards and schools, and members of the research team. Interviews explored stakeholders’ perceptions of the implementation of the new occupational therapy service delivery model – what worked well, what didn’t, and recommendations for moving forward. Audio files were transcribed verbatim and entered into QSR NVivo 10 ©. Content analysis was conducted by team members to extract macro-level “lessons learned” about implementation from the first year of the study. Lessons learned about implementation included: (1) systematic training and regular opportunities for mentoring and networking are critical to people and systems making and sustaining change; (2) people in organizations need to dedicate time to building relationships and developing strong communication processes; (3) consistent and ongoing communication with all stakeholders at all levels facilitates change; (4) change needs to be gradual – too much at once may overwhelm individuals and systems; and (5) strong leadership is needed at every level within and across organizations. Quotes and examples will be provided to illustrate each of these themes. Strategies recommended by stakeholders with respect to these themes will be shared, along with examples of strategies that have been trialed in the second year. The lessons gleaned from this study offer valuable insight into the challenges and benefits of collaborative partnerships in health services research as well as what factors to consider when embarking on implementation of a new health service delivery model. Implications for health services and policy researchers will be discussed.

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E1.3 Partnering to Implement a New School Health Service Delivery Model for Children with Chronic Conditions: Reflections and Lessons Learned

Collaborative partnerships are essential to successful transformation of healthcare services. This presentation will share the experiences and “lessons learned” from key stakeholders involved in a large-scale research study to evaluate a new school-based occupational therapy service delivery model for children with chronic health conditions. Between December 2013 and June 2014, focus groups were held with the 15 occupational therapists who delivered the new service in schools and semi-structured interviews were conducted with stakeholders from the health funding agency, school boards and schools, and members of the research team. Interviews explored stakeholders’ perceptions of the implementation of the new occupational therapy service delivery model – what worked well, what didn’t, and recommendations for moving forward. Audio files were transcribed verbatim and entered into QSR NVivo 10 ©. Content analysis was conducted by team members to extract macro-level “lessons learned” about implementation from the first year of the study. Lessons learned about implementation included: (1) systematic training and regular opportunities for mentoring and networking are critical to people and systems making and sustaining change; (2) people in organizations need to dedicate time to building relationships and developing strong communication processes; (3) consistent and ongoing communication with all stakeholders at all levels facilitates change; (4) change needs to be gradual – too much at once may overwhelm individuals and systems; and (5) strong leadership is needed at every level within and across organizations. Quotes and examples will be provided to illustrate each of these themes. Strategies recommended by stakeholders with respect to these themes will be shared, along with examples of strategies that have been trialed in the second year. The lessons gleaned from this study offer valuable insight into the challenges and benefits of collaborative partnerships in health services research as well as what factors to consider when embarking on implementation of a new health service delivery model. Implications for health services and policy researchers will be discussed.

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E2 ACCESS, EQUITY AND AGING

E2.1 Canada and the Commonwealth Fund 2014 International Health Policy Survey of Older Adults

The objectives of this report are to: Tell the Canadian story on the health care experience of people 55 years of age and older and on their perception of the health care system; and highlight how experiences and perceptions vary across Canadian provinces and relative to other countries. The Commonwealth Fund 2014 International Health Policy Survey of older adults reflects patients’ experiences from a random sample of the population age 55 and older in 11 countries: Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. A total of 5,269 respondents were interviewed in Canada on a landline phone between March 4 and May 28, 2014. The data were weighted by age, gender, education, knowledge of the official languages in each province and subsequently by population distribution across Canada. Significance testing was done between provinces and the international average. In 2014, timely access to primary care and specialist care remains a significant challenge for older Canadians, especially in the evenings, on weekends or holidays. Every province had significantly longer waits for medical care than the international average. However, once older Canadians accessed the system, they generally reported having positive experiences with their providers that were on par with or better than the international average, even though continuity of care between providers can be improved. More of them also reported their health was very good or excellent. Besides, these older Canadians were more likely than their counterparts in other countries to plan for their end-of-life care wishes. They also spent more time as informal caregivers for a person with an age-related problem than the international average. The survey helps to fill important information gaps about the experience and perception of people age 55 and older. This report shows statistically significant variation across the Canadian provinces and the international average, with mixed results overall.

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E2.2 The health and health services utilization of Canadian Veteran in Ontario: Development and early results of the first population-based resource using provincial and national administrative healthcare data

Presented by ALYSON MAHAR PhD Candidate, Queen’s University

Longitudinal, population-based data on the health and health services use of Veterans does not exist in Canada. In collaboration with the Canadian Institute for Military and Veteran Health Research, we have identified, for the first time, a population-based method of studying the health of Canadian Veterans who reside in Ontario. This is a retrospective cohort study of Canadian Veterans residing in Ontario who released from the Canadian Armed Forces (CAF) or RCMP between 01/01/1990 and 03/31/2014. The cohort was identified using data captured from Ontario health insurance application forms. This study linked databases at the Institute for Clinical Evaluative Sciences (ICES) and included information on demographics, hospitalizations, emergency department (ED) visits, medical procedures, and physician visits. Validated algorithms were used to identify the prevalence of diseases (e.g. diabetes, cardiovascular disease). Overall and age-stratified descriptive statistics (demographics, disease prevalence, utilization rates) were calculated in the five-year intervals following CAF/RCMP release. The cohort consists of 23,818 Veterans. The majority are male (86%), and the average age entering the CAF or RCMP was 24 years. Half of Veterans served in the CAF or RCMP for ≤20 years, and 26% served for >20 years. Rates of death, defined as death on or before the date of release was evident. For example, rates of death increased from 4.5%-19.7% in the 0-5 and 20-15 years following release, and ranged from 0.6%-6.0% in Veterans <30 years to 8.0-24.8% in Veterans ≥50 years. In the first 5 years, 82.6% visited a family doctor. Utilization was consistent in the <30 to ≥50 age categories (78.6%-84.9%). In addition, 40.8% of Veterans visited the ED, ranging from 28.7% (age ≤30) to 61.6% (age ≥50), reflecting the public healthcare system following release. This new resource will allow purposeful, population-based research to answer questions related to Canadian Veteran health in the future.
E3.1 More nurses in primary care, yes! But what for?

Presented by SHAUNA ZINNICK MSc Graduate Student, University of Manitoba

Using a mixed methods approach, a comprehensive list of health care aide (HCA) tasks will be developed and categorized and the time spent on these tasks will be quantified. This study will also initially describe how HCAs organize their time and patterns of care in the nursing home setting. Focus groups with HCAs will be conducted to build and refine a comprehensive list of HCA tasks. Next, direct observation techniques will be used to ensure the comprehensiveness of the list and to determine HCAs’ ability to accurately self-report time spent on tasks. Third, the Delphi Technique will be utilized to obtain HCA self-perceived time allocated to each task during a typical day shift. Data pertaining to the general sequence between tasks (e.g., serially without interruption or in parallel with multiple interruptions) as well as the relative importance of the tasks from the perspective of the HCAs will also be collected. Preliminary results based on an extensive literature review, discussions with key nursing home decision-makers and formal focus groups with HCAs indicate that HCA tasks can be categorized into ten primary categories: personal care; assistance with eating; social care; helping with recreational activities; transporting; care planning; paperwork; unit-based tasks; personal time; and other duties. The ten primary categories can then be divided into sub-categories. For example, the primary category of personal care can be divided into seven sub-categories, including: continence and toileting; dressing and grooming; oral care; skin care; preparing the resident for sleep; re-positioning; and non-daily activities (e.g., bathing, nail care). Complete results will be available prior to the conference. This research will fill a void in the literature by describing care activities and patterns performed by HCAs in a nursing home setting. Discussions resulting from this research can begin to shape changing care practice strategies in nursing home environments, enabling HCAs to spend more time on select tasks.

E3.2 Changes in Potentially Inappropriate Drug Prescribing with Nursing Home Admission

Presented by JULIE ERIICKSON PhD Candidate, University of Manitoba

The purpose of this study was to (i) determine the proportion of nursing home (NH) residents dispensed potentially inappropriate prescription (PIP) medications with new NH admission and (ii) identify the factors associated with the onset and cessation of PIP drug use at this time. A retrospective cohort study with all eligible NHs in Manitoba, Canada. The cohort consisted of older Manitobans (N=6755) newly admitted to NHs from 2001 to 2006. The Beers’ Criteria were used to separate PIP drug users into existing users (PIP drug use started prior to NH admission), incidence (new) users, or ‘stoppers’ by comparing their drug dispensation and NH admission dates. Resident- (e.g., demographics, chronic disease), health care system (e.g., polypharmacy drug use, having multiple prescribers), and facility-level (owner-operator type) risk factors were used to define the unique features of these groups. 15.4% of our cohort (N=1,040) used PIP drugs shortly following NH admission; 54.6% of these residents were incident users, mainly of antidepressants, antihistamines, antimuscarinics, and benzodiazepines. Amongst residents who were non-PIP drug users (N=5,715), 5.8% had stopped using a PIP drug shortly following their NH admission date. Being younger, using higher volumes of drugs, residing in not-for-profit NHs, and urban geography were independently associated with PIP onset; while ‘stoppers’ were more likely male, to require higher levels of care, to have waited in hospital for nursing home admission, and to use lower volumes of drugs. This study was the first to quantify PIP with NH admission into incident use, continuing use and cessation. Interventions at a facility level to manage risk factors for PIP onset are indicated. Future research is needed to clarify risk factors for PIP within hospital settings prior to NH admission.

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E3 PRIMARY HEALTHCARE AND NURSING / SOINS DE SANTÉ PRIMAIRES ET SOINS INFIRMIEURS

E3.1 More nurses in primary care, yes! But what for?

Presented by DAMIEN CONTANDRIOPOULOS Professor, Université de Montréal

There is widespread consensus on the fact that nurses—both registered nurses (RNs) and nurse practitioners (NPs)—have an important role to play in improving primary care efficiency, accessibility, and performance. The real question is how. In this presentation, we discuss the findings of a realist review of available evidence. There is limited evidence on optimal team size, team composition, clinical processes, professional roles, and scope of practice for nursing-intensive primary care teams. Using a keyword-based search strategy in MEDLINE, EMBASE and CINHAL, we identified 71 documents. From this core set, we also conducted bi-directional snowball sampling (“being cited in” as well as “having been cited by”). The documents identified were analyzed using a realist review approach. The logic model subjected to review was based on the characteristics of nursing-intensive primary care team structure and care processes that could lead to improved performance. The literature provides limited evidence to inform decisions on optimal structures and processes of primary care teams in which nurses would play a core role. While there are significant data on the contribution of NPs, much less is available on RNs’ role and contribution in primary care teams. The literature on disease-centered and program-based clinical nursing roles and on nurses acting as case managers is also richer than that on broader, more holistic primary care nurse contributions. Nevertheless, by integrating the available evidence within a structure–process–results framework, we were able to identify coherent parameters for nursing-intensive primary care teams. We then organized those parameters according to a contingency theory approach, where choosing one parameter limits the realm of the possible in other dimensions. The realist review conducted confirms there is a potential for nursing-intensive primary care models to improve accessibility, efficiency and performance. Some parameters of team structure and care processes were identified and will be discussed. We will conclude by discussing shortcomings in the available evidence on the topic.

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E3.2 Cost-effectiveness of nurse-led collaborative care for patients with diabetes who screen positive for depressive symptoms in primary care: results from a controlled implementation trial

Presented by JEFFREY JOHNSON Professor, University of Alberta

We recently reported a controlled trial evaluating the implementation and effectiveness of nurse-led collaborative care for patients with diabetes and depressive symptoms in primary care settings. We now report the cost-effectiveness of enhanced care (screening, family physician notification, follow-up) vs collaborative care vs “true” usual care (no screening or intervention). We used 12-month data from patients enrolled in a 3-armed controlled trial. From the health care payer perspective, we estimated total costs per patient for implementing collaborative care and enhanced care, and total costs of health care utilization for all patients through linkage with administrative databases. Two measures of effectiveness were used, depression-free days (DFD) based on changes in Patient Health Questionnaire, and quality-adjusted life years (QALY) based on changes in EQ-5D. We generated incremental cost-effectiveness ratios (ICER) based on regression models for differences in costs and effects between study arms over 12 months. Among 227 study patients, average age was 58 years, 55% were female, and average diabetes duration was 12 years. Compared to total 12-month cost per true usual care patient ($5889), the incremental cost for patients in enhanced care was $450/patient vs $1021/patient for collaborative care. Both the enhanced care and collaborative care interventions improved outcomes compared to true usual care, with incremental DFD of 65.9 and 117.6, and incremental QALY of 0.006 and 0.042, respectively. Compared to true usual care, the resulting ICERs were $7/DFD or $76,271/QALY for enhanced care and $9/DFD or $24,368/QALY for collaborative care. Comparing collaborative care with enhanced care yielded ICERs of $11/DFD and $15,861/QALY. In patients with diabetes who screened positive for depressive symptoms in primary care, family physician notification and follow-up (enhanced care) is a clinically effective initial strategy compared with true usual care, but investing more up-front resources in nurse-led collaborative care yields a more cost-effective strategy.

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E4.1 Improving access to minimally adequate counseling/psychotherapy through financial incentives: Did British Columbia get it right?

Presented by ROXANE BORGES DA SILVA, Professeur, Université de Montréal

Notre étude vise à analyser l’expérience de soins de malades chroniques dans les organisations de soins de santé primaires (OSSP) où les infirmières font du suivi systématique de clientèles en comparaison d’OSSP où les fonctions infirmières consistent principalement en du soutien aux activités médicales. Une enquête a été réalisée en 2010 auprès des 607 OSSP des deux régions les plus populaires du Québec. Un groupe expérimental d’OSSP où les infirmières faisaient du suivi systématique de clientèles et un groupe témoin d’OSSP où elles exécutaient principalement des fonctions de soutien aux activités médicales ont été constitués. Les données d’une enquête populationnelle ont été utilisées pour connaître l’expérience de soins des patients atteints d’au moins une maladie chronique dans ces régions. Un modèle de régression a été utilisé pour comparer les deux groupes de façon à identifier potentiellement des associations significatives entre le cadre d’étalonnage et le nombre de patients soignés par infirmière. Le cadre d’échantillonnage était constitué de 104 OSSP dans lesquelles les infirmières faisaient du suivi systématique de clientèles spécifiques. Le groupe témoin était constitué de 59 OSSP dans lequel les infirmières faisaient du soutien aux activités médicales. Les résultats indiquent que les patients atteints d’au moins une maladie chronique suivis dans les OSSP du groupe expérimental sont proportionnellement plus nombreux, relativement au groupe témoin, à considérer que les services reçus dans leur OSSP leur permettent de bien comprendre leurs problèmes de santé. Les infirmières de l’OSSP expérimental étaient à 11,3% et 14,8% entre janvier 2005 et mars 2012. Les résultats de notre étude montrent une meilleure expérience de soins, au regard des résultats de soins perçus, dans les OSSP où les infirmières font du suivi systématique de clientèles spécifiques. Ils soulignent l’importance d’une utilisation optimale de la contribution des infirmières dans les soins de santé primaires.

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E4.4 CHRONIC DISEASE MANAGEMENT / GESTION DES MALADIES CHRONIQUES

E4.4.1 Improving access to minimally adequate counseling/psychotherapy through financial incentives: Did British Columbia get it right?

Presented by JOSEPH PUYAT, PhD candidate, UBC School of Population and Public Health

British Columbia introduced financial incentives in January 2008 to reduce the barriers family physicians experience when providing mental health care. In this study, we examined the population-level impact this initiative has had on the provision of minimally adequate publicly-funded counseling/psychotherapy (≥4 sessions/year) in patients diagnosed with major depression (MD). We used linked health administrative data from BC to identify individuals who received inpatient or outpatient diagnoses of major depression (MD) from 2005 to 2012. We excluded those who had a 12-month history of mood disorders, and those treated for bipolar I and schizophrenic disorders during a 12-month period before and after the index date of MD diagnosis. In each month, we calculated the proportion of individuals diagnosed with MD (denominator) who received minimally adequate counseling/psychotherapy (numerator). Potential trends over time were determined through plots, stratified by sex and age. Changes due to the policy and over time were confirmed using segmented regression analysis. The proportion who received minimally adequate counseling/psychotherapy varied from 11.3% to 14.8% between January 2005 and March 2012. Sex and age differences were apparent, with men having higher proportions (12.4%-16.7%) than women (10.4%-14.2%) and individuals who were 19 to 25 years of age having higher proportions (10.3%-19.5%) than those who were over 65 years old (9.6%-14.6%). Results of the segmented regression analysis indicate that, after controlling for small and statistically significant increase in the overall proportion of individuals who received minimally adequate counseling/psychotherapy after the introduction of financial incentives in 2008. Plots of the data by sex and age suggest increasing trend for both men and women and a slightly steeper rate of increase in the younger age groups. The proportion of individuals who received minimally adequate counseling/psychotherapy has increased slightly and continues to climb gradually after financial incentives were introduced in 2008. The overall proportion affected by this remains very low. Additional measures are therefore needed to ensure more patients benefit from a recommended therapy.

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E4.4.2 Increasing medication adherence and income assistance access for first-episode psychosis patients through an early intervention service: A PATHS Equity for Children Project

Presented by DAN CHATEAU, Research Scientist, Manitoba Centre for Health Policy

An early intervention for psychosis program (EPPIS) was established in Winnipeg, MB to treat first-episode psychosis patients. This study examined the patient characteristics of those in treatment, and determined whether the program was effective at increasing access to income assistance, and increasing drug adherence. Data were extracted for clients in the PATHS cohort, held in the Data Repository at the Manitoba Centre for Health Policy (MCHP). These data contain de-identified government administrative records collected by Manitoba, including the province’s health services. Clients were identified and linked to their prescription and income assistance use was compared to a historical cohort, matched on pattern of diagnosis. Confounders were adjusted through propensity-score weighting, with asymmetrical trimming. Odds ratios (OR) and hazard ratios (HR) for EPPIS participation and their 95% confidence intervals were calculated. 284 treated individuals were identified. Clients were treated for a mean duration of 446.5 days (SD 553.7). Results of the segmented regression analysis indicate that, after controlling for small and statistically significant increase in the overall proportion of individuals who received minimally adequate counseling/psychotherapy after the introduction of financial incentives in 2008. Plots of the data by sex and age suggest increasing trend for both men and women and a slightly steeper rate of increase in the younger age groups. The proportion of individuals who received minimally adequate counseling/psychotherapy has increased slightly and continues to climb gradually after financial incentives were introduced in 2008. The overall proportion affected by this remains very low. Additional measures are therefore needed to ensure more patients benefit from a recommended therapy.

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E4.3 Effect of an early intervention for psychosis treatment program on suicidal behaviour and hospital service use: A PATHS Equity for Children Project

Presented by JASON RANDALL
Doctoral student, Manitoba Centre for Health Policy

There has been a trend towards early intervention for those with a recent onset of psychosis. An early intervention program (EPPIS) was established in Winnipeg, MB to treat individuals with a first-episode of psychosis. This study evaluated whether this treatment program reduced hospital-based treatment. Data were extracted for individuals present in the PATHS cohort, held in the Data Repository at the Manitoba Centre for Health Policy (MCHP). These data contain de-identified government administrative records collected by Manitoba, including data from the province’s health services. Clients treated by the early intervention program were matched, using diagnosis, to historical controls. Occurrence of emergency department (ED) visits, inpatient admissions, and suicide attempts/deaths was extracted from the administrative data. Propensity-scores were used to derive inverse-probability of treatment weights to control for confounding and obtain an average treatment effect estimate. Rate ratios (RR), Odds ratios (OR) and hazards ratios (HR) were calculated. A sample of 244 clients was matched to 449 controls. During treatment there were significantly more emergency department visits for the clients (RR= 2.54; 95%CI: 1.56 to 4.58), but no difference in inpatient usage. Post-treatment, both emergency department and inpatient usage were higher in the treated group. However, the difference in ED usage was significantly smaller in the post-treatment phase (RR= 1.76 versus 2.68). Suicidal behavior was significantly less frequent among clients, both during treatment (p<0.0001) and after (HR= 0.39; 95% CI: 0.17 to 0.94). The higher rates of service use by clients differ from other studies on early intervention programs. This may be due to an emphasis on bringing patients into treatment during acute episodes. This program resulted in a significant reduction in the occurrence of serious suicide attempts, with clinically important implications.

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E4.4 Justice involvement of homeless men and women with mental illnesses: can self-report be regarded as reliable evidence?

Presented by ASHLEY J. LEMIEUX
PhD Student, McGill University and Douglas Mental Health University Institute

Given their high rates of justice involvement, efficiently assessing justice service use for homeless individuals with mental illnesses is essential when evaluating the effects of intervention programs. This study aims to assess reliability of self-reported court appearances through comparisons with administrative data, and identify participant characteristics that affect self-report reliability. Data on 466 homeless adults with mental illnesses were collected as part of the At Home/On Our Own (Montreal site) randomized controlled trial of Housing First. Self-report data was collected using a health, social and justice service use questionnaire. Administrative data was collected through provincial and municipal court databases. Agreement was analyzed using percentage agreement, as well as Kappa and intra-class correlation coefficients. Associations between participant characteristics and agreement between self-report and administrative data were explored using multivariable logistic regressions. Agreement between self-report and administrative data ranged from 77.04% to 84.37% (κ = 0.59 - 0.72; ICC = 0.68). Several factors were found to be associated with discrepancies between self-reported court appearances and information found in official records: younger male aboriginal participants with poor cognitive and community function, who were pressured by interviewers to have service and little interest during the interview were more likely to misreport. Furthermore, the presence of psychiatric disorders, such as PTSD and psychosis, as well as alcohol and drug use or dependence was also linked to misreporting. Finally, participants who were homeless at a younger age and who committed their first criminal offence as a minor were also more likely to misreport details regarding their court appearances. Participants accurately reported justice involvement, suggesting that self-report can be considered reliable in future studies among this population. Understanding what factors influence validity of self-reported accounts for homeless individuals with mental illnesses will aid researchers in planning their methodological approaches to obtain reliable information from samples with multiple vulnerabilities.

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E5 HEALTH ECONOMICS / ÉCONOMIE DE LA SANTÉ

E5.1 Cancer Formulary Recommendations in Canada - A Revealed Preferences Analysis

Presented by MINI HU
Associate Professor, Dalhousie University

The pan-Canadian Oncology Drug Review (pCODR) recommends the addition of new cancer drugs to provincial formularies. Each pCODR review considers four dimensions of value: clinical benefit, economic evaluations, patient-based values, and adoption feasibility. Our study objective is to assess the extent to which each of these dimensions influences the recommendations. We quantified the four dimensions on the basis of reports on pCODR deliberations up to June 2014 (n=42). Variables included relative and absolute survival gain, incremental cost-effectiveness ratio (ICER), and flags indicating unmet need or an oral drug. Reports did not provide consistent criteria for how patient-based values and adoption feasibility were assessed, and as such these concepts remain vague and elusive. Using a revealed preferences framework, we used a multinomial logit model to assess the influence of these variables on the decision to approve or reject a drug, relative to a conditional approval. The relative most important predictor of the pCODR recommendation was a condition evaluation. An ICER lower than $150,000 significantly increased the likelihood of a drug being approved across several model specifications. Conditional approvals were often issued when the price (or ICER) were perceived as too high. Addressing an unmet need also appeared to increase the likelihood of approval, although this factor did not achieve conventional significance. No other factors appeared statistically significant. The power of the analysis was limited, as there was minimal variability among a number of the variables, and the sample size was small. The analysis of the pCODR reports reveals that the committee has a preference for more cost-effective drugs. The concepts of patient-values and feasibility are recognized as important factors to consider, but their full and consistent consideration is hampered by the lack of well-defined indicators.

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E5.2 Impact of the incitations financières sur l’accès aux services et la qualité des soins : cas du programme d’accès à la chirurgie au Québec

Presented by NIZAR GHALI
Économiste de la santé, Ministère de la santé et services sociaux du Québec

Nous cherchons à mesurer l’impact d’une politique financière incitative pour les hôpitaux (un financement à l’activité) sur l’évolution de l’accès aux services ainsi que la qualité des soins offerts. Cette analyse prend en compte le contexte de médecins qui sont des travailleurs autonomes et non pas des salariés. Dans le cadre d’un programme de financement à l’activité instauré au Québec depuis 2004, nous prenons l’exemple des délais d’attente et des durées de séjour de certaines chirurgies. Nous estimons le hasard de passer d’un état d’attente à un état d’opération et d’un état d’hospitalisation à un état de sortie de l’hôpital. En se basant sur une approche de différence en différence, nous utilisons un modèle de durée à hasards proportionnels avec hétérogénéité non observée. Notre groupe de contrôle est basée sur les données similaires d’une autre province canadienne. Les données portent sur un échantillon de huit ans. Nous démontrons que chaque 1 M$ injecté dans le financement des hôpitaux réduit le délai d’attente moyen de 9.8 jours pour la chirurgie du genou et de 5 jours pour la chirurgie de la hanche. De l’autre côté, la durée de séjour moyenne diminue de 1.14 jours et de 1.18 jours respectivement pour la chirurgie du genou et de la hanche. Cette expérience montre que la mise en place d’une politique financière incitative pour les hôpitaux (un financement à l’activité) sur l’évolution de l’accès aux services ainsi que la qualité des soins offerts. Ce programme est d’autant plus efficace que les hôpitaux qui ont bénéficié du financement ont une performance positive pour des chirurgies. Ce programme a permis d’atteindre des objectifs d’excellence en santé et de réduire les délais d’attente, donnant ainsi plus de temps aux médecins pour se concentrer sur la qualité des soins. Ce programme a également permis de réduire les coûts pour les patients, en raison de la diminution des délais d’attente et des durées de séjour. Ce programme a permis de réduire les coûts pour les patients, en raison de la diminution des délais d’attente et des durées de séjour. Ce programme a permis de réduire les coûts pour les patients, en raison de la diminution des délais d’attente et des durées de séjour.
E5.2 Geriatric care planning in home care: time for change?

Cervical care is becoming understood as a disease that is largely preventable. Decision-makers face some uncertainty about which alternatives deliver best value for money. We partnered with the Canadian Partnership Against Cancer (CPAC) to evaluate the cost-effectiveness of potential cervical cancer control policies in the province of British Columbia (BC). We used the Health Technology Risk Management Model (CHRRM) to test four scenario arms. Data from the BC Cancer Agency’s Cervical Cancer Screening Program was used to calibrate the model to a provincial context (“base case”). The scenarios that were tested include: method of screening (i.e., HPV test compared to Pap testing); time interval between screens; screening participation rate; and population prevalence of HPV. Each scenario was analyzed in terms of its impact on the incremental cost-effectiveness ratio (ICER). Sensitivity analyses were conducted for each scenario. A 3% discount rate was applied to costs and outcomes. The current screening environment for cervical cancer in British Columbia was reflected in the base case. A total of 10 scenarios were analyzed using the CHRRM over a 20-year time period (2013-2033). Compared to the base case, the most dominant scenarios – in terms of cost savings and incremental person-years gained – were found to be the use of the HPV test as the primary screening method in place of standard cytology testing, and increasing the starting age for screening from 21 to 30 years. During the course of this exercise, a number of opportunities were identified that may contribute to the model’s functionality and accessibility for broader audiences, including calibration of base inputs to reflect province-specific settings. Population-level modeling approaches like the CHRRM are becoming increasingly valuable for planning integrated and coherent cancer control strategies. The CHRRM and HPV platforms allow for a broad exploration of many policy-relevant factors of cervical cancer control programs, and provide an informative launching point for further discussion and focused research.

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E5.3 Estimating Cost-Effectiveness of Cervical Cancer Control Policies Using a National-Level Microsimulation Model

Presented by SARAH COSTA Health Economist, BC Cancer Agency; The Canadian Centre for Applied Research in Cancer Control

E6 HEALTH HUMAN RESOURCES / RESSOURCES HUMAINES EN SANTÉ

Fontaine H

E6.1 2014 work locations of Memorial University medical graduates

Presented by MARIA MATHEWS Professor, Memorial University of Newfoundland

We examined the 2014 work locations of Memorial University of Newfoundland (MUN) medical graduates to identify the predictors of working in 1) Canada, 2) Newfoundland and Labrador (NL), 3) rural Canada, and 4) rural NL. We update and compare outcomes to a 2004 study. We linked data from graduating class lists, the alumni and post-graduate databases with Scott's Medical database. Our sample included all MUN graduates from the class of 1973 to 2008, excluding those who died, retired, or were in the military or sponsored by the Malaysian government. We used multiple logistic regression to identify predictors for each outcome and compared the outcomes of two cohorts of newly graduated physicians (graduates from the 1990s and graduates from the 2000s) in their first years of practice. In 2014, 88.3% of MUN graduates were working in Canada, 34.2% in NL, 11.7% in rural Canada, and 4.9% in rural NL. Those with rural backgrounds; Newfoundlanders; graduates from the 1990s, 1990s, and 2000s were more likely to work in Canada. Those with rural backgrounds, Newfoundlanders , 2000s graduates, MUN post-graduate residents were more likely to work in NL. Those with rural backgrounds and family physicians were more likely to work in rural Canada. Those with rural backgrounds; Newfoundlanders, MUN post-graduate residents, and family physicians were more likely to work in rural NL. Rural practice among recent graduates has fallen to almost half the rates of new graduates of a decade ago. Although one in five NL graduates have no full-time NL physical practice workforce in NL. The study highlights the downstream impact of changes in medical student characteristics in NL

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E6.2 Geriatric care planning in home care: time for change?

Presented by JUSTINE GIOSA Research Associate, Saint Elizabeth

The interRAI Home Care Assessment (RAI-HC) is mandated for allocation of government funded home care services in Ontario; however, the specific assessment and information sharing practices of frontline providers, particularly in the provision of geriatric care, are not standardized. This study investigated geriatric care planning in Ontario home care. A literature review, environmental scan and expert interviews (N=7) led to the development of the Geriatric Care Assessment Practices (G-CAP) survey. The G-CAP survey is an online, self-report tool that explores frontline home care provider practices in assessing nine domains of geriatric care, including the collaboration, including person-centred goal setting and information sharing. The survey was pilot tested with nurses, occupational therapists and physiotherapists from four geographic areas in a single home care provider agency in Ontario at two time points (N T1=27; N T2= 20). Survey participants used their own clinical observation and interview skills far more often than any standardized tools for geriatric assessment. Just over half of the participants had heard of the RAI-HC; however, on average, they never use it. While participants agreed they could use client information collected by other health care professionals, they also agreed they must conduct client assessments themselves in order to provide care and only sometimes share and rarely receive assessment information from other health care providers. Pearson's correlation coefficients (M r = 0.39) and t-test statistics (M t= 3.0; M p= 0.01) confirmed expected relationships between survey items. Intraclass correlation coefficients (M ICC= 0.62) and weighted kappa coefficients (M kappa= 0.60) indicate acceptable test-retest reliability for the G-CAP survey in this population. Pilot data indicates disconnect between service allocation at the system level and frontline assessment in geriatric home care. Further research is required to develop policies and practices that optimize all relevant sources of client information for a more seamless geriatric care planning approach that transcends discipline, agency and system boundaries.

Co-Author(s): Paul Stoloe, University of Waterloo / Paul Holyoke, Saint Elizabeth
E6.3 Generalist, Specialist, Subspecialist: How is the physician workforce changing and what is driving the change?
Presented by STEVE SLADE Director, Health Systems and Policy, Royal College of Physicians and Surgeons of Canada

Diverse healthcare needs call for a medical workforce that balances generalists and specialists. Multiple data sources are used to analyze medical workforce specialization. Emerging pedagogical initiatives are reviewed as potential enablers/deterrents of subspecialization. The overarching objective is to evaluate the relationship between pedagogical change, physician workforce composition and systems response to healthcare needs. Multiple pan-Canadian data sources are used to present a comprehensive picture of how the physician workforce is changing with respect to generalist-specialist-subspecialist composition. Postgraduate medical training data is used to gauge increases/decreases in the numbers and types of physicians being trained over the last two decades. Data from regulatory authorities and membership organizations is used to measure how the composition of the licensed physician workforce is changing. Self-reported survey data provides further insight on physician’s practice scope. Pedagogical and credentialing initiatives of Canada’s certifying Colleges are reviewed as potential drivers/deterrents of workforce subspecialization. Canada’s medical Colleges have increased the number of specialties and subspecialties they recognize. At the same time they have added new certification routes that recognize physicians with special interests and focused practices. While there has been relatively little change in the allocation of entry level residency positions across broad specialties, the proportion of trainees who go on to subspecialize has increased significantly since 1995. Overall, there has been a 42% increase in the proportion of medical specialists who subspecialize and a 149% increase in the proportion of family medicine residents who subspecialize. More specifically, 17% of family doctors focus on emergency medicine, 18% focus on hospital medicine and at least 1 in 10 focus their practices on areas such as maternity and newborn, mental health and palliative care. Strong evidence suggests that physicians are increasingly likely to subspecialize and otherwise narrow their scope of practice. Initiatives like Certificates of Added Competence and diploma programs could support more specialized, focused practice. At the same time, initiatives like Triple C and CanMEDS 2015 could bolster generalist practice. Pedagogical change must continue to strive toward the best care and the best health for all.

Co-Author(s): Steve Slade, Royal College of Physicians and Surgeons of Canada / Carole Jacob, Royal College of Physicians and Surgeons of Canada / Danielle Frechette, Royal College of Physicians and Surgeons of Canada

E6.4 Trends among specialist physician unemployment in Canada: gaining understanding of this new phenomenon
Presented by ARUN SHIRCHAND Manager, Health Systems and Policy, Royal College of Physicians and Surgeons of Canada

Evidence does exist of performance challenges among some newly certified medical specialists in Canada. This multi-objective study seeks, among others, to identify existence of any trends among disciplines where employment challenges are reported. Quantitative data has been collected since 2011 through an online survey administered to every new Royal College specialty and subspecialty certificatee (year 2011 N=2002; year 2012 N=2231; year 2013 N=23464 with response rates of 33%, and 32% and 40% respectively; 2014 data collection for subspecialists ongoing). The survey instrument has been designed to identify medical specialties and subspecialties for which employment problems among new certificants problems exist and the reason why job seekers report they can’t find work. These years of data collection reveals consistent trends among the percentage of newly certified specialists and subspecialists reporting they have not found employment and the disciplines where employment challenges are most prevalent. Overall, between 14% and 18% of new certificants report not having secured a job posting 6-24 weeks after confirmation of certification in their field (2011: 14%; 2012: 18%; 2013: 18%). Most impacted disciplines continue to be those which require a resource intensive: cardiovascular surgery, hematological pathology, nuclear medicine, neurosurgery, orthopedic surgery, otorhinolaryngology, obstetrics and gynecology, radiation oncology and urology (range of “no job placement” reported over time among these is 20%-66%). Interestingly, collected data shows one marked change among anesthesiologists reporting employment challenges (down to 2% in 2014 from 20% in 2011). Data collection to date has identified patterns related to disciplines experiencing employment challenges. Ongoing data collection will validate these patterns, changes over time and the length of time to secure employment. Such information will help inform future specialist and subspecialist, and medical workforce planning efforts.

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E7 PANEL / PRÉSENTATION EN PANEL
Mont Royal

E7 Creating Capacity in Support of System Transformation in Ontario
Renforcement des capacités à l’appui de la transformation du système en Ontario
Presented by: G. ROSS BAKER, PhD is Professor of Health Policy, Management and Evaluation and Director of the MSc Program in Quality Improvement and Patient Safety at the University of Toronto; LEE FAIRCLOUGH, MHSc is Vice-President, Quality Improvement, Health Quality Ontario; MICHAEL HILLMER, PhD is Director, Planning, Research and Analysis Branch, Ontario Ministry of Health and Long-Term Care; and Adjunct Lecturer, Institute of Health Policy, Management and Evaluation, University of Toronto; TIM JACKSON, MD, MPH, FRCS is Provincial Surgical Lead for NSQIP-Ontario; General Surgeon, University Health Network; and Assistant Professor of Surgery, University of Toronto

Quality improvement and research mobilization are key enablers for improving health systems. Speakers in this session will describe innovative programs to drive system transformation and examine their impacts on healthcare leaders, and assess how such programs contribute to the capability of healthcare systems to improve healthcare performance. New health system transformation initiatives aim to improve integration between sectors, implement evidence-based care protocols and reform funding. These initiatives rely upon greater skills supporting innovation, quality improvement, and the translation of evidence-based protocols to practice. Enablers at the macro, meso, and micro levels of the healthcare system are crucial to ensuring the capacity, evidence, and skills exist to improve the healthcare system. Panelists from Ontario representing academic and program/policy planning perspectives will discuss innovative strategies and programs. Such programs need to be aligned with system priorities, scaled to fit needs and supported systemically. At the macro level, Dr. Ross Baker will describe the impact of the IDEAS (Improving and Driving Excellence Across Sectors) program in Ontario which provides quality improvement skills to frontline healthcare teams to improve cross-sector and organizational care delivery. IDEAS has been offered to more than 60 teams from across Ontario who seek to improve integration of the care for complex patients and other health system priorities. From a perspective including both the micro level (as a surgeon) and the meso level (as the lead for a provincial quality improvement effort), Dr. Tim Jackson will describe the National Surgical Quality Improvement Program (NSQIP), an internationally recognized initiative to measure and improve the quality of surgical care that Health Quality Ontario (HQO) has brought to Ontario. He will highlight the importance of engaging clinicians in change, how approaches such as the NSQIP that use audit and feedback in addition to quality improvement interventions have proven successful, and potential opportunities for a Canada-wide collaborative. At the meso level, Lee Fairclough, Vice-President at HQO will describe a variety of innovative capacity building efforts in Ontario to enable providers across the system to contribute to the broader policy goals of system transformation. She will describe the strategic approach taken by HQO to develop capacity for system transformation in Ontario. At the macro level, Dr. Michael Hillmer will describe the approaches employed by the Ontario Ministry of Health and Long-Term Care to stimulate an innovative research environment that promotes capacity, collaboration and policy-relevant evidence. Greater capacity to address system priorities, scaled to fit needs and spread across systems. At the micro level, Dr. Ross Baker will describe the impact of the IDEAS (Improving and Driving Excellence Across Sectors) program in Ontario which provides quality improvement skills to frontline healthcare teams to improve cross-sector and organizational care delivery. IDEAS has been offered to more than 60 teams from across Ontario who seek to improve integration of the care for complex patients and other health system priorities. From a perspective including both the micro level (as a surgeon) and the meso level (as the lead for a provincial quality improvement effort), Dr. Tim Jackson will describe the National Surgical Quality Improvement Program (NSQIP), an internationally recognized initiative to measure and improve the quality of surgical care that Health Quality Ontario (HQO) has brought to Ontario. 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On-going evaluation of these programs will inform their further development.
F1.1 Variability in postpartum mental health service use among immigrant women in Ontario

Presented by SIMONE VIGOD Psychiatrist and Scientist, Women's College Hospital

Immigrant women in Canada are at higher risk for postpartum mental disorders, compared to their Canadian-born counterparts. Overall, they are less likely to seek out mental health care from physicians for this condition. How postpartum mental health service use patterns differ within different groups of immigrant women is largely unknown. We conducted a population-based cohort study using linked Ontario health administrative and Citizenship and Immigration Canada data. We identified Ontario female immigrants to Canada between 1985-2010 who delivered a live born infant between 2008 and 2012. We measured postpartum mental health service use (physician visits, emergency department use and hospitalization) by 1) region of origin, 2) time since immigration and 3) refugee status. Odds ratios (aOR) and 95% confidence intervals (CI) are adjusted for maternal age, parity, neighbourhood income quintile, urban residence, history of mental disorder, multiple gestation, type of prenatal care, maternal medical morbidity and severe newborn morbidity. There were 123, 231 immigrant women who gave birth during the study period, representing 27% of new mothers in Ontario. About 14% of immigrant mothers used postpartum mental health services overall, with 13.6% using outpatient physician services, 0.6% emergency services and 0.2% psychiatric hospitalization. Women from Latin America and the Caribbean were most likely to use services (17.3%), and women from East Asia and the Pacific were least likely (10.4%). Immigrant women living in Canada for more than 10 years (16.1%) and for 9-10 years (13.8%) were more likely to use services than women living in Canada less than 5 years (12.7%, aORs 1.21, 1.27-1.37 and 1.10, 1.06-1.15). Refugee women were more likely to use services (16.8%) compared to non-refugees (13.7%, aOR 1.25, 1.20-1.31). There is variability in postpartum mental health service use among immigrant women by region of origin, by time since immigration and by refugee status. This heterogeneity may have implications for the development of active case finding and treatment engagement initiatives for postpartum mental disorder among immigrant women.

Co-Author(s): Cindy-Lee Dennis, University of Toronto

F1.2 Marginalization and access to community mental health services prior to psychiatric emergency visits in postpartum women in Ontario

Presented by LUCY BARKER Psychiatry Resident, University of Toronto

To determine whether marginalization is associated with potentially preventable psychiatric emergency department (ED) visits for women in the first year after childbirth. We used Ontario population-based health administrative data (2006 to 2012) to conduct a nested case-control study of women who had a psychiatric ED visit within the first year after childbirth. We identified women who were without mental health services (controls), compared to those who had accessed community mental health services prior to the ED visit (cases). Marginalization was compared between the two groups using the Ontario Marginalization Index (ON-Marg), a validated geographically-derived index based on material deprivation (our primary dimension of interest), residential instability, ethnic concentration, and dependency. There were 8,728 women with a psychiatric ED visit in the first year after childbirth, of whom 5271 (65.5%) were cases. Cases were more likely than controls to be in the two most marginalized quintiles (Q) for material deprivation, and this was more pronounced after adjustment for age, parity, prior psychiatric history, and having a GP involved in antenatal care (adjusted odds ratio (AOR) 1.21, 95% confidence interval (CI) 1.04-1.41 for Q4; aOR 1.25, 95% CI 1.09-1.44 for Q5). For ethnic concentration, cases were less likely to be in marginalized groups (aOR 0.73, 95% CI 0.63-0.86 for Q4; aOR 0.8, 95% CI 0.69-0.93 for Q5). No association was found for the dependency or residential instability dimensions. Two-thirds of postpartum women do not access community mental health services prior to presenting in the ED for psychiatric reasons and material deprivation is a barrier. Further research on access to postpartum psychiatric marginalization services for marginalized women could inform policy and prevent unnecessary ED visits and accompanying negative outcomes.

Co-Author(s): Lucy Barker, University of Toronto / Kinwah Fung, Women's College Research Institute and Institute for Clinical Evaluative Sciences / Simone Vigod, Women's College Hospital Research Institute and Institute for Clinical and Evaluative Sciences

F1.3 Family-Centered Services versus Family-Centered Systems: The Relationship between Autism Services and Mothers’ Wellbeing

Presented by SANDRA HODGETTS Assistant Professor, University of Alberta

Mothers of children with Autism Spectrum Disorder (ASD) experience increased stress and depression, and decreased parenting satisfaction, parenting confidence, family quality of life and social support compared to others. Family-centered services should enhance family outcomes. We investigated the relationship between current services and wellbeing for mothers of children with ASD. Mothers with a child with ASD completed a comprehensive questionnaire addressing child/family demographics, details about supports and services received, continuity of care over time and across sectors (Alberta Continuity of Services Scale for Mental Health, Adair et al., 2001), family-centeredness of services (Measure of Processes of Care-20; King et al., 2004), and parent wellbeing (Perceived Stress Scale; Cohen et al., 1983); Parenting Sense of Competence Scale; Gibaud-Wallston & Wandersman, 1978 as cited in Johnston & Mash, 1989). Linear regression analysis, with predictors entered in three blocks (service, maternal-household, and child variables) was employed to determine predictors of maternal wellbeing. We obtained responses from 139 mothers across a diverse range of child, parent, family and service demographics. When the influences of other variables were controlled, discontinuity of services and multiplicity of professionals (involvement with more professionals), but not frequency of contact with any one professional or perceptions of family-centered services, predicted decreased maternal wellbeing. Increased household income and having an older child also predicted increased maternal wellbeing, although adding mother/child/ household characteristics to the model did not significantly improve (power to predict) the model. Systemic, not practitioner-level or child (e.g., intellectual and language ability), variables predicted maternal wellbeing. Findings reinforce the negative influence of systems-level challenges, especially fragmentation of services, on maternal wellbeing, despite positive front-line services and differences in child and family characteristics.

Co-Author(s): David McConnell, University of Alberta / Lonne Zwaigenbaum, University of Alberta/Alberta Health Services / David Nicholas, University of Calgary

F1.4 Labour and Delivery Outcomes Among Ontario Women with Intellectual and Developmental Disabilities

Presented by HILARY BROWN Post-Doctoral Fellow, Women's College Research Institute

Women with intellectual and developmental disabilities (IDD) have increased risks for hypertensive and thromboembolic complications of pregnancy. Our objectives were to: (1) compare the risks for poor labour and delivery outcomes among women with and without IDD and (2) determine whether pregnancy complications mediate these risks. We conducted a population-based cohort study using linked Ontario (Canada) health and social services administrative data. We identified obstetrical deliveries to women with (N=3,932) and without (N=382,774) IDD in fiscal years 2002 to 2011. Modified Poisson regression was used to estimate the adjusted relative risks (aRR) and 95% confidence intervals for labour induction, operative vaginal delivery, and caesarean section. We controlled for maternal age and parity and entered in three blocks (service, maternal-household, and child variables) was employed to determine predictors of maternal wellbeing. We obtained responses from 139 mothers across a diverse range of child, parent, family and service demographics. When the influences of other variables were controlled, discontinuity of services and multiplicity of professionals (involvement with more professionals), but not frequency of contact with any one professional or perceptions of family-centered services, predicted decreased maternal wellbeing. Increased household income and having an older child also predicted increased maternal wellbeing, although adding mother/child/household characteristics to the model did not significantly improve (power to predict) the model. Systemic, not practitioner-level or child (e.g., intellectual and language ability), variables predicted maternal wellbeing. Findings reinforce the negative influence of systems-level challenges, especially fragmentation of services, on maternal wellbeing, despite positive front-line services and differences in child and family characteristics.

Co-Author(s): Hilary Brown, Women's College Research Institute / Virginie Cobigo, University of Ottawa / Yona Lunsky, Centre for Addiction and Mental Health / Simone Vigod, Women's College Hospital
F2.1 La participation de patients à des comités d’amélioration continue de la qualité: leur point de vue sur leurs apports et leurs défis
Presented by MARIE-PASCAL POMEY Assistant Professor, University of Montréal
Cette recherche porte sur la perception de patients de leur participation à des comités d’amélioration de la qualité dans des établissements de santé et de services sociaux québécois. Au Québec, depuis 2011 la Direction collaboration et partenariat patient de la faculté de médecine de l’Université de Montréal a permis l’implantation de comités d’amélioration continue (CAC) de la qualité intégrant des patients au sein de 29 équipes provenant de 16 établissements de santé du Québec. Ces CAC étaient composés de 8 à 10 personnes dont un ou deux patients. Vingt de ces patients ont participé à des entretiens de 30 à 60 minutes pour mettre en évidence : 1) leur apport aux équipes ; 2) leur apprentissage ; 3) les défis de leur participation ; 4) les leçons apprises. Ces patients apportent une vision structurée et réfléchée de leur expérience avec la maladie et de leur parcours de soins, sans revendication. Ils se sentent privilégiés d’avoir pu partager leurs savoirs expérimentaux, en complémentarité avec l’expertise des intervenants. Le principal défi soulevé était lié à l’agenda des réunions qui se tenaient le plus souvent sur les heures de travail des intervenants. Ils ont manifesté leur frustration face à la lenteur des prises de décision. Leur participation a permis de transformer un drame personnel engendré par leur maladie par un apport constructif à l’amélioration des services de santé. Ils ont modifié leur relation avec les intervenants à qui ils ont pu témoigner leur reconnaissance et ils ont mieux compris la complexité de l’organisation des soins. Cette étude est l’une des premières à s’intéresser à la perception de patients à leur participation à des comités d’amélioration de la qualité. Elle met en évidence l’apport de leur participation au niveau personnel et de l’équipe. Les patients se sentent privilégiés d’être impliqués et tous souhaitent poursuivre leur participation.
Co-Author(s): Hassiba Hihat, École de santé publique / Paule Lebel, Faculté de médecine / Pomey Marie-Pascale, École de santé publique

F2.2 Social Media’s Impact on Getting Health Research into the Hands of Those Who Can Use It: The CADTH Health Technology Assessment (HTA) experience
Presented by EFTHYIA HELIS Knowledge Mobilization Officer, Canadian Agency for Drugs and Technologies in Health
Social media has gained a prominent place in health care as a way for real-time sharing, communication and discussion of topical issues. This presentation will demonstrate the way CADTH is using social media platforms to enhance dissemination and application of HTA research results, improve communication with decision-makers, and engage patient groups. By taking advantage of cost-effective tools such as Twitter, LinkedIn, SlideShare, Youtube, and others, CADTH is using social media to support improved communications of research findings, transparency, knowledge mobilization strategies and patient engagement. Since launching our social media efforts in 2012, CADTH has effectively harnessed social media to disseminate our HTA work beyond traditional audiences, promote the value of HTA to a diverse group of stakeholders and enhance our knowledge translation and mobilization efforts. By closely monitoring outcomes, we have consistently seen increased engagement from key audiences, including other HTA producers, pharmacists, physicians, professional societies, and patient groups – from Canada and around the globe. By interacting with HTA users online, we have quickly identified trends, responded to decision-maker and patient needs, disseminated evidence in a highly targeted manner, and enhanced strategies for our Knowledge Mobilization programs. Health researchers and users of health research shouldn’t underestimate the ability of social media to reshape the way research is accessed and understood by decision-makers at all levels of the health system. CADTH has successfully used this technology to decrease barriers to HTA research, expand our network, and increase interaction among our stakeholders.
Co-Author(s): Janice Mann, Canadian Agency for Drugs and Technologies in Health / Efthyia Helis, Canadian Agency for Drugs and Technologies in Health / Janet Crain, Canadian Agency for Drugs and Technologies in Health / Andrea Tiwari, Canadian Agency for Drugs and Technologies in Health

F2.3 Applied Knowledge Mobilization to Improve Healthcare – The CADTH Experience
Presented by EFTHYIA HELIS Knowledge Mobilization Officer, Canadian Agency for Drugs and Technologies in Health
Too often, rigorous and high-quality research remains unused. CADTH has been working hard to ensure this is not the case for Health Technology Assessment (HTA) research. This presentation will share CADTH’s unique approach to Knowledge Mobilization for meeting the needs of various audiences including policy-makers, physicians, nurses, pharmacists, or specialists. Successful Knowledge Translation and Mobilization is achieved by a dedicated team in collaboration with the researchers, the influencers, and those who need to know. At CADTH, we include the end-user in the creation of our research and tools, and in the dissemination of knowledge. This presentation will use various projects and examples to demonstrate applied Knowledge Mobilization of HTA research. It will illustrate the need to have a flexible approach and to be open to trying new and innovative techniques. It will emphasize how Knowledge Mobilization results in improved impact of CADTH work, and how a collaborative, context-specific approach improves the uptake of evidence and facilitation of evidence-informed decisions. This presentation will allow the lessons learned from CADTH to be used and built upon by others – across disciplines and jurisdictions – to improve health and healthcare by advancing the quality, relevance, and application of health research. With so much knowledge from research available, getting the right information to the right people, in the best way so that it can be acted upon within their context is crucial. Applied Knowledge Mobilization can help to make that happen.
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F2.4 Using In-Person Modular Workshops to Build Capacity for Health System Improvement in Regions across Canada
Presented by WENDY MEDVED Program Lead, Canadian Institute of Health Information
As part of a capacity building strategy, a Health System Performance (HSP) workshop was developed to build capacity for participating teams within regions across Canada to apply HSP measurement tools and data to monitor performance and take action for health system improvement. The three-day modular workshop is modeled after a course by the European Observatory on Health Systems and Policies. A pilot was conducted in Atlantic Canada in 2013. Two additional workshops followed in 2014-15; rural and northern Ontario and Manitoba. The workshop combines a core of formal teaching with a participative approach including panel discussions and group activities. Participants’ experiences are central, with them raising issues and working through a case study to apply concepts and develop an action plan for improvement. Curriculum is adapted based on needs assessment surveys and feedback from an Advisory Group in each jurisdiction. Evaluation results indicate that by the end of the workshop, participants feel they have further developed their knowledge and skills to define, evaluate and improve local health system performance in their respective regions. Participants emphasize the value of the workshop in learning from peers and facilitating networking opportunities that would not otherwise be available. High rankings are given to the sessions on selecting appropriate and relevant indicators to measure health system performance; identifying sources of available health information; drilling down to investigate potential areas of low or worsening performance; effectively communicating health information to different stakeholders; and developing an action plan for improvement. Decision-makers are increasingly using HSP information to inform policy and drive improvement in the health system at all levels. The workshop helps individuals working in performance improvement roles to better understand the work they are doing in the broader context of health system performance management in their jurisdictions.
Co-Author(s): Jeanie Lacroix, Canadian Institute of Health Information / Shirley Li, Canadian Institute of Health Information / Kristine Cooper, Canadian Institute of Health Information / Seanna McMartin, Canadian Institute of Health Information / Candace Sheppard, Canadian Institute of Health Information
F3.1 Impact of community-based outpatient care and medication reconciliation after discharge on reducing hospital readmissions in Ontario

Presented by LUKE MONDOR, Epidemiologist, Institute for Clinical Evaluative Sciences

Outpatient visits after discharge from an acute hospitalization have been shown to reduce readmission rates for patients with heart failure. We examined the effectiveness of primary care physician visits or receiving medication reconciliation within one week of discharge on 30 day readmissions among a broad set of conditions in Ontario. Patients discharged alive for one of 25 case mix groups (including cardiac conditions, heart failure, COPD, stroke, gastrointestinal disorders and pneumonia) from 2008 to 2012 were identified using health administrative data. Multivariable Cox models assessed the effect of hospital-level rates of follow-up within 1 week to: 1) a usual provider of care (UPPC, based on patient rostering or volume of services in the past 2 years); 2) any community-based general practitioner (GP); or 3) pharmacist for medication reconciliation (i.e., MedsCheck), on a patient’s risk of unplanned, all-cause readmission (or death) within 30 days. The overall rate of readmissions over the study period was 10.6% (537,030 of 5,966,496 total discharges). The median (interquartile range) hospital-level follow-up to a UPPC, GP or receiving MedsCheck was 26.0% (22.3-30.0%), 29.6% (24.1-33.9%) and 1.7% (1.2-2.3%), respectively. Compared to patients discharged from hospitals with the lowest rates of follow-up to a UPPC (quartile 1), those discharged from hospitals with the highest rates (quartile 4) were 7.1% less likely to be readmitted (Hazard Ratio, HR=0.929, 95% confidence interval, CI=0.901-0.957). Patients discharged from hospitals with the highest rates (quartile 4) of medication reconciliation were 9% less likely to be readmitted, relative to hospitals with low rates follow-up (HR=0.900, 95%CI=0.867-0.945). No statistically significant differences were observed for post-discharge follow-up to any other general practitioner. This research suggests that post-discharge follow-up with a usual provider of primary care and receiving medication reconciliation are key community-based practices that reduce hospital readmissions among patients discharged with a range of common clinical conditions.

Co-Author(s): Luke Mondor, Institute for Clinical Evaluative Sciences / Qi Li, Institute for Clinical Evaluative Sciences / Walter Wodchis, University of Toronto

F3.2 Exploring Palliative Care Services in Primary Care Practices; a Comparison of Ontario and Quebec

Presented by TARA WALTON, Policy Research Analyst, Cancer Care Ontario

Little is known about the current state of primary care level palliative care. Primary care practices in Ontario and Quebec were surveyed to explore the extent to which these practices provide palliative and end of life care, as well as barriers and facilitators to the provision of this care. A self-administered retrospective online survey was sent by e-mail to collect quantitative data from primary care groups. In Ontario, Family Health Teams, Community Health Centers, Aboriginal Health Access Centers, and Nurse Practitioner Led Clinics were targeted. In Quebec, Family Practice Teaching Units, Family Medicine Groups, and Local Community Services Centres were targeted. Questions focused on types of services provided, provision of after-hours care, access and use of various community palliative care services, and whether practices maintained a registry. Surveys were completed by 102 practices in Ontario and 39 practices in Quebec. In both provinces, most of the practices reported that at least some members of their group provided palliative care, although the types of services provided varied between Ontario and Quebec. The provision of after-hours care, and how the groups provide palliative care to their patients, varied between provinces. In both provinces, more than half of the practices reported maintaining a registry of patients who require palliative care. There were noted variations in both the facilitators and the barriers to the provision of palliative care for groups in Ontario compared to groups in Quebec. Results of the survey provide insight into the current practice patterns of primary care practices in the delivery of palliative care. Identifying gaps in palliative care provision and barriers to care delivery can help guide development of a targeted strategy for building capacity in primary care practices.

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F3.3 From acute care to primary care: examining follow-up with physician after acute care hospital discharge in Alberta and Saskatchewan

Presented by XI-KUAN (SEAN) CHEN, Senior Researcher, Canadian Institute for Health Information

Physician follow-up and care coordination quickly after hospital discharge may prevent complications and improve patient outcomes. In Canada, physician follow-up is not well documented. Using acute and physician billing data from Alberta and Saskatchewan, we analyzed follow-up rates in select patients, predictors of higher rates and their effect on readmission. Linking discharge abstracts to physicians’ billing data (2010–13), we identified adult patients discharged home (with or without care) after an acute myocardial infarction (AMI), heart failure (HF), or chronic obstructive pulmonary disease (COPD) and determined whether they followed up with a family physician or specialist within 7 or 30 days after discharge. We also examined 30-day unplanned readmissions for these patients (excluding 0-7 day readmissions, as these patients had fewer chances for a follow-up as they were readmitted prior to that). We analysed predictors of follow-up: characteristics of patient, hospital, community, and previous encounters with the health system as predictors of follow up and as covariates in the readmission analysis. More than one third of patients for AMI, HF and COPD in both provinces saw a physician within seven days after discharge (ranging from 35% to 55%). And, more than three quarters of patients at a physician follow up within 30 days (ranging from 77% to 92%). Follow-up rates were lower for COPD patients and higher for AMI patients. Rural regions, smaller hospitals and low-income patients tend to have lower follow up rates in both provinces. Older patients and patients who required a surgical procedure during hospitalization tend to have higher follow-up rates. We did not find a statistically significant correlation between 7-day physician follow-up and 30 day readmission. Although there was regional and disease variation, overall physician follow-up rates for AMI, HF, and COPD in both provinces were high. Physician follow-up remains an important step in continuity of care and further examining barriers of a timely follow-up is important.

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F3.4 Keeping Family Physicians in the Loop: The receipt of discharge summaries after hospital admissions in Ontario

Presented by LIISA JAACKIMAINEN, Family Physician/Scientist, Institute for Clinical Evaluative Sciences

Receiving hospital discharge information is associated with fewer medication errors, decreased readmissions and better provider satisfaction. This study determined whether information from a patient’s hospital admission is received by their FP and what patient and physician factors are associated with the receipt of this discharge information. A descriptive record linkage study of 300 community-based FP’s Electronic Medical Record (EMR) data linked to health administrative data (called EMR可达). For all EMR可达 patients over 18 years of age in 2012/13, the proportion of hospital discharge notes received into the FP’s EMR after either a medical or surgical admission was calculated. Pregnancy-related admissions were excluded. The receipt of the hospital discharge note was also examined in related to patient characteristics (age, sex, co-morbidity, socioeconomic status (SES) and continuity of care with their FP) and FP provider characteristics (age, sex, rurality and participation in a newer primary care model). A chi square test was performed to compare those patients/providers receiving and not receiving a hospital note. For fiscal 2012/13 there were 13,253 medical and surgical hospital admissions for 193,838 EMR可达 patients. Only 13.2% of medical and surgical hospital admissions had a hospital discharge note in their FP EMR. Patient over 65 years, patients with higher co-morbidity and patients living in a lower SES were more likely to have a discharge note in their FP’s EMR. Older and male FP’s, FP’s in rural practices and FP’s practicing in fee-for-service care models were more likely to receive a hospital discharge note. The vast majority of FP’s do not receive hospital discharge information about their patients. System structures to improve the transfer of hospital discharge information are still needed to improve the receipt of information by FP’s.

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F4 HEALTH ECONOMICS (COSTS) ÉCONOMIE DE LA SANTÉ (COÛTS)

Fontaine F
F4.1 Cost-Drivers of Private Drug Plans in Canada
Presented by ELENA LUNGU Senior Economic Analyst, Patented Medicine Prices Review Board

This study is intended to inform policy development discussions related to the sustainability of private drug plans in light of various cost drivers including high-cost drugs and claimants. The study analyzes the recent trends and provides insight into factors impacting expenditure levels in prescription drug expenditures in private drug plans in 2013. Data from the IMS Brogan® database were extracted, analyzed and modeled to articulate cost drivers in private pay direct plans from the point of view of price effects, volume effects, and other trends potentially impacting costs. The analysis also delves into provincial-level analysis and comparisons with public drug plans. Cohorts of high-cost beneficiaries are analyzed based on their level of annual drug expenditure. A therapeutic profile identifies contributors to expenditure growth in this segment of the beneficiary population. Additional focus is given to high cost drugs and claimants to provide insight on their net and potential effects. Low rates of growth in prescription drug expenditures were observed in private drug plans in recent years, driven by ample opposing “push” (positive) effects and “pull” (negative) effects. “Pull” effects on drug cost levels offset many of these cost saving effects. The results of this analysis suggest that a small proportion of the beneficiary population account for a large share and most substantial growth in drug expenditures, mainly fueled by increased use of high-cost biologic drugs. These results suggest that there may be increasing pressure from high cost drugs and claimants moving forward. A stronger understanding of the forces driving expenditures in the industry, including high-cost drugs and claimants, will inform discussions moving forward with respect to the ability to anticipate and respond to evolving cost pressures and thus promote the sustainability of private plans.

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F4.2 High-cost users of prescription drugs: a population-based analysis by age and sex from British Columbia, Canada
Presented by KATE SMOLINA Pharmaceutical Policy Analyst, UBC Centre for Health Services and Policy Research

There is growing interest in high users of Canadian health services, however, there is little research on high-cost users of prescription drugs as population-based prescription databases are scarce. Using British Columbia’s (BC) population-based records, we examine prescription drug spending patterns and patient characteristics across user groups by age and sex. We used population-based, linked health and socio-demographic datasets from 2007 to 2011. We empirically derived a taxonomy classifying users into four groups: non-users, intermittent high cost users, persistent high cost users, and persistent high cost users. We examined between-group variation in patient characteristics, health status, mortality, hospitalizations, and use of medical services. Finally, we used hierarchical clustering techniques to identify any patterns of medicine use that might characterize high-cost users by age and sex. Persistent high-cost users, whose drug costs ranked in the top 10% from 2007 to 2011, accounted for 6% of the population but were responsible for 45% of total prescription drug spending. High-cost users are often older, have lower incomes, and suffer more chronic conditions than average or moderate cost users. Concurrent use of medicines (polypharmacy) is extremely common among high-cost users, with persistent high-cost users annually filling prescriptions for nearly 10 (9.8) different types of medication, on average. Higher use of cancer drugs and biologics for inflammatory conditions distinguished intermittent high-cost users from persistent high-cost users, who used more drugs treating chronic conditions. Cluster analyses further investigating concurrent medicine use among high-cost users showed significant heterogeneity in the patterns of polypharmacy within and across user groups. Prescription drug spending is highly concentrated and common drugs treating chronic conditions account for most spending, even among high-cost user groups. Thus, in addition to efforts managing polypharmacy among high-cost users, cost-control policies might best focus on encouraging price competition in drug classes used by average and high-cost users alike.

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F4.3 Total and attributable healthcare costs of hypertension: historic and projected costs in Alberta, Canada
Presented by KERRY MCBRIEN Assistant Professor, University of Calgary

Hypertension is a major risk factor for cardiovascular diseases, which have high morbidity, mortality and cost. Although effective hypertension prevention programs exist, little is known about their potential cost savings. The objective of this study was to quantify the costs attributable to hypertension and to project this figure to 2020. We used administrative data for the province of Alberta from 2002 to 2010 that included detailed records for physician claims, hospitalizations, and ambulatory care, as well as medications for patients over 65 years of age. We identified patients with and without hypertension and calculated their total healthcare costs. We then estimated the costs that could be attributable to hypertension using a two-part generalized linear regression model that adjusted for sociodemographic factors, including age, sex, First Nations status, and neighbourhood income quintile, as well as comorbidities. Finally, we projected attributable costs to 2020 assuming current growth trends continue. Twenty-one per cent of Alberta adults had hypertension in 2010, and this number is expected to reach 27% by 2020. In 2010, the average hypertensive patient had an annual healthcare cost of $5607 (excluding medications), of which $2276 (41%) was attributed to hypertension. Alberta healthcare costs attributable to hypertension are projected to nearly double from $1.4 billion in 2010 to $2.7 billion in 2020. This projected $1.3 billion increase is due to population growth (14%), an aging population (11%), increasing age and growing polypharmacy prevalence (15%), and increasing per-patient hypertension-attributable costs (31%). Accounting for provincial differences in per capita healthcare spending and hypertension prevalence, we estimated the 2010 Canadian healthcare costs attributable to hypertension to be $13.1 billion. The costs attributable to hypertension are significant and represent 20.5% of direct healthcare spending on adults. Growing hypertension prevalence and severity contribute significantly to large anticipated growth in costs. Implementation of proven effective interventions to decrease both these factors may lead to large cost savings.

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F4.4 Does Higher Spending Improve Survival Outcomes for Myocardial Infarction? Examining the Cost-Outcomes Relationship using Time-Varying Covariates
Presented by DEBORAH COHEN Senior Researcher, PhD, University of Ottawa

Previous research has found higher hospital spending for AMI to be associated with improved patient survival; however, the timing of spending in relation to survival is not accounted for. Patients who live longer are also more likely to receive treatment. In this context, an ineffective treatment can appear erroneously to improve survival simply because healthier patients live long enough to receive treatment. In this study, a standard Cox survival model was compared to an extended Cox model using hospital costs as a time-varying covariate, to examine the impact of cost on one-year survival in a cohort of 50,000 first-time AMI patients in Ontario. Our results show that higher hospital spending decreased patient’s hazard of dying. In the extended model, a 10% increase in patient-level spending was associated with a 3.6% decrease in hazard of death. However, the protective effect of AMI spending on outcomes was overestimated by 62% when survivor-treatment-selection bias was overlooked. This study represents the first of its kind to estimate the impact of survival-treatment-selection bias in outcomes-cost healthcare research. The findings of this study suggest that if survivor-treatment selection bias is overlooked, future research may materially overstate the protective effect of patient-level spending on survival outcomes.

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F5.3 Practicality of using the Patient Activation Measure to gauge program effectiveness

More youth with chronic conditions are surviving into adulthood. Transition to adult health care is often sub-optimally executed with adverse outcomes reported, but only in small samples. This population-based study describes healthcare outcomes for youth with chronic health conditions requiring transition to adult care across a number of conditions. Retrospective, cohort-study using administrative and registry data in Ontario, Canada. Youth born April 1st 1993 were assigned into mutually exclusive, hierarchically arranged groups: ‘complex’ chronic conditions [CCCs: neurological impairment, cystic fibrosis, systemic lupus erythematosus, sickle cell disease (SCD)], ‘non-complex’ chronic conditions [non-CCCs: inflammatory bowel disease, type 1 diabetes, congenital heart disease, asthma], and mental health conditions [MHCs: mood/affective disorders]. Patterns of health system utilization at baseline and at a two-year follow-up were examined for 16 youth (age 16-18 years) and 20 transition-age youth (age 18-20 years) to adult care, which is age 18 in Ontario for most pediatric services. A total of 186,869 youth (43% female) were identified; 139 (0.1%) died before and 159 (0.1%) following transition. Poverty, defined as lowest neighborhood income quintile, was most prevalent in those with SCD (45.6%) and least among those with eating disorders (9.9%). Health system costs increased slightly for non-CCCs ($1513 (7793) vs. $1655 (8128), p<.0001), but did not change pre and post-transition for those with CCCs (mean (SD): $23,730 (4,674) vs. $22,953 (6,219), p=.41), or MHCs ($7,549 (18,838) vs. $6,687 (23,698), p=.11). Emergency department visits increased by 13% for CCCs (p=.001) and 10% for non-CCCs (p=.001), but not MHCs (p=.39). Acute care admissions and length of stay (LOS) declined for both CCCs and MHCs (p<.0001 for both), and LOS (but not admissions) declined for non-CCCs (p<.0001). Pediatric transition to adult care was characterized by minimal change in health service use and costs with the exception of emergency department visits. This may indicate service gaps and could be used to monitor interventions at improving transitions.

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F5.4 A Mixed Methods Study: Examining the Relationship between Therapeutic Self-Care and Adverse Events for Home Care Clients in Ontario, Canada

The purpose of this mixed methods study was to examine the concept of therapeutic self-care in the context of home care, as well as its influence on the safety of home care clients and their informal caregivers. A mixed methods design, involving quantitative and qualitative methods, was used to address the research question. The quantitative approach used a retrospective cohort design and utilized secondary databases available for Ontario home care clients. Logistic regression analysis was used to examine the association between therapeutic self-care and adverse events. The qualitative approach utilized one-on-one interviews with the clients and their informal caregivers recruited from one home care agency in Ontario, Canada. Qualitative description was used to analyze data that generated themes about clients' and their caregivers' perspectives of home care safety in relation to therapeutic self-care and informal caregiving. The quantitative results indicated that low therapeutic self-care ability was associated with an increase in the odds of clients experiencing: (1) unplanned hospital visits; (2) decline in activities of daily living; (3) falls; (4) unintended weight loss, and (5) non-compliance with medication. Analyses of the qualitative interview data revealed four overarching themes: (1) Struggling through multiple aspects of safety challenges; (2) Managing therapeutic self-care by developing knowledge, competency and self-confidence; (3) Coping with informal caregiving through problem-solving, stress management and caregiver relief; and (4) Seeking education, support and collaboration from home care. The results provided a better understanding of the nature of the relationship between therapeutic self-care ability and the prevalence and incidence of adverse events experienced by home care clients. The qualitative findings provided insight into the safety problems related to therapeutic self-care and informal caregiving. This mixed methods study advanced understanding of therapeutic self-care in the context of home care. This knowledge is vital to policy formulation related to the role of home care services in improving client's therapeutic self-care ability to reduce safety related risks and burden for home care recipients.

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F6 PHARMACEUTICAL POLICY II / POLITIQUE PHARMACEUTIQUE II

Fontaine H
F6.1 Reforming private drug coverage in Canada: Inefficient drug benefit design and the barriers to change in unionized settings
Presented by MARC-ANDRE GAGNON Assistant Professor, School of Public Policy and Administration, Carleton University

Prescription drugs are the highest single cost component for employees’ benefits packages in Canada. The study explores the reasons behind the incapacity to implement cost-containment measures in private drug benefits package by examining how private sector employers negotiate drug benefit design in unionized settings.

May Through 18 semi-structured phone interviews conducted with experts from private sector companies, unions, insurers and plan advisors, this study explores the reasons behind this incapacity to implement cost-containment measures by examining how private sector employers negotiate drug benefit design in unionized settings.

Respondents were asked questions on how employee benefits are negotiated; the relationships between the players who influence drug benefit design; the role of these players’ strategies in influencing plan design; the broad system that underpins drug benefit design; and the potential for a universal pharmacare program in Canada.

Experts who participated in this project appeared to have a common understanding of the salient issues facing drug benefits. The five following points were most striking:

1. The necessity of information-sharing between employers and employees.
2. Democratic governance of unions requires engagement of informed employees.
3. The need for incentives for insurance companies to reduce costs.
4. The need for government intervention. All have suggested some form of government intervention, either through a national formulary, a risk-pooling scheme, or an arrangement designed to provide some sort of universal pharmacare to Canadians.

Private sector negotiations between unions, employers, consultants and insurance companies fail to achieve sustainable and cost-effective drug plan designs. Since pharmaceuticals are the highest single cost component of private health benefits, there is an urgent need to implement measures for managing the costs of drug plans without degrading health outcomes.

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F6.2 Do Financial Conflicts of Interest Influence the Drug Recommendations in Canadian Clinical Practice Guidelines?
Presented by ADRIENNE SHNIER Ph.D. Candidate, York University

Clinical practice guidelines (CPGs) are widely distributed by medical societies and associations with the intent to provide systematic recommendations to clinicians making complex medical decisions. We examine the influence of financial conflicts of interest (COI) disclosed by authors of CPGs and the first-line pharmaceutical recommendations made in those guidelines. We include CPGs most recently reviewed or published between 01-January-2012 and 06-November-2013, housed in the Canadian Medical Association (CMA) Infobase. After imposing inclusion and exclusion criteria, we extracted drug recommendations, author characteristics, and disclosed COI for a maximum of 25 authors per guideline. We emailed corresponding authors when COI disclosures were either missing or incomplete (response rate: 75%). When more than 25 authors were named, we included the committee chair(s) and randomly selected the remaining authors. We are currently conducting statistical analyses on authors’ COI with manufacturers of recommended drugs and whether brand vs. generic drugs were recommended in the guidelines. The CMA Infobase houses 1,151 CPGs; however, after imposing our inclusion and exclusion criteria, 35 CPGs were included in our analysis. Our preliminary descriptive results indicate that 30/35 (86%) guidelines recommended brand drugs, while the remaining 5 recommended generic drugs. We collected data for 518 authors on 35 guidelines. One-hundred fifty-one (30%) had financial COI with one or more pharmaceutical companies. Ninety-six of 518 authors (19%) disclosed financial COI with one or more manufacturer of the drugs recommended for first-line treatment in the respective guidelines. We are currently running a logistic regression model with generalized estimating equation (GEE) on this data to establish the strength of the association between authors’ disclosed financial COI and whether they recommended brand or generic drugs for first-line treatment. Our study addresses and fills a gap in Canadian literature regarding disclosure of financial COI and drug recommendations in CPGs in Canada and is the first to assess guidelines and financial COI disclosed by authors on guidelines based on their inclusion in the CMA Infobase.

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F6.3 Generic Drugs in Canada, 2013
Presented by ELENA LUNGU Manager, National Prescription Drug Utilization Information System Database Privacy Impact Assessment

This analysis contributes to discussions and informs policy decisions affecting generic pricing, by comparing the price of generic drugs in Canada with those in other industrialized countries. The analysis compares the 2013 ex-factory generic prices of 487 leading drugs in Canada with international prices for the same drugs. The main international markets considered are: France, Germany, Italy, Sweden, Switzerland, the United Kingdom and the United States. Data was collected from the MIDASTM, IMS AG (All Rights Reserved) for Canadian and international generic and brand prices. Data for the Ontario Drug Benefit Program was collected from the NPDUIS-CIHI database. In 2011, international generic prices were, on average, 35% lower than Canadian prices; by 2013, they were still 32% lower. Domestically, average Canadian generic prices dropped from 56% of branded product prices in 2011 to 39% in 2013 due to changes in provincial reimbursement policies. Ontario fared even better, with 2013 generic prices at 31% of the brand levels, which translates into a 25% price differential compared to the international average. The results based on Ontario prices in the second quarter of 2013, which are presumed to be more reflective of price reductions resulting from the early phase of the Value Price Initiative, reduce the price gap and are a marked improvement. Since then, there have been further generic price reductions, which are not captured in the report. The report finds that despite a significant reduction in Canadian generic drug prices in recent years, they remain appreciably higher than international levels.

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F6.4 Trends in prescription opioid use in British Columbia
Presented by KATE SMOLINA Post-Doctoral Fellow, Centre for Health Services and Policy Research, University of British Columbia

Understanding how patterns of use of prescription opioids have changed over the last decade is important for combating the current prescription opioid crisis. In this study, we describe trends in prescription opioid dispensations between 2004 and 2011 in British Columbia (BC). This population-based cohort study draws on de-identified linked administrative datasets for BC residents, including prescription records and socio-demographic information. The study cohort included individuals with at least one opioid prescription during the study period. We calculated the morphine equivalent (MEq) dose for each opioid dispensation and excluded opioids that are not generally prescribed to treat chronic pain. There were no changes in the overall proportion of BC population using opioids, with approximately 12% of residents filling at least one opioid prescription each year. Annual prescription rates and total exposure in MEqs for all of BC doubled for oxycodone, hydromorphone, and fentanyl but did not appreciably change for other opioids. The average annual exposure to opioids per BC resident filling an opioid prescription increased, driven by an increase in the total days of opioid therapy from 2004 (mean=49, median=8) to 2011 (mean=65, median=10). Consequently, the average daily dose in MEq per person over a year increased from 68 mg to 87 mg and the median daily dose increased from 10 mg to 16 mg. Our results suggest that the current prescription opioid crisis is driven by longer treatment periods, and thus increased opioid exposure, among those prescribed an opioid. Oxycodone, hydromorphone, and fentanyl contribute the most to the rise in total annual opioid exposure among BC residents.

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Modèles et innovations en soins de santé primaires : qu'est-ce qui fonctionne, de quelle manière, pour qui et nous réserve l'avenir ?

Presented by SIMONE DAHROUGE, University of Ottawa; RUTH MARTIN MISENER, RN-NP, PhD, Dalhousie University; CATHIE SCOTT, PhD, Chief Operating Officer & Lead, Policy Research, Alberta Centre for Child, Family & Community Research; MYLAINE BRETON, PhD, University of Sherbrooke

We have seen a dramatic increase in primary health care models with a wide diversity of characteristics and implementation strategies across Canada. In this session lead researchers from different provinces and decision-makers will explore what we know about the alphabet soup of primary health care models in relation to access, continuity of care and cost; if different models work best for different populations; and where we go from here. Simone Dahrouge, University of Ottawa, will share their work on PHC models in Ontario, delving into how implementation creates greater diversity than definitions would capture. Ruth Martin Misener, RN-NP, PhD, Dalhousie University, will speak to the incremental, provider-led models of care development and the new Nova Scotia Collaborative Care Model Framework. Cathie Scott, PhD, Chief Operating Officer & Lead, Policy Research, Alberta Centre for Child, Family & Community Research, will speak to models fit for context-commonalities and necessary difference with examples from the Alberta context. Mylaine Breton, PhD, University of Sherbrooke, will share on organizational innovations implemented in Québec to improve access to PHC.
Poster Presentations – Day 1

Présentations d’affiches – Jour 1
A comparison between initial and well established implementation periods of the Ontario MedsCheck Annual pharmacy medication review service

LISA DOLOVICH  OPEN co-lead, Research Director, Associate Professor, OPEN (Ontario Pharmacy Research Collaboration), McMaster University

A MedsCheck Annual (MCA) consultation is a medication review service funded by the Ontario government for people taking three or more prescription medications for chronic conditions. The objective of this study was to compare the demographic and clinical characteristics of MCA recipients in two time periods: 2007-2008 and 2012-2013. This cohort study leveraged linked administrative claims data from two time periods: 1) April 1, 2007 to March 31, 2008, the first year that MCAs were provided; and 2) April 1, 2012 to March 31, 2013, the most recent year with complete data available at the time of analysis. Ontario Drug Benefit (ODB) patients were eligible for MCAs since April 1, 2007 and on July 17, 2007 MCA eligibility was extended to all Ontario residents taking three or more prescription medications for chronic conditions. Descriptive statistics were calculated for recipient characteristics over the two time periods and stratified by age. MCA was provided to 194,726 Ontarians in 2007-2008 (67% over age 65) and 372,054 Ontarians in 2012-2013 (44% over age 65). In 2007-2008, more recipients lived in urban centres (91%) versus 2012-2013 (86%). The proportion covered by the ODB Program decreased from 48% in 2007-2008, to 37% in 2012-2013, as the proportion with high medication costs in the previous year (14% in 2007-2008 to 4% in 2012-2013). Diagnoses of hypertension (76% in 2007-2008 and 60% in 2012-2013), COPD or asthma (34% in 2007-2008 and 29% in 2012-2013), and diabetes (40% in 2007-2008 and 22% in 2012-2013) were most common. In 2007-2008 versus 2012-2013, more Ontarians were taking antihypertensives (85% versus 77%), diuretics (53% versus 44%) and narcotics (30.9% vs. 22.8%) prior to receiving MCA. Provision of MCA increased over the first 5 years of the program. Initial recipients had a higher prevalence of disease, and greater medication use and costs compared to recipients in 2012-2013. Early delivery of the MCA service was more frequently provided to Ontarians with a high burden of comorbid illness.

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A How-To Guide for Planning Hospital-to-Home Care Transition Interventions in Older Adults: Findings and Implications of a Realist Synthesis

ANUM KHAN PhD student, University of Toronto

Older adults transitioning home after a hospitalization are at heightened risk for medication errors, functional decline, re-hospitalization and admission to institutional care. The goal of this study was to synthesize evidence on which care transition activities benefit this population and how activity outcomes are affected by existing contexts and conditions. The results of a scoping review of care transition intervention studies were summarized using the realist synthesis technique. Through both qualitative and quantitative analysis, we examined how and why more than 40 different care transition activities (e.g. medication reconciliation, tele-health monitoring) achieved their outcomes. We looked at variation in activity mechanisms across different target populations in the presence of coexisting intervention activities and across contexts. Contextual variables included location of the intervention and organizational characteristics. The results of this synthesis are summarized in a cohesive program theory for care transition interventions, with examples of key activity-mechanism-outcome relationships provided. Most of the reviewed studies employed similar transition activities but differed significantly in how they identified their target populations, the timing of activities (pre- and post-discharge), and the type of health care provider who delivered activities. These factors had significant effects on whether activities achieved desired outcomes. Similarly, the context created by shared electronic medical records, program champions at the organizational level and financial incentives for success modified the effect of intervention activities across studies. This study leverages the differences in care transition intervention characteristics across studies to produce actionable outputs. The specific activity-mechanism-outcome relationships (and their modification with contextual factors) identified are relevant to decision-makers and managers seeking to improve care transition interventions in their unique healthcare context.

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A New Service Delivery Model to Improve Access to Orthopedic Surveillance for Children with Cerebral Palsy (CP)

KAREN HURTUBISE PhD student, Université de Sherbrooke

A significant increase in wait-times precipitated the Neuromotor Clinic (NMC) to introduce a new physiotherapist-led (PT-led) orthopedic surveillance clinic to improve access for its patients. The purpose of this study was to monitor wait-times, and compare parent and staff satisfaction and family centeredness between the PT-led and the traditional physician-led model. Wait-time data were monitored monthly through the service tracking system. A sample of convenience of parents attending either the PT- or physician-led clinics were studied using the Visit Specific Satisfaction Instrument (VSQ-9) and the Measurement of Process of Care (MPOC-20). Interprofessional collaboration was measured using the Collaboration and Satisfaction about Care Decisions (CSCAD) questionnaire and staff satisfaction was assessed through the Measure of Process of Care for Service Providers (MPOC-SP). Descriptive statistics were used to analyze the results. Potential differences between the two models were assessed using the Mann-Whitney U test. Wait-times decreased by 125 days for initial appointment with physician and from 830 days for follow-up visit. Most parents graded their overall visit as good. In both models with improved patient satisfaction with access to care in the PT-led clinic and greater satisfaction with technical skills with the physician-led. MPOC-20 scores indicated that staff exhibited family centered behaviors “to a fairly great extent” in all domains in both models. The PT-led model exhibited higher scores in delivering a more coordinated and comprehensive approach, while the physician-led clinic enabled the provision of more general information. Staff involved in PT-led clinic was more satisfied with physician collaboration in care decisions and their ability to treat patient with respect. Despite these variations, no statistical differences were identified. A PT-led clinic model provides significant improved access for children with CP to orthopedic surveillance. In addition to being a satisfactory option for parents, this model improves parents’ perception of a coordinated and comprehensive service and may improve staff satisfaction with care decisions and their ability to provide respectful care.

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A Resilient Nursing Workforce: The Impact of Policy Over Time

MARY CREA Statistician, McMaster University

With the recent outbreak of the Ebola virus, health human resource planning (HHR) has re-emerged as an important issue for policy-makers. This presentation will report on a 7-year analysis of the impact of a government employment policy on new nurses in Ontario using multiple data sources. The Nursing Graduate Guarantee (NGG) is an evidence-informed policy developed in 2007 to stabilize the nursing workforce and increase full-time employment for new graduate nurses. A comparative analysis of nurses who participated in the policy and those who did not participate and who entered the employment market between the years 2007 to 2012 will be presented. The study involves data collected through the post-education tracking system and the university pharmacy data was supplemented by secondary data sources. The study population included six cohorts of new nursing graduates (2007 to 2012). New graduate nurses’ success in finding full-time positions at various stages of their career were analyzed using multiple regression models. Models controlled for additional characteristics known to influence employment status. Results indicate that, overall, the NGG did have a positive effect in terms of increasing the likelihood of obtaining a full-time position. Comparison between two different sources of data demonstrated good agreement in estimates of the effect of the initiative. Secondary data sources were incorporated through creation of survey weights which adjusted the characteristics of the sample to be more similar to those of the population. The use of multiple sources allowed for comparison of the trend over time. Countries are required to maintain a highly trained cadre of health personnel. This is one approach by governments to stabilize a workforce. Data demonstrate that the NGG did create a resilient nursing workforce over the seven years.

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A survey tool to assess long term care resident experience
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Long Term Care (LTC) is both a health and a social program, highlighting the importance of judging social dimensions based on the opinions and experience of consumers. This study sought to update and validate a revised version of a long term care resident experience survey. The National Research Corporation Canada Long Term Resident Experience Survey (LSRE), used for nearly 15 years in Ontario Long Term Care organizations, was evaluated. Input from interviewees regarding implementation challenges and cognitive performance of the tool in the field as well as statistical analyses of survey responses were used to evaluate the validity of this questionnaire for use among residents in multiple LTC and CCC settings. Empirical analyses were based on patient experience surveys completed in 2012. The evaluation addressed recommended criteria, i.e. comparability, post-sort distribution, item-scale consistency, and reliability of domain scores. A total of 8,294 questionnaires were distributed to residents of both LTC and CCC in 95 facilities. The study population included 3,401 respondents representing response rate of 41%. Response rates varied by survey distribution methods (39.4 to 64.5%), type of setting (39 to 57%), and age group (31 to 57%). Questionnaires handled by volunteers attained a significantly higher response rate. Using the original items, dimensions of Food, Activities, Staff, and Dignity all had Cronbach Alpha scores above 0.74; Autonomy and Treatment were lower at 0.65 and 0.73 respectively. While Living Environment had the lowest performance with 0.55, removing one item increased this to 0.66. All dimension showed statistically significant correlations with the ratings of overall quality of care and willingness to recommend. The revised LSRE presents a good level of scale reliability and overall criterion and content validity. Interviews provide better response and completion rates than mailed or mixed-method surveys, regardless of the type of setting, while facilitating volunteers adds to the performance of the tool.

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A systematic review of primary care interventions to improve transition of youth with chronic conditions from paediatric to adult healthcare
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Youth with chronic conditions transitioning to adult healthcare experience poor outcomes. Recommendations have been made for more effective primary care provider (PCP) involvement and broader policy which better integrates primary and specialized care. The aim of this systematic review is to determine effective interventions to improve the PCP role in this transition. The search was conducted using Ovid Medline and Web of Science databases. Selected articles were screened independently by two reviewers, and data were extracted into summary tables categorizing study details including: country, study subjects, PCP type, role/responsibility or intervention description, patient condition, and outcomes. The search criteria were not limited to any condition given that only youth with complex and/or chronic conditions would require transition to adult care. Articles discussing opinion-based best practice or those defining family/caregivers as PCPs were excluded. A total of 591 unique citations were identified yielding 34 studies for inclusion. There were no randomized controlled trials or even observational studies of primary care interventions related to transition. Preliminary results indicate that PCP roles are not well defined and many physicians do not adhere to guiding principles for successful transition from paediatric to adult healthcare (i.e. time alone with patients). Included studies highlight recommendations focused on the need for improved collaboration between those PCP providers who care for youth after transition and paediatric PCPs and specialists in order to enhance continuity and sharing of patient data. Studies also describe the need for expanding the PCP role by providing transition-specific education and skills training on caring for youth with complex, chronic illness. There are no rigorous studies to guide primary care interventions to improve transition outcomes for youth with chronic conditions. Future research and policy should focus on developing and evaluating coordinated transition interventions in the context of initiatives to better integrate primary and specialized care for high need populations.

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Assessing Health System Value in Upstream Health Interventions: A Case Study of Cardiac Rehabilitation and Prevention
CAROLINE BECK Student, Johnson-Shoyama Graduate School of Public Policy, University of Regina

Upstream health interventions are often difficult to assess for overall health system value due to factors such as discounting, intangible outcomes, and differing value assumptions among stakeholders. This study explored the assessment of value through multiple dimensions, using the case study of a cardiac rehabilitation and prevention program. Using a mixed-methods approach, health systems value was explored in three ways: (i) Changes in health status from beginning to end of program (as measured by the Short Form 36 (SF-36) health survey, n=905 from 2008-2014), (ii) Client and staff perspectives of program impact on health, well-being, and community (through semi-structured interviews, n=16), and; (iii) Implications for cost-effectiveness (using the SF-6D health states and program administration data). Quantitative results were assessed for correlation to age, gender, health risk factors, and socioeconomic indicators. Overall, the intervention was shown to improve scores for total health, physical health, and mental health. Preliminary results indicate that variance in health scores within these domains are attributable to factors such as pre-existing health conditions, modifiable lifestyle factors such as smoking, and socioeconomic indicators including education and income level. Benefits perceived to extend into broader areas - such as safety, community, healthy aging, and reduced healthcare utilization - contribute to an overall assessment of high program value among participants and staff. As such, interview participants believe the program to be highly cost-effective and worthy of public funding. These perceptions are discussed in relation to measured cost-effectiveness of the program as well as the implications for regional policymakers involved in budgeting for such programs. Value and importance of upstream health interventions is operationalized and understood differently by users, administrators, policymakers, and other stakeholders. Therefore, assessing value in a multi-dimensional way can potentially reconcile these viewpoints to better inform policy and funding decisions.
Changing the Service Delivery Model to Meet Rehabilitation Needs of Young Children (0-3 years): Impact on Service Wait-times and Staff Perceived Performance

KAREN HURTUBISE  PhD student, Université de Sherbrooke

Due to a 25% rise in referrals, young children with developmental delays have experienced an increased in wait-times for rehabilitation. The purpose of this study was to monitor wait-times to initial appointment with a provider, evaluate interprofessional team functioning and staff perceived family-centeredness of service throughout the service re-design implementation. Wait-time data were monitored monthly through the service tracking system. The Team STEPPS, a self-administered questionnaire of team behaviors, and the Measurement of Processes of Care for Service Providers (MPOC-SP), a service provider perception of the extent of the family centeredness of their service, were administered to all program staff at the beginning and a year into the change process. Descriptive statistics were used to analyze the survey results. Between intervals, a multi-modal change management approach was undertaken that included regular wait-time data sharing, clear individual and team caseload expectations, and staff participation in achieving further service delivery efficiencies. Three hundred and twelve children were referred to the service during these 12 months. The average wait-time for new appointment decreased by 14 days, from 70 to 64 days, throughout the change process. Seventy-two percent of staff responded to the initial questionnaires, while 71% responded to the follow-up surveys. All domains of team behaviors improved, from 4.68 to 5.29 with team functioning demonstrating the largest improvement and team leadership the smallest. Improvements were noted in MPOC-SP scores particularly in the domain of Providing General Information (0.58). A slight decline was highlighted in the area of Providing Specific Information. Decreasing wait-times, sustaining and even improving team behaviors, and maintaining staff perception of a quality family centered service for children with developmental delays is possible during implementation of a service re-design. A carefully crafted multi-modal change management process focused on data, expectations, and staff participation is key to this achievement.

Comprehensive Primary Care Physicians: Who are they and whom do they serve?

RICK GLAZIER  Senior Epidemiologist, ICES

Our objectives were to distinguish between physicians in comprehensive primary care (PC) office practice, ‘focussed practice’ and other types of practice using administrative data; to quantify the number/proportion of PC physicians in each type of practice over time; to identify any important differences in patient population by practice type. An administrative database-based definition of ‘comprehensive PC practice’ was developed using data held at ICES, including OHIP physician billings/shadow-billings, primary care model patient rosters and various physician databases. This hierarchical algorithm was then used to determine if, in a given year, a physician was in comprehensive PC practice, focussed practice or some other category. The number/proportion of physicians in each category was tracked over time. Then, using other databases developed at ICES which link (assign) patients to individual physicians who provide the majority of their primary care, the patient population of each group with respect to sociodemographic characteristics was described. In 2010/11, 11,836 of 26,751 active physicians (44%) were PC physicians. Of these, 8,589 (72%) fit the definition of comprehensive primary care. Among the remainder, 13% worked fewer than 50 days during the year, 11% were in focussed practice and 3% did not fit any category. Since the late 1990s the proportion in comprehensive primary care has been about 72%. We found no relationship between comprehensive practice and physician sex. With respect to patient populations, in 2002/03 approximately 82% of Ontario residents regularly saw a comprehensive PC physician. By 2010/11 this had risen to 86%. Just under 2% of residents receive their primary care from a specialist; 92% of these are children. About 10% of Ontario residents do not appear to receive regular primary care. There is good news in that nearly three-quarters of primary care physicians are in comprehensive practice. We found no evidence of a dramatic increase in the proportion of PC physicians in ‘focussed practice.’ Nearly 90% of Ontarians had a comprehensive PC physician as their regular doctor in 2010/11.

Cost-effectiveness analysis of a two-dose HPV vaccine using the CRMM-HPVMM microsimulation model

SAIMA MEMON  Analyst, Canadian Partnership Against Cancer

The CRMM-HPVMM is a Canadian, web-based, decision-support microsimulation modelling platform that can project the population-based impacts of HPV vaccination strategies. A cost-effectiveness analysis was undertaken to compare 2-dose vaccination regimens with varying duration of protection with the standard 3-dose regimen. We assumed a 70% vaccination rate among Canadian girls aged 12. Vaccine costs were assumed to be $500 for 3 doses and $330 for 2 doses. Since the vaccine was only introduced in 2007, we have little long-term data on vaccine efficacy, therefore we assumed the vaccine would be 100% protective for at least 40 years for the 3-dose regimen and varied the duration of protection for 2-doses from 10-40 years. A cost-effectiveness analysis was conducted to reveal which vaccine regimens proved cost-effective compared to no vaccine, and to understand how the duration of protection affected the cost-effectiveness ratios. The results were compared to a no vaccination scenario. Incremental cost-effectiveness ratios (ICERs) were calculated by aggregating lifetime costs of vaccination, cervical screening and treatment. The 3-dose regimen and all 2-dose regimens with duration of protection of at least 18 years dominated no vaccine. The lifetime cost savings associated with a 2-dose vaccine with 40 years protection was $745 million, compared with a cost impact of $700 million if the 2-dose vaccine only protects for 10 years, due to increased costs of treatment. If the 2-dose vaccine provides equivalent protection to the 3-dose, $600 million in savings would be realized over the lifetime of the model. ICERs were calculated using a 3% discount rate. Based on the CRMM-HPVMM, it can be concluded that the 2-dose vaccine dominates no vaccine if it provides protection for at least 18 years. More research must be done to establish the duration of both the 3-dose and 2-dose HPV vaccine regimens.

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Cost-Utility Analysis of Therapeutic Drug Monitoring for Asparaginase in Pediatric Leukemia

MEERA RAYAR  Resident, Hospital for Sick Children

Asparaginase is a chemotherapeutic agent used for pediatric acute lymphoblastic leukemia(ALL). Therapeutic drug monitoring(TDM) is used to detect patients with clinically silent inactivation of this drug. These patients experience inferior outcomes if their therapy is not changed. This project aimed to determine the costs and quality adjusted life years(OALYs) generated by asparaginase TDM compared to the current standard treatment, no TDM. This cost-utility analysis took a government health-care payer perspective and varied the duration of protection for 2-doses from 10-40 years. A cost-effectiveness analysis was conducted to reveal which vaccine regimens proved cost-effective compared to no vaccine, and to understand how the duration of protection affected the cost-effectiveness ratios. The results were compared to a no vaccination scenario. Incremental cost-effectiveness ratios (ICERs) were calculated by aggregating lifetime costs of vaccination, cervical screening and treatment. The 3-dose regimen and all 2-dose regimens with duration of protection of at least 18 years dominated no vaccine. The lifetime cost savings associated with a 2-dose vaccine with 40 years protection was $745 million, compared with a cost impact of $700 million if the 2-dose vaccine only protects for 10 years, due to increased costs of treatment. If the 2-dose vaccine provides equivalent protection to the 3-dose, $600 million in savings would be realized over the lifetime of the model. ICERs were calculated using a 3% discount rate. Based on the CRMM-HPVMM, it can be concluded that the 2-dose vaccine dominates no vaccine if it provides protection for at least 18 years. More research must be done to establish the duration of both the 3-dose and 2-dose HPV vaccine regimens.

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Drug Use Among Seniors on Public Drug Programs in Canada, 2012
JEFF PROULX

This analysis provides an in-depth look at the number and types of drugs used by seniors, and compares drug use among seniors living in long-term care (LTC) facilities and those living in the community. Data from the National Prescription Drug Utilization Information System (NPDUIS) Database, housed at CIHI, as submitted by public drug programs in eight provinces—Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia—and by one federal drug program, managed by the First Nations and Inuit Health Branch (FNHB). Data includes drug claims for approximately 70% of Canadian seniors. Nearly two-thirds (65.9%) of seniors had claims for 5 or more drug classes, and more than one-quarter (27.2%) of seniors had claims for 10 or more drug classes. The most commonly used drug class was statins, which are used by almost half of seniors (46.6%). More than one-third of seniors (39.9%) had claims for a drug on the Beers list—a list of drugs identified as potentially inappropriate to prescribe to seniors. More than half of seniors living in LTC facilities used 10 or more different drugs. The rate of polypharmacy among seniors living in the community (26.1%). In LTC facilities benzodiazepine use was double, antidepressant use triple and antipsychotic use nine times the rate among seniors living in the community. A high proportion of seniors, particularly those in LTC facilities, are at increased risk of adverse drug events due to the number of medications they are taking. Findings illustrate the importance of medication management strategies for seniors, and the need for communication between health care providers regarding seniors’ drug regimens.

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Examining interventions to address the transition gap: A systematic review of youth to adult mental health services
MARK EMBRETT

Navigating a health system can be a challenging experience for many, especially when moving between children’s health systems, as is the case for youth who transition out of child and adolescent mental health services (CAMHS). The aim of the study is to assess the peer reviewed evidence on services/programs aimed at addressing youth to adult transitions in mental health services. A systematic review of academic literature indicates little consensus exists between AMHS and CAMHS systems, and that few transition programs for youth with mental health disorders have been evaluated in academic literature. Greater integration within the mental health system itself, particularly between CAMHS and AMHS, is needed. Since neither CAMHS nor AMHS were reported to regularly communicate with each other in these studies, a mechanism that facilitates this process may have the highest potential for smoothing transitions. Set up costs, however, may be prohibitive. The primary limitation of these results is that the quality of evidence reported in the published articles limits the application of the findings. The lack of research on the coordination and effectiveness of programs creates uncertainty as to whether youth and young adults with mental health problems are receiving all the help they may need or that they would benefit from during their transition period.

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Geriatric Syndromes Postdischarge Outcomes Among Older Emergency Department Patients: Findings from a Multinational Cohort Study
ANDREW COSTA

Identifying older emergency department (ED) patients with clinical features associated with adverse outcomes may lead to improved clinical reasoning and better patient targeting. The objective of this study was to identify and compare geriatric syndromes that influence the probability of post-discharge outcomes among older ED patients from a multinational cohort. A prospective cohort study of ED patients aged 75 or older was conducted in 13 ED sites in 7 countries. Of the 2,475 patients approached for inclusion, 92.2% were enrolled. Patients were assessed at ED admission with a geriatric ED assessment. Outcomes were examined for patients admitted to a hospital (62.9%) or discharged to the community (34.0%). Hospital length of stay and discharge to higher level of care was recorded for admitted patients. Any ED or hospital use within 28 days of discharge was recorded for patients discharged. Standard and multi-level logistic regression was used. A multi-country model including living alone (OR=1.78, p<0.01), informal caregiver distress (OR=1.69, p=0.02), deficits in ambulation (OR=1.94, p<0.01), poor self-report (OR=1.84, p<0.01), and traumatic injury (OR=2.18, p<0.01) best predicted hospitalization or death within 28 days. A model including recent ED visits (OR=2.10, p<0.01), baseline functional impairment (OR=1.68, p<0.01), and anhedonia (OR=1.73, p<0.01) best predicted older patients at risk of proximate repeat hospital use. A sufficiently accurate and generalizable model to describe the risk of discharge to higher levels of care for admitted patients was not achieved. Despite different health care systems, the probability of long hospital lengths of stay and repeat hospital use among older ED patients is detectable at the multinational level with moderate accuracy. This demonstrates the potential utility of incorporating common geriatric clinical features in routine examination and disposition planning for older patients.

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Implementing a new school-based occupational therapy service delivery model: What do stakeholders say about access, service quality, and sustainability?

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Partnering for Change (P4C) is a school-based occupational therapy service delivery model for children with a chronic health condition called Developmental Coordination Disorder (DCD). Currently being evaluated in 40 Ontario schools, this study identifies stakeholders’ perceptions of the implementation process and outcomes, with an emphasis on factors influencing P4C’s sustainability. Between December 2013 and June 2014, individual interviews were conducted with 5 occupational therapists (OTs), 14 school board managers and principals, 12 health care managers, and 3 research team members. Audio files were transcribed verbatim and entered into QSR NVivo 10 ©. Content analysis was completed using an implementation science framework. Comments related to the implementation and sustainability of P4C were extracted to identify recommendations for expansion of P4C. In addition, 15 OTs completed daily logs to document services provided to children with DCD as well as requests to provide services to other populations of children. All stakeholders groups perceived P4C to be an effective service delivery model increasing access and service quality for children with DCD and, potentially, for children with other chronic conditions. For managers, expanding P4C to other populations of children was considered more equitable and necessary to sustain P4C financially. Partnership with schools was a key factor for success. School stakeholders commented that it was helpful to have an OT as part of their team – to have someone who could problem-solve quickly without requiring a formal referral or a specific diagnosis. OTs were asked to see children with varied needs; they offered 3329 individual sessions to 592 children with coordination difficulties, and were requested to see 435 children with other conditions (70% of whom did receive service). Stakeholders perceived P4C to be an efficient service delivery model and suggested that effective and sustainable service delivery should be responsive to the needs of all children. Their comments highlighted the many changes and the support required at different levels to implement this kind of model.

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Inequality by Race/Ethnicity in Survival Improvement of Children with Acute Lymphoblastic Leukemia in the United States and Canada

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Childhood acute lymphoblastic leukemia (ALL) survival improved dramatically from 5-year survival of 15% in 1960s to over 80% in late 1990s; whether the ongoing improvement has nullified inequalities in ALL survival between children of different race/ethnicity groups and whether there is inequality between US and Canadian children is unknown. Children aged 0-19 years who were diagnosed with a first primary malignant ALL in 1975-2010 participating in one of nine cancer registries in the Surveillance, Epidemiology and End Results program (SEER) were included. Race/ethnicity was classified as White, Black, Hispanic, Asian/Pacific Islander (API), and American Indian/Alaska Native (AIAN). Age was categorized as <1, 1-9 and 10-19 years. Kaplan-Meier methods were used to estimate overall 5-year survival. Multivariable Cox regression analyses were applied to estimate hazard ratios (HRs) and their 95% confidence intervals (CI) by prognosis groups and diagnostic periods. Canadian survival statistics were obtained from the Canadian Cancer Registry’s publications. Survival improved in each race/ethnicity over past 3.5 decades with different magnitudes, resulting in change of inequality patterns. Compared to White children, adjusting for age and sex, the ALL-related-mortality hazard ratio (HR) in Black children dropped to 1.21 (95% CI, 0.74-1.96) in 2000-2010 from the largest inequality in 1984-1991 (HR=2.09, 95% CI, 1.57-2.79). In Hispanic children, the HR increased from 1.28 (95% CI, 0.98-1.66) in 1975-1983 to 1.95 (95% CI, 1.48, 2.58) in 2000-2010. API and AIAN children had HRs of 1.39 (95% CI, 0.92-2.11) and 2.31 (95% CI, 1.13-4.74), respectively, in 2000-2010, which did not change as greatly. Canadian children had five-year survival of 84% in 1994-1998 and 91% in 2004-2008, comparing to US-SEER White children of the same period (87% and 93%, respectively). Survival inequalities in children of different race/ethnicity remain appreciable in the US. While survival improvement over a decade between 1990s and 2000s appears similar between US White and Canadian children, the absolute 5-year survival remains slightly lower in Canadian children. Proper interventions need to be developed to reduce these differences.

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Integrating Health Technology Reassessment into a Complex Healthcare System: Diverse Perspectives from Stakeholders in Alberta Health Services

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Health technology reassessment (HTR) is an emerging policy approach that examines whether existing technologies are being optimally used. Little practical implementation experience with HTR exists in Canada or internationally. The objective of this research is to understand, through practice, how HTR can be integrated into a complex Canadian healthcare system. Qualitative research methods were used to develop an understanding of the context within which the Alberta HTR initiative was embedded. Alberta Health Services (AHS), the province-wide health care delivery organization in Alberta, has committed to advancing HTR activities through its strategic clinical networks (SCNs). This provided a unique opportunity to study the integration of HTR in practice. Semi-structured telephone interviews with AHS stakeholders were conducted from May-August 2014. Relevant documents were also reviewed. Perspectives on current SCN activities, particularly the perceived facilitators and barriers to conducting HTR, were collected. Data was analyzed thematically using standard qualitative data analysis methods. Twenty-two interviews were completed. Preliminary data revealed variable understanding of the practice, language, and purpose of HTR. A number of stakeholders interchanged descriptions of HTR activities with quality improvement or rationing exercises. There was little understanding of how and what to measure in order to value existing technologies. While most stakeholders within SCNs supported the conduct of HTR initiatives, those external to the SCNs (academic partners or operational leaders) reported challenges with communication and partnering to ensure alignment of new HTR activities with existing priorities and initiatives. Many also described experiencing initiative overload. Lastly, despite mixed perspectives of discussing money alongside quality of care and/or patient outcomes, many stakeholders felt that the potential for reinvestment, subsequent to HTR, was critical for incentivizing future HTR activities. While there is broad support for HTR, a number of barriers hinder its successful uptake. Interdisciplinary stakeholder consultation in development phases, purposeful alignment with other initiatives, education to improve conceptualization and decision making, and policy development are among key areas suggested to advance the HTR agenda provincially.

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Learning from each other to promote the health of older stroke survivors through an integrated community-based stroke rehabilitation team supported by a mobile health solution

NANCY MATTHEW-MAICH, Mohawk College

The purpose of this study was to co-create a mobile health (mHealth) technology-based solution with a team of community-based interprofessional healthcare providers and decision makers to support evidence-informed, person-centered care and community re-integration of older adult stroke survivors with multiple chronic conditions. A qualitative descriptive and user-centered design approach was used to build the mobile application. Interviews and focus groups were conducted with 41 healthcare providers including nurses, care co-ordinators, personal support workers, occupational therapists, physiotherapists to identify current challenges for community-based stroke care in Ontario, Canada. Additionally, ten consultations were completed with 23 key stakeholders (e.g., Heart and Stroke Foundation, Stroke Network, OHCA, OACCAC, etc.) involved with Canadian stroke rehabilitation to capture insights into current gaps in community care.

Feedback was offered iteratively throughout the design and build process related to the technology co-creation. The following current barriers to community-based stroke care were identified by stakeholders: 1. fragmented communication between healthcare providers; 2. no consistent means to track patient status; 3. limited access to information and resources at the point-of-care; 4. safety issues resulting from communication gaps; and 5. a lack of consideration of MCC in common best practice guidelines. The solution designed was a mobile app, “My Stroke Team” (MYST), completed in November 2014. It supports best practice implementation in stroke care through: 1) real-time, secure, communication within the full circle of care (including client and family caregivers); 2) evidence-informed safety assessments; 3) alerts to relevant providers regarding changes in client status; and 4) access to resources and providers. The success of this innovation was engaged of end-users using an iterative process. MYST has the potential to bridge communication and safety gaps in home healthcare, ultimately improving quality of care for stroke survivors and their families. MYST will be piloted tested in Ontario within an interprofessional community intervention study.

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Mapping TB treatment availability for refugees and migrants in Tak province, Thailand

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Tuberculosis (TB) is curable but requires treatment. In Thailand public and non-governmental organizations provide free or low cost TB treatment to migrants and refugees. The objective of this research is to examine the availability of TB treatment services for migrants and refugees in a province that borders Myanmar. Fieldwork was conducted in Thailand to examine how refugees and migrants access TB treatment. Data was collected through qualitative focus group discussions and key informant interviews. Following data analysis locations of TB treatment providers were plotted on a map with details on which group could access treatment. Separate maps were created to show treatment availability for TB, TB/HIV co-infection and multidrug-resistant TB. The results show that access to services is highly fragmented and is closely linked to legal status. For example, refugees have access to services that are provided specifically for refugees. Migrants who are part of the government health insurance scheme can receive low cost treatment at Thai government facilities. Non-governmental organizations have TB treatment facilities specifically for migrants. There are some referrals between these systems. Comparisons of the maps show that there are few providers for multidrug-resistant TB. In conclusion, in regions with independent health systems mapping treatment availability may be a useful tool for stakeholder discussions on healthcare planning.

Measuring Triple Aim Results for a Suburban-rural Population by an Alberta Primary Care Network

GRACE MOE Executive Director - Strategic Planning & Special Projects, Westview Primary Care Network/Westview Physician Collaborative

To examine the extent that Triple Aim results are achieved by the Westview Primary Care Network (WPCN)—a physician-operated primary healthcare (PHC) organization servicing an Alberta suburban-rural community; Describe the measures and tools used; Report on results; and Identify barriers to measuring Triple Aim outcomes by community-based PHC organizations. Since inception in 2005, WPCN targets achieving Triple Aim objectives—improve population health status, enhance patients' experience of care and reduce per capita healthcare cost. Implementation of an Inter-professional Collaborative Practice model of care across member family practices provides a one-stop team-based approach to primary/secondary prevention, early intervention, chronic disease management and complex care. Health status (RAND36/SF12), health behaviors (tobacco, diet, exercise, sleep, alcohol/drug use), care quality (PACIC and Starfield's PCAT) plus satisfaction data—collected via multi-year population and patient surveys provide measures for first two Triple Aim objectives. ED visit frequency is used as proxy measures of cost savings. For the Westview population between 2007 and 2013, Health status has improved—mean RAND36/SF12 scale scores had increased: General Health (69.71 Vs 72.33); Physical (73.23 Vs 76.17); Vitality (53.5 Vs 61.73). Health behaviors have changed positively: % “Not Smoking At All” (69.2 Vs 76.8); % “Exercise 30-minutes 3-4 times/week” (25.7 Vs 28.6); CAGE Score (.16 Vs .16). Patient experience with quality of care received has been augmented in: PCAT Summary Scores (3.21 Vs 3.38) and Access (2.21 Vs 2.53); Patient Assessment of Chronic Illness Care (PACIC) and satisfaction ratings remain high. ED Visit Frequency: Population Self-reported .9 Vs .7 visits/past 12-months; HQCA-reported GPSC Visits/patient - 0.133 vs. 0.088; Cost Savings: WPCN-Administrative Records – Average Number of ED visits-avoided/annum is 4,090; Total for 2008-2014 is 20,448 visits. WPCN has achieved its expected Triple Aim outcomes. However, inability to access population and system-level administrative data prevents meaningful segmentation of PCN populations for target service planning; and disables tabulations of per capita costs. Real-time and system-level data must be available for PHC organizations to realize their Triple Aim goals.

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Frequent service users are more likely to have co-morbid health conditions including a combination of chronic physical and mental health conditions. There is a higher existence of co-occurring mental health with chronic physical health conditions involving addiction among Aboriginal Peoples of all ages and gender. Women are more likely than men to have co-occurring health conditions. But how this is experienced specifically by Aboriginal women living in urban settings is largely unexplored. This poster will begin to map out an ongoing study of urban Aboriginal women's health service needs for co-occurring diabetes, mental health and addiction. Our methodological approach consists of three forms of primary data collection: one-on-one semi-structured interviews, surveys, and follow up deliberative focus group discussions across two phases. In the first phase, we collect data from key informants (n= 8-12), including health and social service providers and decision makers. This is followed in the second phase of data collection from urban Aboriginal women (n= 24 - 36). Results from the first phase of this study reveal that separate and parallel mental and physical health treatment options do not offer interventions that are accessible, integrated and tailored for Aboriginal women dealing with co-occurring health conditions. Thus necessitating the use of holistic approach by combining Indigenous perspectives with gender sensitive and trauma-informed practice to address the interconnected risk factors for co-occurring chronic physical and mental health challenges, and addiction; linked to wide-based supports in housing, education, employment, recreation and the wider social network. Ensuring women's safety has been identified as the key health service component. Collaboration and service integration is necessary across the sectors. The findings reported here are from a localized study, therefore can not be generalized. However, there is a clearly identified need for integrated service provision approach based on Indigenous understanding of holistic care; and community development through awareness and education about co-morbid health conditions among Aboriginal Peoples, providers and general public.

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Methods to define hypertension in electronic medical record-validation against national survey data

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To evaluate the role of hypertension diagnosis codes, antihypertensive drug prescriptions, and blood pressure records in identifying hypertension patients in electronic medical records. This study was to propose an appropriate hypertension case definition for surveillance and health services research. We included all the patients actively registered in The Health Improvement Network (THIN) database, UK, on December 31, 2011. Three case definitions using diagnosis code, antihypertensive drug prescriptions, and abnormal blood pressure records respectively were employed to identify hypertension patients in THIN. We examined the clinical characteristics of patients with hypertension for each definition and compared the prevalence and treatment rate of hypertension in THIN with results from Health Survey of England (HSE) in 2011. Nearly all the cases defined by diagnosis code were also identified by the definitions using antihypertensive drug prescriptions and/or abnormal blood pressure. Compared with results from HSE, use of diagnosis code alone underestimated hypertension prevalence. Use of any of the definition or combination of antihypertensive drug prescriptions and abnormal blood pressure had higher prevalence than HSE. Use of diagnosis code or abnormal blood pressure with a 2 year-period had similar prevalence and treatment rate of hypertension with HSE. We recommended the use of “diagnosis code or 2 abnormal blood pressure records with a 2 year-period” to conduct hypertension surveillance in THIN for international comparisons. Different methods might be used based on study purposes.

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Monitoring Drug developments: A Multifaceted Approach

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The objective is to monitor new drugs before they arrive on to the Canadian market to identify those products likely to have an impact on future drug plan expenditures. The New Drug Pipeline Monitor (NDPM) identifies drugs in late-stage clinical trials using a specialized BioPharm Insight® database and decision-tree algorithm. A top-ten list of innovative drugs likely to have a clinical impact is published, along with therapeutic areas with research activity. The New Drug Launch Monitor (NDLM) identifies drugs marketed in other countries but not yet sold in Canada, using sales data from the IMS/Brogan Midas database for all drugs marketed in the PMPRB list of seven comparator countries. These countries include France, Germany, Italy, Sweden, Switzerland, the UK and the US. Information from Midas on jurisdiction, launch date and manufacturer was used to establish the launch sequence of each drug. The NDPM, 6th edition identified 11 pipelines drugs, 3 of which are biologics. The results indicate the pipeline continues to be strong for cancer and biologic drugs, while clinical trials for bacteria-resistant infectious drugs and other classes are promising. The NDLM identified 92 new drugs launched internationally between 2008 and 2013. While less than half have found their way on to the Canadian market, those that were introduced were large market drugs, with significant demand. In addition while most new drugs were launched first in the US, marketing in Canada typically occurred shortly after and was often second or third in the sequence of market release. The analysis contained in these two reports provides meaningful intelligence on new drug products from late-stage clinical trial through to market launch.

Mortality Belief, Individual Health Shocks and the Decision to Smoke

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This paper tries to understand the relationship between individuals’ subjective estimate of their susceptibility to smoking and their decisions to smoke. And it investigates how individual’s smoking related health shocks affect their subject belief of susceptibility to smoking and promote cessation behaviour. I develop a two period decision model of smoking. I derive two testable hypothesis about private health shocks and individual’s belief of susceptibility to smoking from the model. They are: (1). Smokers adjust their survival belief downwards more compared to non-smokers when receiving smoking related health shocks. (2) The level of survival belief correlates positively with the quitting decision. I use data from the Health and Retirement Study (HRS) to test these hypotheses. I also estimate a dynamic discrete choice model of smoking. (In Progress) I implement an approach similar to difference in difference (DID) to test the first hypothesis. The dependent variable is the change in survival belief to age 75 in two adjacent waves of HRS survey. I find that the difference in this variable between smokers who received smoking related health shocks or not is significantly larger than that of non-smokers. The joint F test for smoking related shocks is significant at 1 percent level. For the second hypothesis, I implement a probit regression. The dependent variable whether a smoker quits smoking in the next wave of survey. The regression suggests that the level of survival correlates with the quitting decision positively and significant. Combining the two results together, I find individual’s health shocks promote smoke cessation via getting a more precise understanding of their own susceptibility to smoking. Despite years of public anti-smoking campaign, smokers still have an overly optimistic belief of susceptibility to smoking. Private health shocks serve as an efficient tool for smokers to correct their belief and promote cessation. Policy makers can mandate preventative health check-ups for smoking related health shocks to promote cessation behaviors.
Optimiser la performance des ergothérapeutes dans les programmes de soutien à domicile québécois : impacts sur le raisonnement clinique et les interventions offertes

ANNIE CARRIERE
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Les processus d’optimisation de performance cherchent l’efficience accrue des services ergothérapeutes en soutien à domicile (SAD). Or, l’implication de ces processus dans le raisonnement clinique (RC) menant au choix des interventions est peu connue. Cette étude visait à explorer l’implication des processus d’optimisation dans le RC des ergothérapeutes en SAD. Un dispositif qualitatif de type ethnographie institutionnelle (EI) a été utilisé auprès de 10 ergothérapeutes recrutés dans trois programmes de SAD québécois. Des observations (n = 41 jours) et des entretiens semi-dirigés, informels (n = 206 entretiens; 16 heures et 29 minutes) et formels (n = 10 entretiens; 12 heures et 6 minutes) ont été réalisés avec ces ergothérapeutes. Douze informateurs-clés secondaires (collègues, gestionnaires) ont également été rencontrés (n = 22 entretiens) et des documents administratifs (n = 50) ont été recueillis. Les données ont ensuite été analysées à l’aide du processus analytique de l’EI. Le RC des ergothérapeutes inclut une préoccupation constante quant à leur efficience, ce qui motive leurs évaluations et leurs interventions auprès des clients. Spécifiquement, les ergothérapeutes restreignent le temps et le suivi alloués à chaque client. Leurs évaluations et, conséquemment, leurs interventions, se limitent le plus souvent au seul motif de référence, généralement l’autonomie dans les soins personnels, sauf si la sécurité du client est menacée. Par la catégorisation des activités qu’ils requièrent, les processus d’optimisation génèrent également une lourdeur cognitive pour les ergothérapeutes. La mesure du travail utilisée dans ces processus devient l’échelon pour évaluer la légitimité de leurs activités et gêne des comportements de déviation afin de rencontrer les objectifs de performance. La restriction de leurs interventions ne correspond pas à la formation universitaire des ergothérapeutes en SAD. Des questionnements sont soulevés quant à la qualité des services qu’ils rendent, l’étendue des services offerts aux clients et l’impact des processus d’optimisation sur l’atteinte des objectifs du système de santé.

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Patterns of care: identifying and describing pathways during episodes of care for chronic obstructive pulmonary disease exacerbations

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Patient healthcare pathways affect resource use and outcomes. Defining care pathways may be challenging because patients often exhibit heterogeneity in their healthcare service use. The study objective was to apply a probability-based approach to identify and describe care pathways for chronic obstructive pulmonary disease (COPD) patients. This population-based study used administrative databases from two urban health regions in Saskatchewan to identify a newly-diagnosed COPD cohort (35+ years) and define the healthcare use for this population. Pathways of care were identified for 500 patients from 2007/08 to 2011/2012 fiscal years. Latent class analysis classified the cohort into homogeneous healthcare pathway groups using measures of healthcare use in the episode: general practitioner (GP) visits, specialist visits, emergency department (ED) visits, inpatient hospitalization, and outpatient medication dispensation. Logistic regression was used to model demographic and disease characteristics associated with pathway membership. Differences in resource use between class members were tested using pseudo-class random draws. The cohort consisted of 3,105 individuals. Healthcare use during the index episode was characterized by two distinct pathways: high user (15.2%) and low user (84.8%). The high user pathway was generally initiated by an ED visit, continued by specialist visits, and ended with GP visits. The low user pathway was typically initiated and ended with GP visits and included medication dispensations. Urban residence (odds ratio [OR] = 1.99, 95% CI 1.71 to 2.27), female (OR = 1.24, 95% CI 1.06 to 1.42), and 1+ comorbidities (OR = 1.42, 95% CI 1.21 to 1.63) were associated with high user class membership. Compared to the low user class, the average index episode cost of the high user class was significantly greater ($12,382 vs $2,836; p-value < 0.001). The findings suggest that a probability-based approach is useful for defining care pathways and profiling patients with different pathways. The high user pathway group, with the description of their characteristics, could be targeted for disease treatment or management interventions. The model could be applied to other complex health conditions.

Co-Auteur(s): Lisa Liu, University of Manitoba / Jacqueline Quail, Saskatchewan Health Quality Council / Meric Osman, Saskatchewan Health Quality Council / Eric Wang, Saskatchewan Health Quality Council / Gary Yeare, Saskatchewan Health Quality Council

Perceived need, service use and unmet need for health services amongst a sample of socially marginalized people who use drugs

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Estimating perceived need for care among people with addiction and mental health problems is an important component of system and service planning. Several general population studies have developed these estimates, and demonstrated high levels of unmet need. To complement this work, we measured perceived needs amongst socially marginalized drug users. We administered a structured survey to 324 socially marginalized people who use drugs. Participants were recruited from two inner-city social and health service providers in Edmonton, Alberta. Surveys lasted 40-60 minutes and assessed demographic, substance use, and health status measures as well as the Perceived Need for Care Questionnaire (PNCQ), a structured instrument designed to quantify several dimensions of perceived need for services (information, medication, hospitalization, counseling, social interventions, skills training, and harm reduction). Descriptive and inferential statistics were used to describe patterns and correlates of perceived need, unmet need, service use, and access barriers. Preliminary analyses indicate high levels of medical and social complexity in the sample, with approximately 57% reporting unstable housing, and 90% reporting injection drug use in the previous six months. Additionally, 61% met criteria for past year heavy drug dependence, and 43% for past year mental health and addiction comorbidity. Only 20% of participants reported having their care needs fully met. Significant unmet need was reported across seven service categories with the largest unmet needs being for social interventions (59%) and counseling (47%). Analysis of demographic and clinical correlates of perceived need for care and service access is ongoing. The results of this work, and a description of unmet need for care and self-reported access barriers will be presented and discussed. Socially marginalized people who use drugs experience high rates of addiction and mental health problems and despite high levels of perceived need, report significant unmet needs for care. Results indicate that measuring perceived needs for health services in hidden, high-needs populations is feasible and useful for improving system planning.

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Perspectives en matière de soins de santé selon le public et les fournisseurs et gestionnaires des soins de santé : résultats du sondage sur les soins de santé au Canada 2014

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Nous rapportons les résultats de la onzième édition du sondage sur les soins de santé au Canada (SSSC) sur les perspectives en matière de soins de santé selon le public et les fournisseurs et gestionnaires des soins de santé. L’enquête a été menée par un institut de sondage professionnel au moyen d’entrevues téléphoniques auprès d’échantillons nationaux représentatifs de gestionnaires (n=104) et professionnels de santé (101 médecins, 100 infirmières et 100 pharmaciens) et de sondage en ligne de membres du public (n=1000) sélectionnés de façon aléatoire d’une base de sondage entre le dernier trimestre 2013 et le premier trimestre 2014. Une variable de pondération basée sur les distributions de l’âge et du sexe des données du recensement de 2011 a été définie pour tenir compte des poids régionaux. Les maladies cardiovasculaires et l’arthrite sont les affections chroniques les plus répandues (22%), suivies par les maladies mentales (16%), pulmonaires (14%) et diabétiques (11%). Les temps d’attente, l’accessibilité, le vieillissement, le coût élevé et le manque de médecins apparaissent dans le top trois des défis du système des soins de santé selon le public et les professionnels mais pas dans le même ordre de priorité. Pour améliorer l’accès, le public suggère principalement 1) d’augmenter les inscriptions dans les écoles de médecine et de soins infirmiers et 2) d’exiger que les professionnels de la santé travaillent en équipes avec d’autres types de fournisseurs de soins de santé. Avec le vieillissement de la population et l’augmentation de la prévalence des maladies chroniques, l’accès en temps opportun aux soins demeure la première préoccupation du public et des professionnels de la santé. Le développement de programmes d’autogestion et d’une plus grande implication des patients dans la gestion de leur santé constituent des pistes de solution.

Co-Auteur(s): Sara Ahmed, McGill University
Physicians Reaching Out: Supporting Youth Mental Health in British Columbia

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The objective of this physician-led initiative was to develop policy on youth mental health, and to raise awareness among youth, families, teachers, and physicians about mental health generally, how to recognize mental illness, and where to seek help when it is needed. The policy development process involved a two-pronged approach. An initial literature review and environmental scan helped to identify the policy gap and opportunities. Following this, a stakeholder forum was convened to seek input on a number of key questions relating to building awareness of youth mental health. Forum attendees included representatives from the Ministries of Health, Education, and Children and Family Development, Health Authorities, and various mental health organizations. A meeting was also held with youth with lived experience of mental health issues to seek their feedback on barriers to seeking help and how best to connect with youth. It is estimated that 12-20% of transition-age youth (15-24 years) in British Columbia suffer from mental illness but the majority of these youth will not seek help. Barriers to seeking help include a lack of understanding about mental health and how to recognize mental health problems, a lack of awareness about where to seek assistance and how to navigate the mental health system, and the stigma attached to mental illness. One of the key findings as a result of meeting with stakeholders is that many youth are not aware that they can speak to a physician about their mental health concerns. There is an opportunity for physicians to raise awareness of the role they can play, alongside other health providers, in addressing the mental health needs of youth, and to also raise awareness of existing mental health tools and resources. A major component of this initiative was developing a website information hub.

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Predictors of hospital discharge to continuing care: exploring the role of kidney function

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Identifying factors (e.g. level of kidney function) relating to discharge to continuing care is important for informing hospital discharge planning, particularly for patients transitioning from nephrology inpatient units to primary care. Our objective was to determine predictors of hospital discharge to continuing care among older adults. This is a retrospective cohort study using laboratory and administrative data from Alberta, Canada. We identified patients aged ≥66 years with ≥1 hospitalization between 2005 and 2010 (index date: first hospital admission). The outcome was hospital discharge to continuing care (another facility providing ongoing care by medical providers) compared to hospital discharge home with support services (indicating independent patient function with community services provided when necessary). Predictors examined by logistic regression include estimated glomerular filtration rate (eGFR), proteinuria measurements, socio-demographic factors, comorbidities, and hospital factors. This study included 43,801 patients (mean age 81.3 (SD 8.01) years; 60.3% females). Patients with mild to moderate decreased kidney function (eGFR 45 to 59 mL/min/1.73m2) who had lower odds of hospital discharge to continuing care compared to those with higher kidney function (e.g. age 66 to 74 years: OR 0.77, 95% CI 0.63-0.94). Patients with urgent hospital admissions had higher odds of discharge to continuing care (e.g. age 66 to 74 years: OR 3.67, 95% CI 3.09-4.37). Dementia was the strongest predictor of the outcome across all age groups (e.g. age 66 to 74 years: OR 8.46, 95% CI 7.33-9.77). Other major predictors were paralysis and cerebrovascular disease. Decreased kidney function was associated with reduced odds of discharge to continuing care, while baseline cognitive and physical dysfunction and unplanned admissions were strong predictors. Future studies to explain this finding and to explore the relationship between kidney function and other discharge dispositions are needed to inform hospital discharge planning.

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Primary care provider perceptions of the challenges of managing patients with mental-physical multimorbidity: a qualitative study

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Multimorbidity is common in primary care and difficult to manage, but less is known about the specific challenges of managing patients with mental-physical multimorbidity. We aimed to explore primary care providers' perceptions of the everyday challenges of caring for patients living with both mental illness and chronic physical diseases. Qualitative, embedded multiple case study with four primary care clinics within two health and social service centres (CSSSs) in Montreal, Quebec. Clinics were sampled purposively based on survey data from project “Dialogue” to ensure diversity in organizational characteristics of clinics (clinic type, mental health services). Recruitment targeted different types of primary care professionals and proceeded by snowball sampling. Data collection involved individual semi-structured interviews with providers and non-participant observations of study sites. A thematic, inductive analysis was conducted by an interdisciplinary team, facilitated by NVivo. Feedback from participants on preliminary findings was obtained and integrated into the final analysis. Sixteen primary care professionals (e.g. family physicians, nurses, psychologists) identified numerous challenges falling into three overarching themes: patient, provider and healthcare system-related challenges. Patient-related challenges pertained to the types of mental illnesses patients presented with; the presence of other social problems, and interference from some illnesses on care for others. It could be challenging for providers to build relationships with these patients and they sometimes faced clinical uncertainty and a sense of being stuck alone with complex patients. Participants identified major healthcare system-related challenges, including a lack of integration of physical and mental health services, lack of time to provide adequate care, tensions between access and quality of care, and poor interprofessional communication and collaboration, especially for cases requiring care over longer time periods. Providers reported that patients with mental-physical multimorbidity are very common in their clinics. The challenges they identified in caring for these patients suggests that urgent and targeted actions are needed to improve the organization of primary mental health care services for these patients and particularly to enhance integration of care.

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The Effects Of A Preoperative Educational Dvd On Parental Participation In Recovery Room: A Randomized Controlled Trial

JULIE CHARTRAND Assistant Professor, University of Ottawa

The objectives of this study were to evaluate the effects of a validated preoperative educational DVD, as a KT tool, on parents’ knowledge acquisition, participation and anxiety related to their child’s care in the recovery room as well as children's postoperative distress, pain, analgesic consumption and recovery length. A randomized controlled trial was conducted on 105 French and English speaking parent-child dyads whose child was aged 3 to 10 years and underwent an ENT or dental same day surgery at a Canadian pediatric hospital. The experimental group parents (n=49) viewed the DVD and received the standard preoperative preparation and the control group parents (n=56) received the standard preoperative preparation. Parents and children were videotaped in recovery room; parental participation and children's distress were measured using observational scales. A multiple choice questionnaire, a visual analogue scale and a chart review were also used to collect data. T-test, chi-square and repeated measures statistical analyses were conducted. Parents in the experimental group acquired significantly more knowledge (p=0.03) and demonstrated significantly more participation behaviours (p=0.02) related to positive reinforcement, distraction and relaxation than those in the control group. Children's postoperative pain in day-care surgery unit was significantly lower (p=0.02) among the experimental group compared to the control group. There was no significant difference however between the groups with regards to parents’ anxiety, children's postoperative distress, analgesic consumption and recovery length. The preoperative educational DVD has encouraged appropriate expectations and enhanced parental roles during children's postoperative recovery and in turn aided to minimize children's postoperative pain. However, further psychological and physical support is required to decrease parents’ anxiety and their child’s distress.

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The Objective Of A Preoperative Educational Dvd On Parental Participation In Recovery Room: A Randomized Controlled Trial

JULIE CHARTRAND Assistant Professor, University of Ottawa

The objectives of this study were to evaluate the effects of a validated preoperative educational DVD, as a KT tool, on parents’ knowledge acquisition, participation and anxiety related to their child’s care in the recovery room as well as children's postoperative distress, pain, analgesic consumption and recovery length. A randomized controlled trial was conducted on 105 French and English speaking parent-child dyads whose child was aged 3 to 10 years and underwent an ENT or dental same day surgery at a Canadian pediatric hospital. The experimental group parents (n=49) viewed the DVD and received the standard preoperative preparation and the control group parents (n=56) received the standard preoperative preparation. Parents and children were videotaped in recovery room; parental participation and children's distress were measured using observational scales. A multiple choice questionnaire, a visual analogue scale and a chart review were also used to collect data. T-test, chi-square and repeated measures statistical analyses were conducted. Parents in the experimental group acquired significantly more knowledge (p=0.03) and demonstrated significantly more participation behaviours (p=0.02) related to positive reinforcement, distraction and relaxation than those in the control group. Children's postoperative pain in day-care surgery unit was significantly lower (p=0.02) among the experimental group compared to the control group. There was no significant difference however between the groups with regards to parents’ anxiety, children's postoperative distress, analgesic consumption and recovery length. The preoperative educational DVD has encouraged appropriate expectations and enhanced parental roles during children's postoperative recovery and in turn aided to minimize children's postoperative pain. However, further psychological and physical support is required to decrease parents’ anxiety and their child’s distress.

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The Role of Education in Colorectal Cancer Screening Participation: Evidence from Canadian Community Health Survey (2011-2012)

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In the context of conflicting evidence, this study was designed to investigate the association between education and colorectal cancer screening participation. Data from the Canadian Community Health Survey (2011-12) was analyzed using multivariable logistic regression among 38,863 respondents. The outcome was derived from: 1) Fecal Occult Blood Test participation; and 2) colonoscopy or sigmoidoscopy participation. Compared to those with education of less than secondary school level, people with post-secondary graduation (OR=1.44, 95%CI 1.25, 1.67), some post-secondary (OR=1.16, 95%CI 0.88, 1.52), or secondary graduation (OR=1.22, 95%CI 1.04, 1.44) had an increase in odds of colorectal cancer screening participation, adjusting for age, sex, income, language, and ethnicity. This study reinforced the positive association between educational level and colorectal cancer screening, which could be useful in designing interventions aimed at improving participation in colorectal cancer screening.

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Trends in Income-Related Health Inequalities in Canada: Alcohol-attributable hospitalizations

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Excessive or chronic alcohol consumption can lead to conditions, such as mental and behavioural disorders (e.g., acute intoxication, withdrawal), acute pancreatitis, and liver cirrhosis, requiring hospitalization. This research examines trends in alcohol-attributable hospitalizations between 2006 and 2012, by sex and by neighborhood income level, and highlights potential approaches for reducing alcohol-related harm. As part of a new report on income inequality by the Canadian Institute of Health Information (CIHI), rates of alcohol-attributable hospitalization (excluding injuries and suicide) were generated from 2006 to 2012 for Canadians 15 years and older, by sex and neighborhood-level income quintile. Rates were calculated as discharge rates per 100,000 and standardized to the 2011 Canadian population. Rate ratios and rate differences comparing the highest and lowest income quintiles, as well as population-attributable fractions, were calculated. The academic and grey literature was scanned to identify interventions to reduce income-related inequality in alcohol-attributable hospitalizations. Alcohol-attributable hospitalization rates are over 2.5 times higher among men compared to women, and are highest among Canadians experiencing low income in low income neighborhoods. Between 2006 and 2012, rates increased for men and women across all income levels, while income-related inequality persisted. For men, overall rates increased from 133 to 142 per 100,000, while rates among the lowest income quintile remained approximately 2.5 times greater or 140 per 100,000 higher than rates among the highest income quintile. Among women, overall rates increased from 48 to 56 per 100,000, and rates among the lowest income quintile remained approximately 2.1 times greater or 44 per 100,000 higher than rates among the highest income quintile. The strategies implemented in this research project are guided by adaptations of strategies from the Community Tool Box. Resources available in this Tool Box are useful and applied in this project to inform the PAR and KT approach. To date, the strategies implemented to inform the PAR and KT approach include those intended to: (1) establish community introductions and buy-in; (2) identify variations between the communities during this process that have emerged; (3) identify the extent to which variations between the communities during this process have emerged; and (4) manage the emerging variations during this process. Essential and useful adapted Community Tool Box strategies that have been implemented in this research project entails an iterative process of: (1) identifying with whom to make initial contact with; (2) developing a plan to reach out to key community members; (3) implementing the plan to reach out to key community members; and (3) learning about the local governance structure of a community. The strategies implemented in this research project are guided by adaptations of strategies from the Community Tool Box. Resources available in this Tool Box are useful and served to inform the PAR and KT plan in the research project.

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Understanding the Health Service Use of Colorectal Cancer Screening Among First Nations: Describing the Unfolding of a Project

BONNIE MCINTOSH
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Colorectal cancer (CRC) is preventable, if detected precancerous through screening and treated. A research project is underway which involves working with First Nations Northern bands to understand distinct factors influencing CRC screening utilization. Particularly, this presentation will describe some of the specifics of the way this project is unfolding. Participatory action research (PAR) is participatory-based research that is action oriented, and involves using a community-based partnership to plan, apply, and disseminate research. Knowledge translation (KT) involves the collaborative and iterative practice of interactions between researchers and knowledge users to enhance health. PAR and KT are integrated into this research project to guide best-practice methods to better understand this matter from the community’s viewpoint. A comprehensive resource, known as the Community Tool Box offers strategies for taking action in communities. Adapted strategies derived from the Community Tool Box are applied in this project to inform the PAR and KT approach. To date, the strategies implemented to inform the PAR and KT approach include those intended to: (1) establish community introductions and buy-in; (2) identify variations between the communities during this process that have emerged; (3) identify the extent to which variations between the communities during this process have emerged; and (4) manage the emerging variations during this process. Essential and useful adapted Community Tool Box strategies that have been implemented in this research project entails an iterative process of: (1) identifying with whom to make initial contact with; (2) developing a plan to reach out to key community members; (3) implementing the plan to reach out to key community members; and (3) learning about the local governance structure of a community. The strategies implemented in this research project are guided by adaptations of strategies from the Community Tool Box. Resources available in this Tool Box are useful and served to inform the PAR and KT plan in the research project.

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Understanding Variations in Health System Efficiency in Canada: A Descriptive Multiple Case Study

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We previously conducted a quantitative study that resulted in the production of efficiency scores for regions across Canada. Expanding on this work, we aim to (1) identify contextual factors that help explain variations in efficiency; (2) identify barriers and enablers; and (3) identify innovations related to health system efficiency. This is a descriptive multiple-case study. Four regions with variations in health system efficiency were selected, and semi-structured interviews will be conducted with policy-makers, senior system planners, managers and clinicians at both the provincial and regional levels representing different health sectors (e.g., acute care, primary health care, public health). Approximately 10-12 interviews will be conducted per region (20-24 per province). Focus groups will be conducted after preliminary analysis of interview results to elucidate some of the themes identified. A document analysis of academic and grey literature will be triangulated with the interview and focus group data. The data collection and analysis will be completed by March/April 2015. This work will highlight contextual factors that may explain regional variation in health system efficiency. It is important to develop methods for measuring efficiency in the Canadian system that make use of available data and measure the most appropriate inputs and outputs for the policy priorities of Canadian decision makers.

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Where’s the 911 for First Nation peoples mental health services in Manitoba?

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We report on findings from a larger study, aiming to identify models of primary healthcare delivery best suited to deliver optimal outcomes in rural and remote communities. We assessed the performance of existing primary healthcare services, using hospitalization for Ambulatory Care Sensitive Conditions. This presentation focuses on mental health findings. We developed a multi-level model that predicts hospitalization for ACSC over time (1984 to 2012) for each resident of First Nation and rural and remote communities in Manitoba on the basis of community and individual-level characteristics. We aggregated the results by community to derive predicted rates of hospitalization episodes, and length of stay. The project sample included all MB residents eligible under the Manitoba Health Services Insurance Plan living on FN reserves (n=72,000 FN), and those living in rural and remote communities (n=280,013) for the years 1984 to 2011. Although the gap is closing, we note that overall rates of hospitalization episodes for ACSC remain higher for First Nations. Looking closer however, we note that rates of hospitalization for ACSC are highest and rising for mental health conditions, compared to acute, chronic and vaccine preventable conditions. The length of stay (LOS) for these hospitalizations is shorter for First Nations. Drilling down further, LOS is similar for acute, chronic and vaccine preventable conditions, but significantly shorter for mental health conditions, suggesting possible premature discharge. Finally, we note that the age of admission for mental health conditions has remained relatively constant in Manitoba, at 41 years of age, whereas the age of admission for First Nations has dropped from 35 in 1986 to 26 in 2010. Our results raise serious concerns about the responsiveness of mental health services for First Nations in Manitoba. Given the documented lack of mental health services accessible on-reserve, levels of social distress associated with a history of oppressive policies and continued practices of infrastructure neglect, these findings are alarming.

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Poster Presentations – Day 2

Présentations d’affiches – Jour 2
A Collaborative Approach to Designing Better Care
SERENA KURKJIAN  Project Coordinator, Cancer Care Ontario

Quality cancer symptom management is critical in improving patient outcomes. However, there are gaps in the system. Patient needs are not always addressed and providers often struggle to operationalize symptom management tools designed to support the process. Patients, clinicians, and administrators were brought together to understand barriers and co-create solutions. Patients, clinicians, and administrators from across Ontario were invited to participate in a day-long Symptom Management Summit. Using a design thinking approach, stakeholders engaged in multiple collaborative structured activities, supported by data and designed to encourage critical discussion, creativity, and innovation, while acknowledging both system-level and local concerns and barriers. Collaborations were both cross-disciplinary and cross-regional, and encouraged sharing of both challenges and successes in cancer symptom reporting and management. Patient and family advisors were integrated not only in the initial planning phase of the Summit, but at each activity during the day to ensure their perspective was incorporated throughout. The Summit resulted in a deeper understanding of multi-stakeholder needs and challenges, identified as strategic priorities in improving symptom management across the Province. These priorities have already started to inform system-level change initiatives. Summit outputs also included Regional Quality Improvement Plans, developed and signed at the Summit by senior administrators, clinicians, and patient and family advisors from each of the 14 Ontario Regional Cancer Centres. Regions will be accountable for ensuring implementation of locally-appropriate strategies to improve the symptom management experience for all stakeholders, most importantly patients. Feedback from Summit participants indicated that the design thinking approach was appropriate to meet Summit objectives; and the integration of patient and family advisors into Summit planning and process was identified as a key driver of success. Quality management of patient symptoms involves a multi-disciplinary team of providers together with supportive administration and resources. To understand challenges and identify priorities, all stakeholders must participate in strategic planning for improvement, both locally and across the system. Patients are an essential voice in designing meaningful change.

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A comparison of regulatory policies governing the promotion of prescription medicines by pharmaceutical sales representatives in Canada, France, and the United States
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Pharmaceutical sales representative (PSR) visits to doctors can affect prescribing and patient safety. Countries employ various regulatory measures to manage these promotional activities. We examined the barriers and enablers to an effective regulatory framework through a comparative analysis of how regulations work in practice in Canada, France, and the United States. Semi-structured interviews were carried out with 36 key actors/stakeholders in this area of regulation across the three jurisdictions, complemented by a literature review of the regulatory approaches in these countries. Interviewees were recruited using a snowball sampling strategy and represented the regulatory, industry, health professional and consumer perspectives (3 interviewees per group per country). A thematic analysis of transcribed interviews was carried out using the five-step framework analysis approach: 1) familiarization with data 2) identification of a thematic framework 3) indexing 4) charting and 5) mapping and interpretation. This is the first multinational study comparing regulatory experiences in this sector. There are divergent perceptions on the effectiveness of regulations both across jurisdictions and actor/stakeholder groups. Frequently cited concerns from regulators in all countries included the lack of monitoring capacity, the ineffectiveness of enforcement activities, and a scarcity of objective evaluations of regulatory performance. Contrasting opinions were found between regulatory and industry interviewees on how well regulations were protecting public health. Health professional stakeholders were most likely to prefer measures to counteract industry influence by helping improve access to unbiased information, such as academic detailing, while consumer stakeholders cited the lack of visibility of problems arising from inappropriate pharmaceutical promotion as a barrier to raising public awareness and holding key actors accountable. Countries have widely varying regulations on PSR visits, but similar concerns are cited on regulatory effectiveness across jurisdictions. Actors and stakeholders have a variety of perceptions and recommendations, suggesting the need for more focused dialogue between regulators, industry, healthcare professional and consumer groups to identify mutually acceptable solutions to this regulatory issue.

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A Rapid Scoping Review Update For Non-Clinical Interventions For Reducing Unnecessary Caesarean Section
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To perform a rapid scoping review to assess the updated literature on studies assessing the effectiveness and safety on non-clinical interventions for reducing unnecessary caesarean sections with the intention of informing an update for the original Cochrane review published in 2011. We searched the electronic databases - Medline, Embase, Cochrane Central Register of Controlled Trials, Cochrane Library, CINAHL - for potentially relevant articles indexed between March 2010 and August 2014. Potentially eligible articles were single-screened and selected according to the inclusion criteria by all members of the review team, and single data abstraction was performed by all members of the study team using a standardized data extraction form. The electronic search strategy identified 2424 references for title and abstract screening. Ninety-one articles underwent full-text screening, and eleven references reporting eight studies met our inclusion criteria. Five studies (four randomized controlled trials; 1 quasi-experimental study) described non-clinical interventions specifically targeted at pregnant women or their family members, including two that evaluated the effects of group education regarding mode of delivery on intention for and rate of caesarean section, and three evaluated lifestyle or complementary therapy interventions delivered prior to labour. Three studies (one interrupted time series; two uncontrolled before and after studies) evaluated the use of audit and feedback targeting healthcare professionals. No new studies evaluating financial or regulatory interventions were identified. Interventions to address the rise in caesarean section rates is an international concern and active area of primary research. This scoping review lends support to the original Cochrane review in 2011 and indicates that there are additional reported non-clinical interventions that may also be useful in addressing this global priority.

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Abuse in childhood substantially increases the risk of later depression and anxiety: a systematic review of cohort studies  

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Childhood abuse is a major public health and social welfare problem. It is recognized as one of the leading causes of adult mental disorders. We synthesized the research evidence on the potential quantitative effect of reducing childhood abuse on the occurrence of depression and anxiety. Medline, PubMed, Embase, PsycINFO, and Cochrane library electronic databases from 1990 to 2013 were searched for empirical English language cohort studies with criteria for depression, anxiety, and childhood maltreatment. The grey literature on the topic was also searched. Studies that measured maltreatment via recall methods were excluded. Systematic review with meta-analysis was used to synthesize the quantitative effect of childhood abuse on depression and anxiety taking into account study quality. Heterogeneity and publication bias were thoroughly examined. Initial screening resulted in 5,067 articles; 3,340 titles and abstracts were reviewed; 199 papers were retrieved for full text screening. Eight good quality articles satisfied the criteria for analysis. Heterogeneity mandated random and fixed effect models. The pooled odds ratio (OR) between any type of maltreatment and depression and anxiety disorders was 2.03 (95% CI 1.37-3.01) and 2.70 (95% CI 2.10-3.47) respectively. Significant associations were also observed for specific types of maltreatment or depression or anxiety disorders, including physical abuse (OR=2.00, 95% CI 1.25-3.19), sexual abuse (OR=2.66, 95% CI 1.88-3.75), and neglect (OR=1.74, 95% CI 1.35-2.23). Population attributable fractions suggest that over half of global (365 million) and one third of Canadian (1.78 million) depression and anxiety cases are potentially attributable to childhood maltreatment. A 10-25% reduction in child maltreatment could potentially prevent 31.3-80.2 million depression and anxiety cases worldwide and 124,000-325,000 cases in Canada. This systematic review provides robust evidence about the effects of childhood maltreatment on the subsequent incidence of depression and anxiety in adolescence and adulthood. The results of this analysis reinforce the need for health and social services programs and policies aimed at reducing the prevalence of childhood maltreatment.

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Administrative data and Life Course Epidemiology  

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Systematic comparisons of the events at different life stages depend on very large number of cases with many variables measured over substantial periods of time. Using high school graduation as an example, this study aims to demonstrate the unique suitability of administrative data to conduct life course epidemiology. Files from the Population Health Research Data Repository at the Manitoba Centre for Health Policy (MCHP), linked across ministries, include information on individual level health and education. A cohort of children born in Manitoba, Canada in 1984-1989 residing in province until age 19 (N = 45 734) were followed to determine the mechanisms by which time-varying predictors influenced the odds of graduating high school. Six distinct models – the full life course model, the accumulation of risk model, the sensitive periods model and three critical period models – were examined for seven time-varying predictor while controlling for a set of background variables. The data proved to give significant insight into how and when events in childhood and adolescence influenced the odds of graduating high school. The models that worked best differed across predictors; each ‘group’ of predictors was best fit using a different model. The full model worked best for the family instability variables (residential mobility and family structure changes), sensitive periods models worked best for externalizing mental conditions (ADHD and Conduct Disorder/ODD) and the accumulation of risk model worked best for major injuries. Two variables were not significant and were removed from the model. These predictors provided a reasonable fit for the outcome (c-statistic = 0.781, Brier Score = 0.13). This study provides a framework and demonstrates the usage of administrative data to conduct life course epidemiology. Administrative data is an invaluable tool for conducting life course research as it is more cost effective than large scale cohort studies relying on surveys and provide more accurate timing of events.

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Bonus Payments for Avoiding Outside Use in Ontario’s Leading Primary Care Capitation Model  

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Primary care capitation payments are generally made for a defined basket of services, with some incentive/penalty for discouraging outside use for the same services. Our objective was to examine that incentive in Ontario, the Access Bonus, a payment of up to 18.6% of capitation for avoiding outside primary care use. We used Ontario’s administrative datasets that were linked using unique, encoded identifiers. We identified Access Bonus payments in 2012-2013 to physicians in Family Health Organizations, the leading capitation-based payment model. We ordered physicians into quintiles according to the proportion of the maximum possible Access Bonus payment they received, and examined characteristic associated with that earning, including: physician age, sex, country of medical school graduation, years in practice, roster size, and group size; patient age, sex, rurality, morbidity, area-level income, and immigration status; and, as markers of access, use of after-hours primary care and low-urgency emergency department visits. The median Access Bonus payment per physician ranged from $35,033 in the highest quintile to $0 in the lowest. Physicians in the highest quintile were more likely to be Canadian medical graduates (82.6% versus 74.9%, p<0.001) and to be male (61.6% versus 55.6%, p<0.001) and were 7.4 times more likely to serve rural areas (66.0% versus 8.9%, p<0.001). Other patient characteristics were similar. In the highest quintile, 14.2% of visits were made after-hours versus 18.0% in the lowest quintile, p<0.001. The rate of low-urgency emergency department visits was twice as high in the highest quintile as the lowest (20.0 per 100 patients versus 10.0, p<0.001) and this pattern remained after urban-rural stratification. High urgency emergency department visit rates were similar across quintiles and urban-rural settings. In Ontario’s leading primary care capitation model, bonus payments for avoiding outside use are substantial in amount and reward rural physicians. Those receiving the highest payment proportion do not provide more after-hours care and do not have fewer low-urgency emergency department visits. These payments may not align with policy objectives.

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Caring is sharing: Provider perceptions of secondary use of anonymized health information  

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Health researchers and health care professionals are increasingly seeking access to linked and anonymized individual-level patient data, for purposes of research, accountability and improved care. Providers, however, may be reluctant to share patient data. The current research examines when providers are comfortable sharing patient data for purposes of secondary use. Providers may be reluctant to share patient data when they perceive a risk in sharing—but that perception of risks, in relation to benefits or sharing, may not correlate with actual risks and benefits. We survey providers' willingness to share across several variables, including type of record shared, degree of individuation of data, nature of record (electronic versus paper), to whom data is shared with, who benefits from sharing directly, and how familiar the provider is with sharing procedures. Providers (Ontario physicians and residents) were asked to read and respond to six vignettes, where variables of interest were varied and counterbalanced. Recruitment is ongoing (estimated completion: March 2015), but we hypothesize that providers will be more willing to share patient survey responses (relative to medical records), aggregated data sets, such as practice-wide disease rates (relative to individual records), paper records (relative to electronic records), with public institutions, such as university-affiliated researchers (relative to private insurance or pharmaceutical firms), when the patient benefits directly from sharing (relative to when the patient does not benefit directly), and when providers are more familiar with sharing practices. As we move from paper to electronic records, this include mobile devices, email, and wearable technology into care, opportunities to capture, aggregate, and share patient data have increased. Understanding unique challenges for providers to sharing anonymized health records is an important step toward improved research and quality of care.

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Community general paediatricians’ barriers to providing ASD diagnoses: a qualitative study

MELANIE PENNER
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Community general pediatricians (CGPs) are often consulted in cases of suspected ASD, and may play a role in increasing ASD diagnostic capacity in the community setting. The objective of this study was to explore the perspectives of CGPs regarding their role in the system of ASD diagnoses using qualitative methods. We performed a phenomenological qualitative study of CGPs’ experiences with suspected ASD. Two groups of CGPs were sampled to provide variation in perspectives: CGPs that had referred at least one patient suspected of ASD for a specialist assessment, and CGPs that regularly attended ASD educational events. Individual in-depth interviews were recorded and transcribed. Two investigators coded each interview. Thematic saturation was reached when two successive interviews did not generate new codes. Texts were analyzed using a grounded theory approach. A preliminary theoretical framework was summarized and sent to participants with a request for feedback. This feedback was incorporated into the final theoretical framework. Eleven in-depth interviews were conducted (six males, five females). Participants described three elements of assessment: diagnostic determination, communication of the diagnosis, and management of the diagnosis. Diagnostic determination was affected by patient factors (such as age, severity, and comorbidities), family factors (the reliability of the historian), and physician factors (such as training, access to informal expert consultation, and interest in ASD). When communicating the diagnosis, it was important that families know enough, but not too much, about ASD; families who knew too much were perceived to need an “expert” opinion. Participants felt ill equipped to deal with the fragmented service delivery system for ASD. Helping families to access services was time-consuming, poorly remunerated, and less satisfying than other areas of pediatric practice. Though CGPs are frequently consulted on cases of suspected ASD, they experience many barriers to making a diagnosis, leading to increased subspecialist referrals. Efforts to improve diagnostic capacity in this group must focus not only on diagnostic determination, but also on communicating the diagnosis and efficiently connecting families to resources.

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Cost-effectiveness analysis comparing pre-diagnosis autism spectrum disorder (ASD)-targeted intervention with Ontario’s Autism Intervention Program

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New intervention models propose providing autism spectrum disorder (ASD) interventions, such as the Early Start Denver Model (ESDM), before diagnosis. We performed a cost-effectiveness analysis comparing costs and dependency-free life years (DFLYs) generated by comparing both pre-diagnosis intensive ESDM (ESDM-I) and parent-delivered ESDM (ESDM-PD) to the Ontario Status Quo (SQ). The analysis took a time horizon to age 65 using both provincial government and societal perspectives. Estimates of effectiveness came from published literature. The mean expected IQ was estimated for each intervention profile. IQ outcomes were assigned a probability of achieving an Independent (60 DFLYs), Semi-Dependent (30 DFLYs) or Dependent (0 DFLYs) outcome. Costs were determined using the budget of an ESDM pilot project and government publications. A discount rate of 3% was applied to costs and effects occurring more than one year in the future. An incremental cost-effectiveness ratio (ICER) was calculated. One-way and probabilistic sensitivity analyses were performed. From a provincial perspective, the ESDM-PD resulted in a savings of nearly $9,000 per person to age 65 compared to SQ, and generated 0.17 additional DFLYs. The ICER for ESDM-I compared to SQ was $23,000 per DFLY gained, and the ICER for ESDM-I compared to SQ was $58,000 per DFLY gained. One-way sensitivity analyses showed the model was most sensitive to uncertainty in predicting functional outcomes from IQ. From a societal perspective, the ESDM-I was the dominant strategy, producing more DFLYs for a lower cost than ESDM-PD or SQ. The societal model was most sensitive to uncertainty in predicted functional outcomes and caregiver costs. Probabilistic sensitivity analyses for both provincial and societal models showed considerable uncertainty in the effectiveness estimates of the interventions. Pre-diagnosis ASD-targeted intervention may be associated with cost savings compared to current Ontario service models; however, predicted gains in independence based on increased IQ remain low with all programs. Further study on the effectiveness of these models is necessary to decrease uncertainty in the cost-effectiveness estimates.

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Cost-Effectiveness Analysis of Preimplantation Genetic Screening in In Vitro Fertilization

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The objective of this study was to examine the cost-effectiveness, per ongoing pregnancy achieved, of in vitro fertilization (IVF) with and without preimplantation genetic screening (PGS). A decision analytic model was developed to compare IVF alone and IVF with PGS from a societal perspective. The time frame of the study was one IVF cycle, defined as one egg retrieval and any or all subsequent embryo transfers. An ongoing pregnancy was defined as any pregnancy reaching the second trimester of gestation. Outcome probabilities were extracted from the peer-reviewed literature or based on expert opinion. Costs were obtained from Ontario fertility clinics, the Ontario Schedule of Benefits, and expert opinion. One way and probabilistic sensitivity analyses were conducted to examine the robustness of the model. Using base case estimates, the chance of achieving an ongoing pregnancy was 35% with IVF alone and 51% with IVF with PGS. The costs per ongoing pregnancy were $16,916 and $18,512 for IVF alone and IVF with PGS, respectively. The incremental cost-effectiveness ratio was $9,649 per ongoing pregnancy. The one way sensitivity analysis indicated that the model was most sensitive to uncertainty in the probability of achieving an ongoing pregnancy with IVF alone. Probabilistic sensitivity analysis revealed that IVF with PGS was more expensive but more effective than IVF alone in 76% of iterations, but dominant in 23% of iterations. IVF with PGS was more expensive and also more effective than IVF alone in achieving an ongoing pregnancy, with an incremental cost-effectiveness ratio of $9,649. Future research should focus on extending the outcome measure to live birth and utilizing Ontario data to refine the probability inputs.

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The objective of this study was to validate a decision aid to assist patients in choosing between four different oral anticoagulants (warfarin vs. dabigatran vs. rivaroxaban vs. apixaban) for atrial fibrillation (AF). The validation assessed decisional conflict, knowledge transfer, and overall clarity, comprehensiveness and helpfulness in making evidence-informed decisions. The study design was a prospective case series assessing face validity and construct validity. Participants (age ≥ 60 yr) were recruited from thrombosis and cardiology clinics. The decision aid described AF, stroke, bleeds, anticoagulation versus nothing or aspirin, then compared the four anticoagulants on important clinical, lifestyle and cost outcomes. The primary outcome was confidence in making decisions regarding their treatment, using a validated decisional conflict scale. The secondary outcomes included: change in knowledge scores and ratings of clarity, helpfulness and comprehensiveness. 81 patients (mean age 73.8 [SD 8.5], 34.6% female, 77.8% taking anticoagulant) participated. After using the decision aid, the mean decisional conflict score was low at 6.5 (SD 10.6) on a scale from 1-100. The mean knowledge score was 74 (SD 1.7) out of a total score of 10 and improved to 9.3 (SD 1.0) following use of the decision aid (p<0.001). The mean helpfulness score of the decision aid in making a treatment choice was high at 6.15 on a scale from 1 to 7. Only one participant (1.2%) found presented information in the decision aid difficult to understand. Information about the general health care costs was significantly different across Ontario primary care models. Using the traditional FFS as the reference, analyses that adjusted for patient factors showed that patients in enhanced-FFS models had the lowest primary care and total health care costs while patients in blended capitation models had higher primary care but lower total health care costs. Incremental costs for primary care in blended capitation models appear to be offset with lower total health system care costs. The differences in patients’ characteristics across models (selection bias) suggest that case-mix variables included as risk adjustment in these analyses may not fully capture patients’ complexity.

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Design, Implementation and Evaluation of Complex Care Interventions in the Community

VALERIA RAC

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Complex interventions (ClIs) are defined as interventions with several interacting components. They are context-dependent and go beyond the PICO model research question. The objective of this abstract is to present our experience with the design, implementation and evaluation of complex health care interventions for chronic disease management in the community. The Wound Interdisciplinary Teams (WIT) study is a community-based two-arm pragmatic randomized controlled trial designed to evaluate the effectiveness and cost-effectiveness of a systematic referral process to improve primary care access to multidisciplinary wound care teams (MDWCTs) in Toronto from May 2011 to May 2013. Telehomecare (TLC) study is a multi-level program evaluation of telehomecare provided to community-based patients with heart failure or chronic obstructive pulmonary disease. Telehomecare program was launched in Ontario in 2007, and is currently being implemented across three Local Health Integration Networks (LHIINs): Toronto Central, Central West and North East LHIINs. During design and implementation of the WIT study we were faced with different challenges/barriers; many of them were context driven and very specific to community setting. Many challenges were associated with multiple stakeholders’ involvement (four community clinics, four nursing agencies, two multidisciplinary wound care teams) and different organizational and research culture they bring. Some of these barriers significantly affected conduct of the study and validity of study results. Evaluation of telehomecare program identified various organizational factors (facilitators and barriers) and processes, which facilitated or impeded the implementation and adoption of telehomecare across three LHIINs. We were able to identify which of the critical success factors have been implemented in which LHIINs to date and what implementation strategies appear to be the most responsible for success. There is an increasing role for complex health care interventions in the community setting. However their design, implementation and evaluation might be very challenging. Early engagement of all stakeholders might understand the role of context and implementation processes is essential for successful design and implementation of complex interventions.

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Costs of Mental Health Care Services among High Cost Users in Ontario

PAUL KURDYAK

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A small proportion of health care users account for a disproportionately large share of health care costs; these patients are commonly termed high-cost users (HCUs). HCUs for whom the majority of cost is attributable to mental health service use may differ from HCUs with primarily non-mental health related costs. We evaluated HCUs in Ontario, Canada using administrative health care databases for the fiscal year 2012. Mental health HCUs were defined as patients in the 90th percentile of the cost distribution for whom 50% or more of costs were mental health-related; non-mental health HCUs were defined as all other HCUs. Mental health HCUs were compared to non-mental health HCUs on socio-demographic characteristics, health care utilization, and total and average costs. In 2012, there were 38,739 mental health HCUs in Ontario that accounted for a total cost of $1.4 billion to the health care system. The average cost was $36,502 per user compared to $24,666 per non-mental health HCUs (p<0.01). Mental health HCUs were generally younger and of lower income than non-mental health HCUs. Now compare them on other outcomes, ED and physician services. Approximately 78% of mental health HCUs had at least one psychiatric hospitalization and over 90% had at least one physician outpatient visit., but A substantial proportion of mental health HCUs used non-mental health services while few non-mental health HCUs used mental health-related services. Mental health HCUs are younger, incur higher average health care costs and have different health care utilization patterns compared to non-mental health HCUs. This should be considered in policies and interventions designed to address high health care spending.

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Costs of Health Care across Primary Care Models in Ontario

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This study analyzed the relationship between Ontario primary care remuneration models (fee-for-service (FFS), enhanced-FFS, and blended capitation) and primary care and total health care costs. Utilization data for one year was examined using administrative databases at the Institute for Clinical Evaluative Sciences for a 10% random sample selected from the Ontario adult population eligible for public health insurance (n=1,171,019). Primary care and total health care costs were calculated at the individual level including costs from physician services, hospital visits and admissions, long term episodes, drugs, home care, rehabilitation, lab tests, and visits to non-medical health care providers. Analyses used both log-transformed ordinary least squares and generalized linear model regressions. FFS Patients were younger, more likely to be males and of lower income; they also had higher health care costs, which were mainly driven by longer term episodes and hospital costs. Patients in blended capitation models were healthier and wealthier than those of other primary care models. Primary care and health care costs increased with patients’ age, morbidity, lower income quintile and for females. Primary care and total health care costs were significantly different across Ontario primary care models. Using the traditional FFS as the reference, analyses that adjusted for patient factors showed that patients in enhanced-FFS models had the lowest primary care and total health care costs while patients in blended capitation models had higher primary care but lower total health care costs. Incremental costs for primary care in blended capitation models appear to be offset with lower total health system care costs. The differences in patients’ characteristics across models (selection bias) suggest that case-mix variables included as risk adjustment in these analyses may not fully capture patients’ complexity.

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Development and Validation of a Decision Aid for Choosing Among Anticoagulants for Atrial Fibrillation

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The objective of this study was to validate a decision aid to assist patients in choosing between four different oral anticoagulants (warfarin vs. dabigatran vs. rivaroxaban vs. apixaban) for atrial fibrillation (AF). The validation assessed decisional conflict, knowledge transfer, and overall clarity, comprehensiveness and helpfulness in making evidence-informed decisions. The study design was a prospective case series assessing face validity and construct validity. Participants (age ≥ 60 yr) were recruited from thrombosis and cardiology clinics. The decision aid described AF, stroke, bleeds, anticoagulation versus nothing or aspirin, then compared the four anticoagulants on important clinical, lifestyle and cost outcomes. The primary outcome was confidence in making decisions regarding their treatment, using a validated decisional conflict scale. The secondary outcomes included: change in knowledge scores and ratings of clarity, helpfulness and comprehensiveness. 81 patients (mean age 73.8 [SD 8.5], 34.6% female, 77.8% taking anticoagulant) participated. After using the decision aid, the mean decisional conflict score was low at 6.5 (SD 10.6) on a scale from 1-100. The mean knowledge score was 74 (SD 1.7) out of a total score of 10 and improved to 9.3 (SD 1.0) following use of the decision aid (p<0.001). The mean helpfulness score of the decision aid in making a treatment choice was high at 6.15 on a scale from 1 to 7. Only one participant (1.2%) found presented information in the decision aid difficult to understand. Information about AF, stroke, bleeding, benefits, harms and the summary drug comparison table was rated as good or excellent in terms of clarity and comprehensiveness. Our Anticoagulant Decision Aid helps patients participate in shared decisions about anticoagulation, which is the highest priority medication safety topic in Canada. Future research is required to evaluate how the decision aid influences actual anticoagulant choice and clinical outcomes.

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Different Patterns of Advanced Access Implemented in Primary Healthcare Practice

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Several international surveys show that timely access to primary healthcare is an important problem in Canada. One solution for improving timely access is the implementation of advanced access in primary care health settings. The objective of this presentation is to show different patterns of advanced access implemented in medical practices. The Ministry and Health of Social Services of Quebec and the Quebec Federation of General Practitioners (FMGQ) developed a 3-day training session for family physicians willing to implement advanced access in their practice. We invited family physicians from the two first cohorts of this training session (2011 and 2012) to participate in our study. We conducted 20 interviews with family physicians. All interviews were coded by two independent researchers with QDA Miner. Analysis was based on several codes such as collaboration with nurses, the secretary's role, scheduling strategies, caseload and the perceived effects of advanced access on practice and patient satisfaction. Three distinctive patterns of advanced access were observed. The most popular pattern is “standard advanced access” was implemented by 13 of the family physicians interviewed. Its main characteristics are: 1) the extended role of nurses managing follow-ups for patients with chronic disease and 2) appointment schedules open two weeks in advance. The second pattern, “hybrid advanced access,” was implemented by five family physicians and is characterized by: 1) nurses having more traditional family physician’s assistant roles, 2) the presence of a recall list or maintaining annual visits, and 3) multi-site practices. A third pattern of “very light advanced access,” implemented by two physicians, is based on 1) willingness to offer timely access, but working solo, with strong collaboration with nurses, without synergy with the secretary in adopting new scheduling strategies, 2) working longer hours than before to meet the exceeding demand and 3) a caseload of vulnerable patients. Advanced access requires time to be fully implemented and calls for important changes in practice that should be planned. All family physicians interviewed, except one, were very satisfied with the implementation of advanced access in their practice, would not go back and perceive benefits for themselves, their team and their patients.

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Do British Columbians with major depression receive minimally adequate care?

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The objectives of this study are to determine the degree to which patients diagnosed with major depression received minimally adequate counseling or psychotherapy (>4 sessions/year), minimally adequate antidepressant therapy (at least 84 days/year), and either treatment modality; and, to measure physician- and patient-level variations in the receipt of depression care. We used linked health administrative data from BC to identify, retrospectively, individuals who received inpatient or outpatient diagnoses of major depression (ICD-10-CA F33.1-F33.9) in 2010-11. We exclude those treated for bipolar I and schizophrenic disorders during a 12-month period before and after the index date of MD diagnosis. The use of publicly-funded MD-related health services (i.e. physician visits and prescription fills) were tracked for 12 months. The influence of patient-level characteristics and physicians-level variations on the receipt of minimally adequate health services where assessed using mixed-effects logistic regression analyses. We identified 110,529 individuals, predominantly women (65%) and urban residents (89%), who met study criteria. Of the total, 13% received minimally adequate counseling/psychotherapy with higher proportions observed among men, younger individuals, and urban residents. In contrast, there were more who received minimally adequate antidepressant therapy (48%), with women, older individuals and rural residents having the highest proportions. Overall, around 53% received either forms of treatment and the pattern of use is similar to that of antidepressant therapy. After adjustments for other factors in a multivariable model, these factors remain independent predictors of the receipt of minimally adequate depression care. Further, results indicate the presence of potentially important differences in the receipt of depression care that are attributable to variations among physicians, especially with respect to counseling or psychotherapy. Only about half of British Columbians diagnosed with major depression receive either minimally adequate counseling/psychotherapy or minimally adequate antidepressant therapy. Disparities also persist, affecting mostly men and younger individuals. Policies aimed at improving access to and reducing physician variations in the provision of depression care are therefore needed.

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Do economic fluctuations affect the health behaviours of Canadians?

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Our objective is to provide Canadian estimates for the association of modifiable health behaviours, self-assessed mental and general health, with economic fluctuations. More specifically, we look at variation in unemployment rates at the Census Metropolitan Area (CMA) level to understand how local labour market changes affect the above variables. All cycles/years of the CCHS (cycle 1.1 to 2013) are pooled to construct a panel data set. We include only variables consistently available. A model with location (CMA) and time (month and year) fixed effects, clustered at the CMA level, is estimated. This model differences out time invariant unobserved heterogeneity over the period studied and provides unbiased coefficient estimates. For example, some geographic areas may experience both poor health and high unemployment but a causal relationship does not exist. If individuals within CMAs have similar unobservable characteristics errors may be correlated - clustering addresses this to provide robust standard errors. Health behaviours are measured using dichotomous variables for smoking, alcohol use, physical activity and consumption of fruits and vegetables. Some of the results are as follows. Smoking increases during economic downturns while alcohol use (measured by heavy drinking and binge drinking) decreases. Physical activity also decreases. Daily consumption of fruits and vegetables increases for those who consume less than 5 servings per day but decreases for those who consume more than 5 servings per day – some individuals take on positive health behaviours. Individuals that report being in poor and fair health increase while those that report good and very good health decrease. Life and work stress increase during economic downturns in addition to those reporting poor and fair mental health. Health systems can help to change health behaviours and improve health. Programs and services delivered by health professionals that help improve individual health behaviours can facilitate prevention rather than treating conditions or illnesses. Understanding Canadian health behaviours during economic fluctuations can inform policymakers when making decisions for improving population health, especially in times of fiscal restraint.

Effects of Family Medicine Groups on visits to the emergency department among diabetics in Quebec between 2000 and 2011: a population-based segmented regression analysis of an interrupted time series

RENEE CARTER
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Family Medicine Groups (FMG) were introduced in Quebec in 2002 to re-organize primary care practices and encourage team-based and inter-professional approaches to service delivery. We measured visits to the emergency department (ED) as a proxy for access to and quality of primary care, before and after the reform using an open cohort of individuals diagnosed with Type 1 and Type 2 diabetes. Administrative databases were used to derive the weekly rate of ED visits for acute diabetes complications between April 1, 2000 and March 31, 2012. We performed an interrupted segmented regression analysis to derive the estimated and extrapolated rates of visits in the years following the introduction of the reform. We employed an outcome control series of diabetics visiting the ED to treat appendicitis to strengthen the study's internal validity. After 9 years of reform implementation, we observed a reduction of 2.12 and 2.25 visits to the ED per 10,000 diabetics per week to treat acute diabetes complications in urban and rural areas, respectively. This accounts for approximately a 36% and 34% decrease in the weekly rate of visits in urban and rural regions, respectively. No change in the rate of visits to the ED for appendicitis was observed by the end of the study period. Our results suggest that the decreases in the rate of ED visits are attributed to the implementation of the FMG reform. Evidence of these decreases despite the low-intensity nature of the FMG reform suggests the potential for this model to act as a future platform for implementing comprehensive care models for chronic disease management.

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Engaging older adults in healthcare research and planning: Guidelines from the CHOICE project

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Engaging the community in healthcare research and planning has been recognized as an important component of system improvement. The involvement of older adults is particularly critical, given that they are high users of the healthcare system. Best practice guidelines for engaging older adults and their families will be presented. In the CHOICE project, we conducted a realist synthesis (Greenhalgh et al., 2001; Pawson et al., 2005) of available knowledge on strategies for engaging older adults and their families (including other informal caregivers) in healthcare. The search methodology was informed by a framework for realist review (Wong et al., 2013). Our synthesis encompassed theoretical frameworks and peer-reviewed and grey literature. Expert consultation included interviews with academics (n=2), two focus group interviews with seniors and families, and two half-day workshops organized with our partner Patients Canada. The initial search generated over 15,000 articles; of these, 546 were identified as relevant to healthcare research and planning and were retained for further review. A framework for engagement has emerged from this project. Theoretical and empirical work identifies a number of best practice guidelines and associated strategies for engagement of older adults and their families in healthcare research and planning. We have developed best practice guidelines and strategies for engaging older adults and their families in healthcare research and planning. We plan to implement and evaluate the guidelines and strategies from the CHOICE project, in collaboration with members of our SHARP (Seniors Helping as Research Partners) network.

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Effects of Housing First on employment and income of homeless individuals: results of a randomized trial

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Housing First (HF) is being established as an evidence-based practice for the treatment of homeless people with a mental illness. The objective of the present study is to determine if HF increases employment in this population. We also seek to determine if informal and illegal sources of revenue change. Between October 2009 and March 2011, a sample of 2148 people with recent experiences of homelessness and mental illness were recruited from five Canadian cities. Participants were classified into two groups based on need level and then randomized to either HF or treatment as usual (TAU). Interviews at three month intervals included questions about vocational activities and earnings. Regression models estimated via generalized estimating equations were applied to determine the effect of HF on obtaining competitive employment. The median follow-up time was 720 days with an interquartile range of 645 to 737. Participants receiving HF had less chance of obtaining employment compared to TAU: adjusted odds ratio for high needs of 0.69 (p=0.016, 95% CI 0.51-0.93) and 0.77 (p=0.070, 95% CI 0.58-1.02) for moderate needs. Odds ratios are adjusted for age, gender, location, and housing stability. Statistically significant differences were observed between cities. HF had no impact on types of income. The trends observed in this study suggest that HF alone does not increase the probability of obtaining competitive employment. Additional services may be required to help people achieve their goals of employment. Further research is needed to determine why people receiving HF have reduced odds of finding employment.

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Episodic Caregiving - The Caregiving Sister That Policy Forgot

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The Episodic Caregiver Support Initiative was launched in the fall of 2013 to explore the needs of family/friend caregivers of individuals with episodic disability in Ontario. The objective was to answer the question: What is the ideal model of support for family/friend caregivers of persons living with episodic disabilities? Research involved a literature review, a survey of caregivers and persons with episodic disabilities, an environmental scan & an accompanying commentary to the scan, as well as in-person focus groups in order to get a deeper understanding of the challenges that are unique to this subset of family/friend caregivers. Through the research and the stories shared, we learned that there was much that the broader social systems and we as a society could do in order to better demonstrate the value we intrinsically place on caregiving. The results fell within the following categories: - Unique aspects of caregiving in an episodic disability context - Impact of episodic disability on different care relationships - Access to supports - The ideal system Drawing on the lessons learned from this project a model was developed to depict how caregivers need to be supported to address the life domains most impacted by their caregiving of a person living with episodic disability: education/information; job security and flexibility; income adequacy and security; health services; emotional wellness; and social supports. The onset of episodic disabilities in young adulthood or midlife and the long-term, unpredictable and fluctuating nature of these illnesses yields challenges for caregivers that are both similar and different to those experienced by those who care for a person with a long-term disability or aging-related conditions.

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Examining the influence of organisational and institutional arrangements on priority-setting for health technology assessment (HTA): A mixed methods study

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Priority-setting for health technology assessment continues to be a challenge. Currently, evidence on how technologies are prioritized for assessment and whether current processes are effective is limited. This study seeks to understand how HTA organisations approach priority-setting and how institutional and organisational contexts within which HTA organisations operate influence priority-setting. A mixed methods design encompassing a descriptive survey and qualitative comparative case study is used. The descriptive survey analyzes the range of ways in which HTA organisations address priority-setting and the specific processes that are used. The qualitative comparative case study assesses how differences in the institutional and organisational contexts within which HTA organisations operate influence how technologies are prioritised for assessment. Adopting a critical social science perspective, and specifically institutional theories of organisation and organisational decision-making, this research aims to understand how the institutional and organisational norms, interests, and structures within which HTA organisations function affects priority-setting processes. Increasing attention has been placed on the development of rational and explicit priority-setting processes and tools to support decisions regarding which technologies should be prioritized for HTA. Yet evidence suggests that the way in which HTA agencies set priorities for assessment varies across different countries. This study suggests that approaches to priority-setting for HTA may be influenced by three contextual levels in which priorities are being set. The contextual levels include the jurisdictional and institutional location of the HTA agency, its organisational context, and internal decision-making context of the HTA agency. This study suggests that despite the emphasis on the development of rational approaches to setting priorities for HTA, a focus on decision-making methods cannot override the political and institutional dynamics of priority-setting. This study aims to understand problems of applying rational approaches to priority-setting and utility of such approaches. In efforts to improve priority-setting processes in HTA, this study will help decision-makers identify where resources are efficiently allocated through understanding what does and doesn't work for priority setting in HTA.

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Family physicians' interactions with sales representatives: a focus group study in three countries
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To examine and compare the experiences of family physicians in Canada, the United States, and France in their interactions with pharmaceutical sales representatives, in particular physician attitudes about the quality of safety information provided by sales representatives and the influence on prescribing practice. Fifty-seven family physicians in four research sites (Vancouver, Montreal, Sacramento, and Toulouse) participated in 12 focus groups; all had participated in a prior observational study of the quality of safety information provided by pharmaceutical sales representatives in three different regulatory environments. The focus groups provided an opportunity to further explore physicians' experiences of these interactions and responses to key study findings. The latter indicated a serious problem with information quality and balance. A thematic analysis was conducted following the five-stage framework analysis approach: 1) familiarization, 2) identifying a thematic framework, 3) indexing, 4) charting, and 5) mapping and interpretation. Physicians participating in the focus groups are seeking accessible, evidence-based information on medicines to inform their prescribing practices. One of the main sources of drug information used by physicians is sales representatives. Physicians report a high level of awareness that interactions are biased and promotional. Their expectations of receiving balanced information about drug benefits and harms from sales representatives are low, and most do not acknowledge an influence on prescribing. The physicians who participated in the focus groups see sales representatives regularly and value the information, drug samples, food and invitations provided. Attitudes toward the interaction, and toward the inadequate provision of information on harm were often contradictory. The French physicians raised safety concerns more often than those in Canada or the U.S. Given the high level of cognitive dissonance among physicians, reliance on information provided by pharmaceutical sales representatives is likely to continue, despite information biases, unless regulations limit these interactions. Physician experiences and preferences identified in this study may inform the development of interventions to address the immediate lack of safety information.
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Gender differences in primary care clinical activity and uptake of incentive payments in British Columbia: A preliminary analysis
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The objective of this study is to examine the extent to which observed differences in physician income and activity between male and female primary care physicians are driven by differential uptake of a) non-clinical payments, including bonuses, incentives, on-call payments and others; and b) alternative-payment programs (APP). We used population-based administrative data from PopDataBC: patient and physician registries, physician billing records (for all fee-for-service (FFS) encounters) and APP (non-fee-for-service) payments for all BC physicians for 2005-12. We modeled percent of compensation for non-clinical activities, and percent of compensation from APP and FFS sources using generalized linear models for each study year. Results are presented as annual least-squares mean percent for male and female physicians. Average physician compensation remained constant during the study period. Payments for non-clinical activity increased significantly (from $19,935 to $35,980) while payments for clinical care declined (from $200,723 to $184,374). The proportion of physicians' income derived from non-clinical and APP sources increased significantly over the study period. Male physicians had significantly higher income in all study years. From 2007/8 forward, significantly more of male physicians' income came from non-clinical activities compared with females. Non-clinical activities accounted for 11% of the income gap between male and female physicians in 2005/6; this increased to 22% in 2011/12. Female physicians, received a significantly larger proportion of their income from APP sources for the duration of the study period, offsetting the observed gender gap in FFS billings. Differential uptake of non-clinical payments and APP remuneration schemes appear to be significant drivers of the income/activity difference between male and female physicians. The increasing proportion of physician payments for non-clinical activities and the reduction in clinical care billings raises concerns about maintaining adequate primary care service supply in future.

Healthcare Associated Infections, Infection Prevention & Control: Patient Safety Survey
EMILY NADOLNY Epidemiology & Policy Analyst, Public Health Agency of Canada/ The University of Toronto
The objective of this survey was to identify factors that may influence IPC best practices and outcomes, within the context of patient safety. Results are intended to help inform future action plans related to advancing IPC in Canada, and healthcare associated infection (HAI) related events. The HAI-IPC patient safety survey was sent in August, 2014 to a range of organizations, healthcare providers, professional associations, and stakeholder groups in Canada to seek input from those involved in IPC, healthcare delivery, patient safety, and quality care issues related to HAIs. Participants were given 2 weeks to respond=(n=153), and over two thirds of respondents indicated primary work in an acute care or other healthcare setting, while stakeholder organizations represented 20% of the total sample. As the context of where participants worked influenced survey questions, results were separately analyzed and compared. There were 13 questions common to both groups. Results revealed the most commonly identified IPC campaigns employed in the workplace were the 'Stop! Clean Your Hands day,' 'Safer Healthcare Now!' 'Just Clean Your Hands' and 'Do Bugs Need Drugs' initiatives. Among respondents that answered yes to AMR involvement, a common theme that emerged was the need for established antimicrobial stewardship programs, suggesting a commonly held priority in tackling this emerging issue. Despite this, antimicrobial prescribing practices were identified as the top reported concern by one-third of HCWs (32%), but only 13% of stakeholder groups. Burden of disease was a common concern between HCW and stakeholder groups. Top items identified to support IPC best practices were similar among HCWs and stakeholders. These included staff training/education as well as managerial support and organizational priority. Although many commonalities were observed, the apparent differences may present challenges during the development and implementation of a national patient safety action plan in relation to IPC policy. This is particularly significant given both HCWs and stakeholder survey participants highlighted the need for national coordination of standards in maximizing IPC.
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“How appropriate is all this data sharing anyway?": Building consensus on electronic health information exchange in extended circles of care
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A CIHR planning grant facilitated a stakeholder-centered planning meeting to identify research gaps in our understanding of the impact of electronic health information exchange (eHIE) in integrated, community-based, multi-disciplinary care teams. We identify research directions, objectives and preliminary questions to study the integration of health records in an integrated healthcare system. Using a nominal group technique, 30 key experts and stakeholders from across Canada explored these gaps in a daylong meeting. Participants included primary care providers (family physician, nurse practitioner, pharmacist), social supports (social worker, mental health nurse), patient representatives (advocate, patient), health region managers, technology experts and health organizations (eHealth Ontario, Canada Health Infoway, Canadian Mental Health Association), and experts in law, privacy and ethics. Following sensitizing presentations from researchers, participants considered the question: “What research needs to be done to better understand how electronic health records should be shared across large healthcare teams that include social supports? In two rounds of consensus building, participants ranked the importance of each idea on a 9-point Likert Scale, the rankings were aggregated, and concepts that achieved a mean score of at least 6 by at least 70% of the group were retained. Fifty-eight discrete questions that address gaps in understanding were identified by the group. Eight items achieved consensus and addressed questions related to the impact of information sharing on team outcomes, assurance of data quality and accuracy, cost-benefits, which processes will use the data, regulatory or legislative changes, appropriateness of sharing core datasets, defining the circle of care, and the role of data analytics. Healthcare reforms are increasingly focused on systems that integrate and coordinate multidisciplinary care, facilitated by eHIE. The goal is to ensure providers have reliable clinical information; implicit is the assumption that providers have a shared understanding of that data. Research prioritization will ensure common concerns and barriers are addressed and resolved.
Co-Author(s): Kelly Grinrod, University of Waterloo / Mohamed Alarakhia, Centre for Family Medicine Family Health Team/ McMaster University / Catherine Burns, University of Waterloo / Parmit Chilana, University of Waterloo / Justin St-Maurice, University of Waterloo
Obesity Predicts Differential Rates of Coronary Revascularization Following Cardiac Catherization

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Persons with obesity have been identified as marginalized populations with restricted access to health care services. We investigated whether patients with obesity are more or less likely to undergo coronary revascularization compared to patients with a body mass index (BMI) classified as normal. We used detailed clinical data collected as part of an inception cohort of patients from Alberta who underwent cardiac catheterization between April 2003 and March 2014. Rates of receiving percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG) surgery after index cardiac catheterization were examined using multivariable Cox regression, comparing patients in overweight and obese BMI groupings to patients with normal BMI, and adjusting for available clinical covariates. Revascularization rates were separately examined for patients with higher-risk (≥3-vessel, ≥2-vessel with left anterior descending, or left main artery) and lower-risk (<2-vessel disease) coronary disease. Of 73,071 patients who had BMI data recorded, 23% were of normal weight, 40% were overweight, and 37% were obese. Patients classified as overweight and obese were more likely to have higher BMI (HR: 1.04, 95% CI 1.01-1.08). Among patients with the same BMI classification, those with higher BMI were more likely to undergo coronary angiography (HR: 1.06, 95% CI 1.02-1.10), CABG surgery (HR: 1.06, 95% CI 1.02-1.09). However, patients with severe obesity (BMI >40) were more likely to have CABG surgery (HR: 1.07, 95% CI 1.03-1.11). In general, the pattern of use of revascularization procedures after cardiac catheterization differs across BMI subgroups. These findings suggest that further research is needed to identify to what extent mismatch of current clinical guidelines with patient-centered care contributes to poor diabetes monitoring in diabetes patients with comorbid dementia.

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Planning for Change In Health Care Reform: The Case of Alberta
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To identify the necessary elements of transition planning in reorganization of health services that accompanies large-scale health care reform. This research is based on 60 in-depth interviews of leadership and management personnel in Alberta in 2013. Interviews focused on management challenges encountered at all levels within the jurisdiction of Alberta Health Services. Interview text was analyzed using grounded research techniques. Elements of what should be part of an effective transition plan were identified based on the experience of personnel who had been present during multiple reorganizations. Interviews of management personnel suggest several key challenges associated with incomplete transition planning. These include uncertainty of scope of work, reporting relationships, and career paths. Required components of transition planning were inferred, including: (1) Obtaining buy-in from critical personnel; (2) Ensuring that all critical functions will be adequately staffed following transition; (3) Maintaining “organizational memory” through documents and records; (4) Taking steps to retain key personnel. Public health care delivery authorities must be responsive to elected officials, newly emergent issues in health services, and changing models of effective service delivery. But organizational change cannot take place merely by government mandate. It must be accompanied by comprehensive transition planning.

Potentially Avoidable Emergency Department Visits Made by Nursing Home Residents: Refining Current Definitions
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The prevalence of potentially avoidable emergency department (ED) visits made by nursing home (NH) residents ranges from 3.8-67.0% due to varied definitions. This study compares the prevalence of these potentially avoidable ED visits using past and new definitions. This cohort study includes all NH residents in the Winnipeg Health Region of Manitoba, Canada with 1+ ED visit during 2012/2013. Person-level administrative health care records were used to create various existing and new definitions of potentially avoidable ED visits. Existing definitions include visits where residents were: a) triaged as less or non-urgent using the Canadian Triage and Acuity Scale; or b) discharged back to the NH following the visit. Using linked records, we identified ED visits where residents were triaged as less/non-urgent, had no diagnostic imaging or blood work performed, and were subsequently discharged back to the NH. From our cohort (N=12,403), 25.0% of residents (N=3,159 people) made 5,991 ED visits during the year, meaning that amongst ED users, 45.0% had multiple visits. 38% of all visits resulted in resident death or admission to the hospital. From existing definitions, counts of potentially avoidable ED visits varied greatly, ranging from 2,918 (48.7% of all visits; residents returned to NH regardless of CTAS) to 1,063 visits (17.7% of total; residents were triaged as less/non urgent, then returned to NH). During these latter visits however, residents often had diagnostic imaging or blood work performed (N=619 visits), implying that only 74.6% of all ED visits (N=444) were potentially avoidable. These visits were made by 352 residents who most recently arrived to them by ambulance. The prevalence of potentially avoidable ED visits made by NH residents may be lower than previously reported, highlighting the need for standard definitions. Reducing these visits has resident quality of care and healthcare system cost saving benefits.
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Provider perspectives on facilitators and barriers to accessible service provision for immigrant women with postpartum depression (PPD)
REBECCA GANANN  PhD Student, Assistant Clinical Professor, McMaster University
What do healthcare services providers who work with immigrant women in Canada identify as: 1. facilitators and barriers for immigrant women in accessing primary healthcare for PPD 2. individual, organizational, and system level challenges they face in terms of providing accessible services for immigrant women with PPD? The study used a qualitative interpretive descriptive design, shaped by an integrated knowledge user-researcher partnership. Knowledge users were engaged throughout the research cycle, helping identify research questions, establishing and refining recruitment and data collection approaches, and contextualizing recommendations. Fourteen community and health services providers who work with immigrant women living in Scarborough, ON, participated in individual in-depth, face-to-face interviews. Using a socio-ecological framework as an organizing structure, an inductive approach to thematic content analysis was conducted. Providers identified attributes that foster relationship building, including addressing power dynamics, understanding women's experiences, enacting cultural competence, involving family members, providing adequate time, and facilitating system navigation. Together, these approaches helped break down barriers and facilitated service accessibility. Relationship characteristics such as trust and establishing therapeutic alliances were thought to positively impact PPD and promote accessibility. Organizational barriers to providing accessible services included assessment approaches, treatment availability/accessibility, wait times, and primary care provider gate keeping. The ability of providers and organizations to address social health determinants also contributed to accessibility. Providers suggested that different organizational and management approaches could facilitate or discourage service coordination across organizations. Finally, providers believed that health and immigration system mechanisms could work more effectively to optimally support immigrant families. Health service providers are critical in supporting immigrant women with PPD and facilitating service accessibility. Organizational and system barriers restrict optimal service provision. Furthermore, gaps exist in terms of available and accessible, decentralized and specialized mental health services. Enhanced system integration and establishment of community-based system navigators could facilitate accessibility.
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Scaling up IKT? Adapting integrated KT strategies to a large multi-jurisdictional network
SARA KREINDLER  Manitoba Research Chair in Health System Innovation, University of Manitoba
Integrated knowledge translation (IKT) demands time-intensive, highly personalized activities to build close relationships with specific stakeholders and meet their unique knowledge needs. Yet there is an increasing demand and need for multi-jurisdictional research. Can IKT be adapted to the new reality of large, multi-organizational networks? An experienced “embedded” researcher (8 years with an RHAs research unit) led the development of a researcher/decision-maker team to investigate how health regions can achieve maximal improvement in patient flow. The team included key stakeholders from the 4 provinces and 8 urban health regions of Western Canada, existing networks (Western Healthcare CEO Forum, Western Patient Flow Collaborative) and Accreditation Canada. Research program development entailed an intensive one-year process informed by IKT principles. This presentation focuses on challenges, strategies and adaptations from the researcher perspective, based on the PI’s reflective practice journal, process documentation, and feedback from other team members. The skills of embedded IKT – helping decision-makers identify priority questions, maintaining two-way communication through face-to-face and other channels, communicating in ways that resonate with decision-makers, genuinely listening to and incorporating feedback – are highly transferable. The context of embedded IKT – deep familiarity with a particular organization, longstanding trusting relationships, protected resources and established executive support – is not. Geographic scope and distance multiply administrative and social complexity, and with them the potential for errors. The number and diversity of stakeholder groups makes it harder to establish common priorities and adapt to changing circumstances. The need for external funding introduces research agency deadlines and demands, with some paradoxical adverse impacts on IKT. In short, the aims of scale, depth, and speed are not easily reconciled. Having established the fundamentals of our research program, we will now facilitate local customization, leveraging regional/provincial strengths and interests to reinforce bilateral connections within the overall network. Thus, Year 1 was about adapting IKT to fit a multi-jurisdictional approach; Year 2 will be about adapting that approach to fit IKT.
The CHOICE Project: Engaging Older Adults in Healthcare Decision-Making
JACOBI ELLIOTT
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Engagement in shared healthcare decision-making has been recognized as an important, and often lacking, aspect of person-centred care. We aimed to draw on available theory, evidence and experience to develop best practice guidelines for engaging older adults and their families in decisions around their own health care. We conducted a realist review of the literature, and interviews with academics and practitioners, in order to develop a theoretical framework on health care decision-making. The search methodology was informed by a framework for realist syntheses (Wong et al., 2013) as well as Arksey and O’Malley’s (2005) design considerations for scoping reviews. Our synthesis encompassed theoretical frameworks and both peer-reviewed and grey literature. Search terms included: health care, decision making, public health care decision making, engagement, and public engagement. Expert consultation included interviews with academics (n=3), two focus group interviews with seniors and families, and two half-day workshops organized with our partner Patients Canada. The initial search generated over 15,000 articles; of these, 2921 were pertinent to health care decision making and were retained for further review. Theoretical and empirical work identifies a range of strategies and levels of engagement of older patients and their families in healthcare decision-making. Many key themes emerged including, the importance of relationships and communication, discussing patient goals and preferences, considering patient and provider characteristics, and understanding the context in which care is being provided. It is also important to discuss and acknowledge the extent to which patients want to participate in healthcare decision-making. We have developed best practice guidelines for creating productive partnerships between older adults, their families, and health care providers. These partnerships can result in more informed clinical decisions, and more effective health care.

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The Impact of Quebec primary healthcare (PHC) reform on patients’ experience of care, unmet needs and use of services
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To compare Family Medicine Groups (FMGs) and Network Clinics (NCs) implemented since 2003 with the other PHC organizations, regarding changes in patients’ experience of care, unmet needs and services used between 2003 and 2010 in the two regions. Patients’ experience of care and use of services referred to the two years preceding the surveys. Organizational and population data were linked through identification of the usual source of care by respondents to the population questionnaire. Design was a before-and-after natural experiment with experimental group (FMGs, NCs, FMG-NCs) and control group (the other clinics). Differences in changes over time between the two groups were assessed, using difference-in-difference (DID) statistical procedures. Comparability between the two groups on all other variables was obtained by adjusting with propensity scores. Continuity generally improved among users of services, but the increase was less important for individuals in the FMG, NC and FMG-NC than those in the other group (DID = 0.07, p = 0.04). Responsiveness also increased during the period and to a greater extent in the FMG, NC, FMG-NC group than in the other group. No significant difference between the two groups was found regarding use of services and unmet needs. Sensitivity analyses, done by region and by specific type of PHC organizations, showed additional differences. The PHC reform in Quebec has brought about positive results regarding accessibility of care and responsiveness, results on continuity of use of services, and unmet needs did not generally come out as expected. A longer period of time is needed to assess more realistically the impact of the PHC reform.

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The intersection of gambling and substance use among men facing homelessness
ERIC LATIMER
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The impact of problem-gambling on the homeless population is receiving increasing attention as the links between gambling, substance use, and perpetuated homelessness become more evident. The purpose of the present study is to explore the temporal contiguity between the development of substance use and problem-gambling among homeless men. A realist synthesis of all available knowledge on the intersection of gambling and substance use or problem-gambling was conducted. The intersection of gambling and substance use was explored in 56 studies using difference-in-difference (DID) statistical procedures. Continuity generally improved among users of services, but the increase was less important for individuals in the FMG, NC and FMG-NC than those in the other group (DID = -0.11, p = 0.10). Responsiveness also increased during the period and to a greater extent in the FMG, NC, FMG-NC group than in the other group. No significant difference between the two groups was found regarding use of services and unmet needs. Sensitivity analyses, done by region and by specific type of PHC organizations, showed additional differences. The PHC reform in Quebec has brought about positive results regarding accessibility of care and responsiveness, results on continuity of use of services, and unmet needs did not generally come out as expected. A longer period of time is needed to assess more realistically the impact of the PHC reform.

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The Many Meanings of Patient Engagement: A Unified Framework
Vidhi Thakkar, Doctoral Student, University of Toronto

There are varying definitions of patient engagement in the literature. Patient engagement can be considered at the macro, meso, and micro level. The objective of this study was to examine current patient engagement frameworks and to develop a unified framework that can be used for patient engagement. The academic and grey literature was reviewed for articles specific to conceptual frameworks for patient engagement. Databases searched included Ovid Medline, Ovid Health STAR, SCOPUS, and Google Scholar. Articles were included if they described a conceptual framework for patient engagement. Articles were excluded if they only described patient engagement activities. Key words and the search strategy included combining the concepts of “patient engagement AND conceptual framework OR patient centered care.” Dimensions of each conceptual framework such as the patient-provider relationships, economics, and policy were considered in the unified framework. Patient engagement may refer to micro (e.g. individual patient care, including clinical interactions), meso (e.g. improved care delivery, including incorporating patient and family advisory councils), and macro (e.g. policy guidance) levels. Different levels often implied different participants and goals; key elements also varied. However, there were many recurring concepts that spanned across levels including the patient provider relationship, communication, and the role of families in patient engagement. Based on these findings, a comprehensive framework for patient engagement was created. It recognizes that optimal approaches must also take into account underlying patient characteristics including disease state, health literacy, and contextual factors such as politics, economics and the bio psychosocial context. There are multiple meanings of patient engagement and various approaches to patient engagement with different factors to consider at the micro, meso and macro levels. A comprehensive framework inclusive of multiple contexts is important in order to encourage patient engagement.

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Understanding the Multiple Vulnerabilities and Service Utilization of Homeless Youth: Findings from At Home/Chez Soi
Nicole Kozloff, Resident, University of Toronto

Given the significant limitations of existing literature on homeless youth with mental disorders, we sought to examine demographics, clinical characteristics, and service utilization patterns in a large national sample. Using baseline data from the At Home/Chez Soi field trial, a Mental Health Commission of Canada 4-year study of over 2000 homeless people with mental disorders across 5 cities in Canada, we calculated descriptive statistics for youth age 24 and under and adults over age 24, specifically examining: 1) demographics including housing history; 2) rates of mental disorders and physical illness; 3) service utilization. We then used logistic regression models to examine predictors of 3 service use variables, namely, having a regular medical doctor, feeling they needed help and did not receive it, and number of emergency department (ED) visits. Youth participants had been homeless a mean of 26.1 months. Less than one-quarter had completed high school. Nearly three-quarters had a concurrent substance use disorder. Almost half reported a learning disability. Less than half had a regular medical doctor; none of the demographic and clinical characteristics examined were significantly associated with this outcome in a multivariate model. Almost half reported not receiving health care when they needed it, associated with being female or other gender and not from an ethnoracial group. Over 60% had visited an ED in the prior 6 months; number of ED visits was increased in those with a learning disability and perceived unmet need for healthcare and decreased in those with a drug use disorder. This sample of homeless youth with mental disorders demonstrated multiple vulnerabilities, including high rates of substance use disorders, low education, learning disabilities, and inadequate, sporadic medical service use. Programs geared towards homeless youth should take these individual characteristics and service use patterns into consideration to better serve this vulnerable population.

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What happens when young and mid-life adults leave complex continuing care? Patterns of subsequent health system use and survival
Kerry Kulukski, Scientist and Assistant Professor, Bridgepoint Active Healthcare and University of Toronto

Complex Continuing Care (CCC) is a “bridge” setting between the acute hospital and the home for many young and mid-life adults with heavy care needs. It is unclear what happens to these patients when they are discharged back to the community. The study objective was to investigate whether follow-up within 7 days of discharge was associated with subsequent healthcare use and mortality. This population-based retrospective cohort study used linked administrative databases to identify 1,906 individuals who were aged 18-64 years and discharged alive from CCC in Ontario, Canada between April 1, 2005 and March 31, 2006. Individuals who received a family physician visit or home care service within 7 days of discharge were compared to those who did not based on demographic characteristics, clinical factors, functional status and survival using descriptive statistics and multivariable logistic regression models. CCC patients had high levels of functional impairment, were characterized by multiple diagnoses and were disproportionately from low-income neighbourhoods. Most patients received follow-up care within 7 days of discharge (20% received home care, 33% had a physician visit, 16% received both, and 31% received no follow-up). Controlling for individual demographic and clinical characteristics, individuals who received any community follow-up within 7 days were less likely to be admitted to an acute hospital within one year than those with no follow-up within 7 days. Those who received homecare were less likely to be readmitted to CCC at the end of one year than people who received physician care only or no follow-up. Mortality was high with 18% and 44% dying within one and five years respectively. Community follow-up was not protective against mortality. While immediate community follow-up may reduce use of healthcare, particularly hospitals and CCC, it does not appear to impact one year mortality. Whether or not this is inevitable based on the illness characteristics of the population or preventable by managing their health and social needs in a different way, requires further research.

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Poster Presentations – Day 3

Présentations d’affiches – Jour 3
A Cross-Provincial Comparison of the Policy Context of Community-based Primary Healthcare Innovations Intended to Influence Performance: Preliminary Results of a Document Review

RUTH MARTIN-MISENER  Associate Professor, Dalhousie University

To identify and compare the policy context of major innovations in community-based primary healthcare (CBPHC) intended to influence performance in three regions across Canada in BC, Ontario, and Nova Scotia, with similar populations. A document review of published literature for a multiple comparative case study. We searched CINAHL, PubMed, and Dissertations & Theses. Keywords searched: 1) British Columbia, Ontario, Nova Scotia, Fraser Health, Eastern Ontario, Capital Health; 2) primary health care, primary healthcare, primary care; 3) innovation, policy, model of care; 4) teams, group practice, networks, patient enrollment, funding, financial incentives, payment models, governance, nurse practitioner, physician assistant, midwife, electronic medical record, quality improvement, patient engagement, telehealth, web-based services. We used standardized criteria across each region to analyze the literature and identify major CBPHC innovations intended to have an impact on CBPHC performance. In each region 5 major policy innovations were identified. Policy innovations included, for example: expansion of the numbers and types of providers in CBPHC; expansion of team-based models of care; implementation and expansion of information systems and data management; financial incentives and blended payment schemes; and group practices and networks. Notably, despite the common innovations, the contextual background for each region contributes to how the innovations are implemented. We present the similarities and differences across regions in CBPHC innovations and implementation strategies. Despite similar populations, policy-makers have adopted different strategies for improving CBPHC performance in three provinces. In-depth interviews of purposively selected decision-maker leads in CBPHC, providers and patients will illuminate how these innovations and their implementation strategies have influenced CBPHC performance.

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A novel method for systematic evaluation of health indicators: Perspectives from a measures producer

ZEERAK CHAUDHRY  Senior Analyst, Canadian Institute for Health Information

Since 1999, CIHI and Statistics Canada have collaborated on development and reporting a broad range of health indicators (with more than 80 in 2013). CIHI undertook a review of 56 health system performance (HSP) indicators to evaluate their relevance for continued public reporting. In absence of an established framework for evaluation of existing indicators, the Institute of Medicine’s Recommendations for Measure Selection were adapted to guide our evaluation methodology. A literature review was also performed to determine a comprehensive list of criteria used for indicator assessment. A final list of 18 criteria was identified and applied systematically to 56 HSP indicators. Additionally, the RAND/UCLA Appropriateness Method guided the internal expert ranking process using an iterative modified-Delphi approach. Recommendations were consolidated for indicators to be retained, retired, or to undergo consultation and/or research and development. Our systematic indicator evaluation plan identified nine measures as candidates for retirement, eight requiring additional consultation from stakeholders, and two to undergo research and development. Recommendations were presented at the fourth National Consensus Conference on Health Indicators (jointly held by CIHI and Statistics Canada every five years). Diverse stakeholder participants from across Canada reviewed and ratified recommendations. There was widespread support for the initiative, evaluation criteria, and process. The methodology and process have been applied successfully to measures beyond clinical administrative data, such as health expenditure indicators; efforts are underway to expand the evaluation to other CIHI data holdings (e.g. home care). Overall, this process has led to ongoing improvements to indicator methodology, enhanced stakeholder engagement initiatives, and analytical alignment within CIHI. Systematic evaluation of health indicators is important to ensure reporting relevance, sound methodology, and production feasibility. Emphasis on high-quality actionable measures should reduce ‘indicator chaos’ by ensuring ongoing alignment with stakeholder needs and priorities.

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Adoption of evidence-based practices by health care organizations: a scoping literature review

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A scoping literature review was done to answer the question: What is known from the existing empirical literature about the organizational-level factors, context and processes that influence the uptake, implementation and sustainability of evidence-based practice in health care organizations? This scoping literature review used the Arksey and O’Malley (2005) framework to describe findings. Relevant studies published between January 1991 and March 2014 were identified using four electronic databases. Study abstracts were screened for eligibility by two reviewers. Following this screening process, full-text articles were reviewed to determine the eligibility of the studies. Eligible studies were then analyzed by coding findings with descriptive labels to distinguish elements that appeared relevant to this literature review. Coding was used to form categories, and these categories led to the development of themes. Thirty studies met the eligibility criteria for this literature review. The themes identified were: the process organizations use to select evidence-based practices for adoption, use of a needs assessment, linkage to the organization's strategic direction, organizational culture, the organization's internal social networks, resources (including education and training, presence of information technology, financial resources, resources for patient care and staff qualifications), leadership, the presence of champions, standardization of processes, role clarity of staff and the presence of social capital. This scoping review contains a number of implications for health care administrators, managers and providers to consider when adopting and implementing evidence-based practices in health care organizations.

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Aider les patients à retourner au travail après une dépression lorsqu'on est médecin de famille : une pratique sous influence?

CHANTAL SYLVAIN  professeure, Université de Sherbrooke

Au Canada, les médecins exercent un rôle important dans le retour au travail après une maladie comme la dépression. Vu leurs prérogatives, les compagnies qui versent des prestations d'assurance-maladie peuvent influencer les possibilités d'action des médecins. Notre objectif : décrire ces influences et leur impact selon les médecins de famille.

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An examination of perceived healthcare accessibility and unmet healthcare need among the City of Toronto

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Despite the importance of neighbourhood condition, minimal research has investigated the association between perceived neighbourhood condition and unmet healthcare need in an urban city setting. This study aimed to examine the relationship between perceived healthcare accessibility and unmet healthcare among the City of Toronto residents. We used data from project Neighbourhood Effects on Health and Well-being (NEHW), a cross-sectional survey conducted by Centre for Research on Inner City Health (CRICH) at St. Michael's Hospital between 2004 and 2005. In this survey, individuals were asked about experience of and reason for unmet healthcare need as well as perception of healthcare accessibility. We conducted logistic regression to understand the association between perceived accessibility and unmet healthcare need, as well as unmet need arising from 1) personal choice; 2) barriers; 3) wait times. Among 2,338 respondents, 369 individuals (15.8%) reported an experience of unmet healthcare need in the past year. In relation to overall unmet healthcare need, negative perception of healthcare accessibility was associated with experience of unmet healthcare need (OR: 1.68; 95%CI: 1.15-2.45). In addition, lowest income, not having a family doctor and poor self-rated health were associated with overall unmet healthcare need. Among these sub-categories of unmet healthcare need, personal choice, barriers, wait times-related individuals who reported negative perception of healthcare accessibility in their neighborhood were more likely to experience personal choice- and wait times-related unmet healthcare need (OR: 1.91; 95%CI:1.13-3.28/OR: 2.52; 95%CI: 1.54-4.21). Meanwhile, perceived healthcare accessibility was not associated with barriers-related unmet healthcare need. These findings suggest that neighbourhood targeted interventions are possible solutions to address unmet healthcare need in an urban city setting. For instance, personal choice- and wait times-related unmet healthcare need can be diminished by improving healthcare accessibility at the neighbourhood level, accompanied by close engagement with community-based service agencies.

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Analyse comparative de caractéristiques de la pratique des médecins de famille dans les cliniques médicales, en fonction du type de région de pratique

MARC LEMIRE Chercheur, Institut national de santé publique du Québec et Université de Montréal

Explorer les variations de diverses caractéristiques de la pratique des médecins de famille du Québec selon quatre types de région définis en fonction de la proximité d’un centre de médecine universitaire et de la densité de population : universitaire, périphérique, intermédiaire et éloigné. L’enquête internationale et panafricanienne QUALICOPC (Quality and Costs of Primary Care) dresse un portrait de l'organisation et des pratiques cliniques des médecins de famille, ainsi que de l'expérience de soins de leurs patients. Le volet québécois de l’enquête se distingue par la collaboration de partenaires-décideurs à chaque étape du projet et par le cadre conceptuel utilisé : modèle d'Évaluation globale et intégrée de la performance des systèmes de santé (ÉGIPSS). Les données sont issues de questionnaires auto-administrés remplis par 218 médecins et 1798 de leurs patients. Des analyses bivariées (Chi2) ont été menées en fonction du type de région. Selon les réponses des médecins, un bon nombre de caractéristiques de leur pratique sont uniformisées. En particulier, les observées en faveur des régions éloignées en termes de collaboration : dans la connaissance de ressources communautaires accessibles aux patients, la fréquence de demandes de conseils à des médecins spécialistes, la fréquence de rencontres avec d'autres professionnels de la santé et la coordination des soins. La globalité des services est également plus prononcée en régions éloignées pour les actes médicaux offerts dans la clinique par le médecin ou son personnel. Par ailleurs, les modalités d'accès aux médecins de famille en termes d'horaire d'ouverture en région éloignée (et intermédiaire) apparaissent différentes par rapport à celles des autres régions. Ces résultats suggèrent une capacité d'adaptation favorable de la pratique médicale de première ligne en région éloignée, qui se distingue par un plus grand nombre à couvrir, une plus faible densité de population et des ressources plus restreintes. Le réseautage entre les professionnels de la santé semble particulièrement important.

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Analyse comparative entre les nouveaux et les anciens modèles de clinique médicale : ressources et production des services

MARC LEMIRE Chercheur, Institut national de santé publique du Québec et Université de Montréal

Examiner si les nouveaux modèles de clinique médicale mis en place au Québec selon les recommandations gouvernementales (groupe de médecine de famille-GMF) se distinguent favorisant des anciens modèles sur divers attributs souhaités visant l'amélioration des soins en première ligne, dont les ressources de la clinique et la production des services. L’enquête internationale et panafricanienne QUALICOPC (Quality and Costs of Primary Care) dresse un portrait de l’organisation et des pratiques cliniques des médecins de famille, ainsi que de l’expérience de soins de leurs patients. Le volet québécois de l’enquête se distingue par la collaboration de partenaires-décideurs à chaque étape du projet et par le cadre conceptuel utilisé : modèle d’Évaluation globale et intégrée de la performance des systèmes de santé (ÉGIPSS). Les données sont issues de questionnaires auto-administrés remplis par 218 médecins et 1798 de leurs patients. Des analyses bivariées (Chi2) ont été menées en fonction du type de région. Plusieurs différences significatives globalement favorables aux nouveaux modèles de clinique sont observées, tant dans les réponses des médecins que dans celles de leurs patients. En effet, en termes de collaboration, ce qui varie entre les médecins est leur rapport de coordonnation avec les autres professionnels de la santé. Entre autres, les nouveaux modèles se caractérisent par davantage de collaboration des médecins de famille avec d’autres médecins (demande de conseils auprès de spécialistes) et d’autres professionnels de la santé (travail établi avec une infirmière clinicienne ou praticienne). Ils participent plus souvent à un système de garde les soirs et les week-ends, mais aussi des soins les dimanches et nuits en semaine. Ils ont une utilisation accrue de l’ordinateur. Toutefois, certaines différences observées entre les nouveaux et les anciens modèles de clinique pourraient être davantage marquées. Les efforts investis au Québec depuis 2003 pour développer et maintenir les nouveaux modèles de clinique, notamment les GMF, semblent porter fruit. Les partenaires-décideurs de l’étude sont d’avis toutefois que des améliorations restent à être apportées, comme le déploiement des dossiers médicaux électroniques, pour accroître la continuité des soins.

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Applying the Children with Special Health Care Needs (CSHCN) Screener to Administrative Health Data

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Administrative health data is currently an underutilized resource to explore child health. We examined how the widely used, survey-based Children with Special Health Care Needs (CSCHN) Screener could be used to identify child health problems in Canadian administrative health data. De-identified administrative data (6-10 year old children in 2006) were drawn from: Medical Services Plan, Hospital Separations, and PharmaNet, available through Population Data BC. The five indicators of the CSHCN (mortality use for at least 12 months, above average health services use, activity limitations, special therapy, and counseling) were operationalized in the administrative data; children captured by one or more of the five indicators were considered to have a health problem. Analyses identified the proportion of the child population with health problems by gender and by indicator. Hospital admissions and socio-demographic characteristics were examined. Overall, 16% of children were identified as CSHCN. An estimated 14% of children used at least one health service in a year, and 5% had functional limitations; 3% were prescribed long-term medications; 2% received special therapy and 0.1% needed/received special therapy. More boys (19%) than girls (16%) were identified as CSHCN. Among CSHCN, the prevalence of overnight hospital admissions (6% vs. 1%) and the percentages in families that received premium subsidies (35% vs. 21%) or lived in the lowest income quintile neighbourhoods (21% vs. 20%) were higher than among those in the non-CSHCN group. The CSHCN Screener can be operationalized using administrative health data with some limitations. Limitations emerged identifying activity restrictions, use of special therapies, and counselling for emotional and behavioural problems. These findings have important implications for identifying children with health problems based on a non-categorical measure rather than a condition-specific definition.

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Clinical preventive services in primary care settings: a substudy using data from the Quality and Cost of Primary Care (QUALICOPC) cross-sectional study

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Besides providing curative care, primary health care (PHC) practices also offer clinical preventive services (counselling, screening, immunization and preventive medication). Delivery of such services in the context of PHC practices is challenging. Study objective is to evaluate how provision of preventive services varies across PHC models in Quebec, Canada. This study uses family physician (FP) survey data from the QUALICOPC study, a cross-sectional study to evaluate the performance of the overall health care system. Participants: 218 FP practicing in solo or group practices in various geographic locations. Outcome measure: physician-reported clinical preventive services delivery rates. Data analysis: bivariate analyses to investigate the relationship between preventive service delivery and PHC models or practice geographic location. Multiple logistic regressions to assess factors associated with delivery of preventive services. Hypothesis: preventive services delivery rates are higher in the Family Medicine Groups compared to traditional settings due to requirement for greater service provision. 97% and 40% of FP routinely measure blood pressure and blood cholesterol level in office contacts with adults regardless of the reason for visit, respectively; there was no statistically significant difference between rates across PHC models. More than 90% of FP are involved in counselling on lifestyle change in connection with normal patient contacts; statistically significant differences between rates were observed across PHC models. 73% of FP are involved in influenza vaccination; statistically significant differences between rates were observed across geographic locations. More than 70% of FP working with practice nurses indicated that these last independently provides preventive services; statistically significant differences between rates were observed across PHC models. Complete study findings including analysis of the merged Canadian QUALICOPC dataset will be available in March. Results suggest higher rates of preventive services delivery in the Family Medicine Groups compared to traditional settings. Complete study findings could inform decision-making about performance of the health care system in regard to preventive services delivery in Quebec and Canada.

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Community Pharmacy Response to a New Provincial Drug Plan Reimbursement Policy

LINDA MACKEGAIN  Research Project Coordinator, University of Toronto

The purpose of this study was to gain insights on community pharmacies’ implementation of Ontario’s first government-reimbursed medication management services: MedsCheck (MC), an adherence-focused medication review between pharmacist and patient; and pharmaceutical opinions (PO), pharmacists’ prescriber-directed recommendations for addressing identified liquor drug therapy problems. In this qualitative study, 44 semi-structured interviews were conducted with 16 corporate executives (representing banner, chain, franchise, and food store/mass merchandiser pharmacies), 12 pharmacy managers (at least one per participating corporation), 12 pharmacy owners, 5 external stakeholders (government and pharmacy organizations), and 2 recent pharmacy graduates. For the pharmacy owners/managers, purposive sampling was used to obtain diversity in location, ownership type, and prescription volume. Interviews were conducted by telephone or in person. Transcripts were coded and descriptive content analysis used to identify themes in the data. MedsCheck implementation included systematic and ad hoc corporate and pharmacy-level strategies. The most common were infrastructure change (eg, computer technology, construction of private space), pharmacist training (especially for MedsCheck Diabetes), and marketing strategies. A less common but noteworthy strategy was setting target numbers for completed MCs. Some participants viewed targets as a positive incentive and others as problematic and unprofessional. Common continuing challenges were lack of time, low patient awareness or cooperation, need for pharmacist behavioural change, and economic pressures. Perceptions of service quality were variable, with external stakeholders and pharmacy owners/managers more concerned about quality than corporate executives. For POs, underbilling was a consensus theme, attributed to restricted patient eligibility and unclear service criteria. Overall, implementation strategies were perceived to be successful. Community pharmacy corporations invested in systematic strategies to facilitate implementation of medication management services. These services are now largely viewed as normal pharmacist practice and a source of professional satisfaction. Provision of MC and POs was motivated by complementary but competing objectives of enhancing patient outcomes and increasing pharmacy revenues.

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Developing Drug Prescribing Profiles for Family Physicians Using Electronic Medical Record Data

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The Drug Utilization 90% (DU90%) measures the number of drugs accounting for 90% of all prescribed drugs over a period of time. The purpose of this project was to use the DU90% to develop drug prescribing profiles for family physicians using electronic medical records (EMR) data. The Maritime Family Practice Research Network (MaRNet-FP) is a regional network of the Canadian Primary Care Sentinel Surveillance Network (CPCSSN). All prescriptions written for patients with diabetes in 2013 by 29 consenting community Nova Scotia family physicians of MaRNet-FP were extracted from the Nightingale EMR. The prescription records were cleaned and coded. The DU90% was calculated and used to create prescribing profiles for the physicians. The 29 family physicians created 41,184 prescriptions for 2723 patients with diabetes in 2013. Our experience with cleaning and coding prescriptions from EMR data and the number of drugs that make up 90% of the top drug classes prescribed by the 29 family physicians will be presented. The DU90% has been used successfully in several countries to provide feedback to physicians on their drug prescribing in order to affect change in practice. Aggregate physician prescribing profiles can determine if there are any drug prescribing issues which can lead to targeted education and interventions.

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Factors associés au fait d’avoir ou non un médecin de famille

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Docummentation des caractéristiques associées au fait d’avoir un médecin de famille (MF) dans les deux régions les plus populaires du Québec (Montréal et la Montérégie), les raisons liées au fait de ne pas avoir de médecin de famille et l’impact d’avoir un médecin de famille sur l’expérience de soins. Une enquête téléphonique sur l’utilisation des services et l’expérience de soins a été réalisée en 2010 auprès de la population adulte de Montréal et de la Montérégie (n=9180). Les raisons liées au fait de ne pas avoir de MF ont été documentées auprès des patients sans MF. Des indices d’expérience de soins (accessibilité, continuité, globalité) et d’exposition aux services préventifs ont été calculées pour chaque patient à partir de questions référant à l’expérience vécue auprès de la source habituelle de soins de première ligne au cours des deux années précédant l’enquête. 70,3% des répondants ont déclaré avoir un MF et 13,4% n’avaient jamais de MF. Avoir un MF est significativement (p<0,05) plus fréquent chez les femmes (OR 1,75) et les personnes avec maladies chroniques (OR 2,38), augmenté avec l’âge (65 ans ou plus: OR 5,13) et le niveau économique (niveau élevé: OR 2,23). 42% des patients sans MF ont déclaré ne pas en avoir besoin (davantage les hommes, les personnes plus jeunes et celles sans maladie chronique) et 58% ont déclaré ne pas avoir trouvé de MF prenant de nouveaux patients. Parmi ces derniers, 25% ont au moins un problème de santé chronique. Les scores d’expérience de soins, à l’exception de l’accessibilité, sont plus élevés chez les patients ayant un MF. Bien que certaines personnes considèrent ne pas avoir besoin d’un MF (notamment les plus jeunes sans maladie chronique), des raisons organisationnelles liées à la disponibilité des ressources sont souvent invoquées par les personnes sans MF, ce qui est particulièrement préoccupant dans le cas des personnes atteintes de maladies chroniques.

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Generic atorvastatin: The impact of physician detailing and sampling in Manitoba

HEATHER WORTHINGTON  Research Coordinator, UBC Centre for Health Services and Policy Research

In 2011, Manitoba implemented a province-wide program of physician detailing and free sampling for generic atorvastatin. As there are no rigorous data on the efficacy of a combined program of detailing visits and sample provision on generic drug use, we examined the impact of the program. We conducted a retrospective study of Manitoba insurance claims data for all patients who filled one or more prescriptions for a statin between 2008 and 2013. We assessed policy-related changes in the use and cost of statin medicines, market share of generic statins, and choice of starting statin for new users. We also used linked data on the number of physician visits and sample provision to analyze whether the impact of the program varied based on the number of visits conducted. The detailing program reached 651 of the 2,103 physicians who prescribed a statin medicine, market share of generic statins, and choice of starting statin for new users. Stratified analysis revealed modest increases in the level of statin prescribing for physicians visited 3 or more times after the implementation of the program. The greatest increase occurred in the group visited 9 or more times, where prescribing increased by 7.6% above prescription rates per month (8% increase). Though physician detailers were trained to target high prescribing physicians, a combined program of detailing visits and sample provision did not appear to increase the overall prescription rates or decrease the cost of statins prescribed. The introduction of generic atorvastatin alone appeared sufficient to modify prescribing patterns and decrease costs.

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Guidelines for the Reporting of studies Conducted using Observational Routinely-collected health data (RECORD): An extension of the STROBE reporting guidelines

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Routinely-collected health data, obtained for administrative and clinical purposes without specific a priori research goals, are increasingly used for research. The rapid evolution and availability of these data have revealed issues not addressed by existing reporting guidelines, such as STROBE. The RECORD statement was created to fill these gaps. A large, international group of stakeholders (http://record-statement.org/group.php) was recruited reflecting the diversity of researchers and consumers of research using routinely collected health data. Stakeholders participated in two consecutive modified electronic Delphi surveys. The first asked for themes deemed important for the RECORD statement, and was analyzed using qualitative methods. The second requested quantitative prioritization of the themes for each manuscript heading (abstract, introduction, etc.). The surveys were followed by a meeting of the RECORD working committee, and re-engagement with stakeholders via an online commentary period. Drafting of the final RECORD reporting guidelines was informed by this multi-stage participatory process. The qualitative survey (76 responses from 123 surveys sent) generated 10 overarching themes and 13 specific themes derived from existing STROBE categories. Highest-rated overall themes for inclusion were: “Disease/exposure identification algorithms”; “Characteristics of the population included in databases”; and “Characteristics of the data”. In the quantitative survey (71 responses from 135 surveys sent), the importance assigned to each of the compiled themes varied depending on the manuscript section to which they were assigned. Following the working committee meeting, online ranking by stakeholders provided feedback for revision of the final checklist, which will be presented at the CAHSPR Annual Meeting. Following publication, the checklist will be available at record-statement.org. The RECORD statement addresses issues specific to observational research using routinely-collected health data. Stakeholder responses pointed to unique aspects of research using these data, including the need for better reporting of methodological issues. Through implementation of RECORD, authors, journals editors, and peer reviewers can encourage transparency of research reporting.

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Health Economic Analysis of Genomic-Informed Approaches for Lymphoid Cancer Management – A Multifaceted Platform

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As the pace of advancement in genomic technologies increases, so too does the need for rigorous health economic analyses. A team of researchers at the British Columbia Cancer Agency is developing a research platform for analysis of health economic evidence, as it applies to genomic-informed treatments for lymphoid cancer. As part of a large-scale research project looking at personalized treatment of lymphoid cancer, the health economics component is helping bridge research-based analyses and clinical applications through a variety of approaches. These include: a time-motion study of the timing and resource requirements for various genomic assays, including targeted sequencing, of routinely-collected patient samples; a ‘real-world’ analysis of costs, resources and disease survival experienced by a retrospective cohort of patients previously treated for lymphoid cancer without consideration of genomic analysis; and development of a modifiable health state transition model to assess the cost-effectiveness of current and new cancer treatments. Each component of the economics platform is currently underway. Treatment-specific costs, resource utilization patterns and patient outcomes (i.e., overall survival) of a retrospective cohort of lymphoid cancer patients are being analyzed, and will be used to evaluate the health state transition model. The results from the time-motion study will be used to identify the major cost drivers associated with the genomic assays and technologies, as well as provide cost estimates for these analyses in a ‘real world’ setting. The health state transition model provides a platform for the research team to answer several hypothetical scenarios including the introduction of new treatments for the target population, changes in clinical management, and demographic changes that may affect the incidence and prevalence rates of lymphoid cancer. Incorporating economic analysis into this project allows for the evaluation of technologies and treatments that are either currently available, or forthcoming, in lymphoid cancer management. The results from this research platform have the potential to influence and inform medical decision-making in everyday clinical practice within BC.


Health Services Utilization and Costs Associated with Co-Morbidity in Older Adults with Diabetes

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To describe health services utilization and associated costs over 5 years among a cohort of community-dwelling older adults in Ontario with diabetes according to number of co-morbid chronic conditions. This study is part of a research initiative to develop and evaluate community-based management programs for specific chronic conditions, including diabetes. We used administrative health data to identify all community-dwelling adults aged 66 and older with diabetes as of April 1, 2008 (baseline). Their use of health services covered under the provincial insurance program was obtained for 5 years following baseline. Physician and home care costs were calculated by multiplying service volumes (total visits or hours) by unit costs; acute care costs were calculated by multiplying per diem rates by total days from visit and length-of-stay data. To explore the extent to which service volumes drove changes in total costs over the 5 years, we held costs constant to 2012 dollars. There were 376,421 individuals with diabetes at baseline (mean age 75 years, 49.8% female). Only 5% had no co-morbidity while 46% had 3 or more. Use of all health services increased with co-morbidity but the greatest increases were for hospitalizations and emergency department visits. All service use, except primary care, increased over 5 years among those without co-morbidity but not for those with 3 or more. Average annual per patient cost varied five-fold by co-morbidity in 2008 but decreased over the 5 years, due to increased costs in those without co-morbidity. The main cost drivers were any physician visits in those without co-morbidity but hospitalizations and specialist visits in those with 3 or more. Service use was consistently greater for non-diabetes-related than diabetes-related reasons. Diabetes frequency co-occurs with other chronic conditions, which is associated with greater service use, higher costs, and different drivers of overall costs. There was little change in per patient costs over time but the difference by number of co-morbidities narrowed largely due to increased service use among those without co-morbidities.

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Higher cesarean delivery rates are associated with higher infant mortality rates in industrialized countries

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Recent data indicate that more than half of high-income industrialized countries have a cesarean delivery rate of >25%, which is higher than the appropriate level considered by most health professionals worldwide. Data for 31 high-income industrialized countries in 2010 (the nearest year) obtained from WHO, OECD, World Bank, and individual countries were analyzed in this study. We examined the correlation between cesarean delivery rate and infant mortality rate with Pearson correlation coefficient analysis, and examined the independent effect of cesarean delivery on infant mortality with multiple linear regression analyses. The cesarean delivery and infant mortality rates varied substantially among the included countries: from 15.6% to 50.0% and from 1.9 per 1000 live births, respectively. Cesarean delivery rates were positively correlated with infant mortality rates (Pearson correlation coefficient: 0.41, P < 0.05). The association remained after adjustment for maternal age, infant sex, per capita GDP, and the Gini index (P < 0.03), but disappeared after further adjustment for preterm birth (P = 0.07). In a sensitivity analysis, the results were not appreciably affected by excluding births at <22 weeks of gestation, by weighting the data by the number of births in each country, or by excluding data from particular countries with possible measurement issues (USA, Greece). A higher cesarean delivery rate is associated with higher infant mortality rate among these high-income industrialized countries. One of the mechanisms by which cesarean delivery affects infant mortality is through iatrogenic prematurity.

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Hospitalizations and mortality in publicly funded for-profit and not-for-profit long-term care facilities: A population-based retrospective cohort study

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To establish if proprietary status (i.e., for-profit or not-for-profit), is associated with mortality and hospitalizations among publicly funded long-term care (nursing) homes. We conducted a health-quality spanning cohort study examining incident death and hospitalization rates from lowest income to all Ontario long-term care facilities between January 1, 2010 and March 1, 2012. We calculated adjusted rates of hospital admissions and mortality, per 1,000 person-years (PY) of follow-up, among for-profit and not-for-profit facilities at 3, 6, and 12 months post-admission. We examined 640 publicly funded long-term care facilities in Ontario (384 for-profit, 256 not-for-profit), 53,739 incident admissions were captured between January 1, 2010 and March 1, 2012. One-year following admission, 12.1% of residents died while 21.6% had at least one hospitalization prior to discharge. After 12 months of follow-up, residents in for-profit facilities had a crude mortality rate of 198 per 1,000 PY versus 174 per 1,000 PY in not-for-profit facilities. During the same period, hospitalization rate in for-profit facilities was 401 per 1,000 PY versus 306 per 1,000 PY in not-for-profit facilities. At 3, 6 and 1-year post admission, for-profit facilities had an adjusted hazard ratio of 1.21 (95% confidence interval (CI): 1.11-1.31), 1.17 (95% CI: 1.10-1.25) and 1.12 (95% CI: 1.06-1.18) for mortality and hazards of 1.34 (95% CI: 1.26-1.42), 1.30 (95% CI: 1.24-1.37) and 1.24 (95% CI: 1.19-1.29) for hospitalizations, respectively. Publicly funded for-profit facilities have significantly higher rates of mortality and hospital admissions.

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Identifying Quality Indicators for Palliative and End-of-Life Care from Administrative Data

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Interest in palliative and end-of-life care, and efforts to expand and improve its delivery in Ontario has been growing over the past few years. This study aims to identify meaningful, health-sector specific quality of care indicators that can be captured using the rich health administrative databases available in Ontario. The authors used a scoping review technique to search for peer-reviewed journal articles using MEDLINE and EMBASE databases containing quality indicators for palliative care. Additionally, relevant grey literature was also searched. Indicators were selected based on relevance and feasibility of measurement through Ontario's administrative datasets. A total of 72 journal articles and 40 grey literature pieces were found from which a total of 1021 indicators were extracted. From these indicators, duplicates and redundancies were removed and the final list was grouped by health care sector such as acute care, home care and long-term care. Next steps include running a modified Delphi to elicit recommendations from stakeholders on the most important measures. The resulting indicators will be measured across health regions in Ontario and will help inform the work of organizations such as Health Quality Ontario and the Declaration of Partnership and Commitment to Action.

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Inequalities in Early Child Development in Canada

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To examine the influence of income level and sex on child development and readiness to learn at school. To highlight initiatives and interventions that contribute to equitable access to strong nurturing environments for all children which contribute to healthy child development. The indicator ‘Children Vulnerable in Areas of Early Development’ calculated using data collected by the Early Development Instrument (EDI) was used for this analysis. This indicator measures vulnerability rates across five areas of development (physical health; social competence; emotional maturity; language and cognitive development; and communication skills and general knowledge) in populations of children at age 5. Vulnerability rates were examined by neighbourhood-income quintile and sex across Canada. Academic and grey literature was scanned to study initiatives and interventions aimed to support healthy child development especially in at-risk populations. In Canada, one in four children (26%) was vulnerable in at least one area of development. Neighbourhood-income level was a powerful predictor of vulnerability. In particular, the lowest rates of vulnerability (19.5%) were observed in the children from high-income neighbourhoods while the highest rates of vulnerability (25.9%) were observed in children from low-income neighbourhoods. The ratios of vulnerability rates were also observed with vulnerability rates higher in boys (32.9%) compared to girls (19.0%). Boys in the lowest income neighbourhoods had even higher vulnerability rates (42.3%) compared to girls in the lowest income neighbourhoods (27.3%). Boys who were vulnerable in at least one area of development showed highest vulnerability in Emotional Maturity (50.9% of boys were vulnerable in this area), while girls showed highest vulnerability in Communication Skills and General Knowledge (45.2%). Our analyses revealed that neighbourhood-income and sex are strong predictors of vulnerability rates in child development. Moreover, the effect of income is more pronounced in boys than girls. This research demonstrates the need for targeted interventions for lower income neighbourhoods along with universal approaches for early child development in Canada.

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Influence of Electronic Medical Record Implementation on Provider Retirement at a Major Academic Medical Center

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The push for electronic medical record (EMR) implementation is grounded on increasing efficiency and cost-savings. With the increase in dependence on the EMR for patient care and documentation, we hypothesized an increase in provider dissatisfaction. Our objective is to investigate the effect of EMR implementation on provider attrition. An extensive literature review was completed, with no prior published data that have analyzed the effect of EMR implementation on provider attrition. We completed a retrospective study investigating whether medical provider attrition, clinical M.D. or equivalent, coincided with EMR implementation. Our hypothesis was that the EMR implementation is associated with increased attrition of an older provider cohort. We analyzed monthly provider attrition rates and mean age at attrition 24 months preceding the EMR ‘go-live’ date at our institution and 24 months after. The go-live date at our institution was July 1 2013. 208 provider departures occurred between from July 2011 and June 2014. The attrition categories were classified as “departure” (n = 137, 65.9%), “emergent” (n = 30, 14.4%), “no specified reason” (n = 26, 12.5%), and “not reappointed” (n = 15; 7.2%). The most common departure reason was “MD” (n = 170; 81.7%). Most departures occurred in June 2013 (n = 24). The mean provider age at departure was 46.4 years +/- 2.9 years for June 2012, 48.1 years +/- 2.5 years for June 2013, and 45.0 years +/- 4.1 years for June 2014. Our data indicates a trend for both an increase in number of departing providers, as well as an increased mean age in the month immediately prior to EMR implementation. To date, no other investigation of the effect of EMR implementation of provider retirements have been published. We speculate on potential influence of EMR implementation on provider attrition, including the steep learning curve for new technologies as well as the changes to daily clinical workflow inherent to EMR use.

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Introducing an interprofessional team for the management of stable rheumatoid disease to improve access to care

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Rheumatoid disease (RD) patients face challenges with accessing care which can have profound effects on their disease prognosis. The current supply of rheumatologists cannot meet demand for services. We aimed to understand the potential of using alternative providers in the case management of stable RD to improve wait times. We used a case study approach to conduct an in-depth assessment of an RD clinic in Alberta. We conducted a document review to understand the current intake process and the staff associated with the various steps. Interviews were conducted with managers to learn about staff roles, responsibilities, process, bottlenecks, challenges and solutions. Staff interviews focused on professional background, knowledge and skills required for the role and challenges faced by staff. Interview findings were reviewed against scope of practice regulations for a range of health care providers to determine if alternate providers may in fact perform the current roles. The RD clinic refers appropriate patients directly to a general rheumatology or specialty clinic. Screening and assessment are completed at these clinics. Due to the unique nature of RD, patients require regular monitoring for disease indicators limiting the number of available appointments for new patients. This delay in access for new patients can increase the likelihood of permanent joint damage and lower their chance of remission. Our results showed that introducing an interprofessional team comprised of providers working in an advanced role (e.g., physiotherapists, nurses) could mitigate the risk of deterioration for patients on a wait list. This team could provide ongoing follow-up to stable patients thereby opening spaces for rheumatologists to see new and assess new patients and health outcomes would improve. An interprofessional team could improve bottlenecks specifically related to the assessment and management of stable RD patients. Including a broader range of providers in the screening and assessment process can improve patients’ prognosis, enhance the patient care experience and address current access issues.

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L'évolution des urgences au cours des dix dernières années au Québec

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Comprendre l'évolution de l'utilisation des urgences au Québec au cours des dix dernières années ainsi que les facteurs qui peuvent avoir un impact sur l'encombrement des urgences. À partir des tendances observées, faire une projection sur l'utilisation des urgences dans les dix prochaines années à venir. L'utilisation des urgences dans les dix dernières années a été analysée à partir du registre des patients sur civière. Cette banque de données contient l'information sur l'ensemble des visites dans les hôpitaux du Québec et permet de déterminer, entre autres, l'âge, le sexe et le type de patients. Nous avons considéré deux types de patients qui arrivent aux urgences, à savoir les patients qui sont couchés sur civière et les autres patients, dits ambulatoires. Les analyses tiennent compte de la croissance démographique et portent sur l'utilisation des urgences, les hospitalisations, les soins à domicile et les comparaisons régionales En 2012-2013, près de 3,4 millions de visites ont été effectuées dans les urgences du Québec, et ce, pour une population de 6,1 millions de personnes. Environ un tiers de ces visites sont des visites sur civière. Les cas les plus urgents représentent moins de 40 % des visites. Le nombre total de visites est resté relativement stable dans les dix dernières années, malgré l’accroissement de 8% de la population. Toutefois, les patients qui se présentent à l'urgence sont beaucoup plus âgés. En 2003-2004, une visite sur civière sur cinq (21.3 %) était faite par une personne de 75 ans et plus. En 2012-2013, c'est le cas d'une visite sur quatre (26.5 %). Dans le même temps, le séjour moyen est passé de 3.1 à 4.6 heures pour les visites ambulatoires; et de16,6 à 18,4 heures pour les visites sur civière. Dans les dix dernières années, le taux de visites à l'urgence a baissé chez les moins de 75 ans, mais il est resté stable chez les personnes plus âgées. Comme la population vieillit rapidement on observe un vieillissement important de la clientèle aux urgences.

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Laying the foundation for primary care performance measurement: Lessons from Ontario

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A systematic approach to primary care performance measurement is needed to provide useful information on a regular basis to inform planning, management and quality improvement at the practice and system levels. Our organization, in collaboration with key stakeholders, has developed a Primary Care Performance Measurement (PCPM) framework for Ontario. The Steering Committee (SC), comprising senior representatives of 22 stakeholder organizations, identified system and practice level measurement priorities across 9 domains based on an environmental scan, a summit of primary care stakeholders and a stakeholder survey. The SC established Measures and Technical Working Groups that included data and policy experts and patient and provider representatives. For each priority measurement area, members of the Measures Working Group ranked a set of potential measures. Guided by the rankings and a set of relevance and validity considerations, the Measures Working Group selected specific measures. The Technical Working Group then identified technical specifications, appropriate data sources and required infrastructure. The SC recommended specific measures in eight domains: Access, Patient-Centredness, Integration, Effectiveness, Focus on Population Health, Efficiency, Safety and Appropriate Resources. Equity — the ninth domain — will be assessed by applying a recommended set of economic, demographic and social variables to the performance measures in the other domains. At the system level, 48 (27%) of the 179 recommended measures are currently available at the Local Health Integration Network level and 90 measures (50%) are available at the provincial level. At the practice level, only 15 (13%) of the 112 practice-level measures in the PCPM framework are widely available to primary care clinicians. The SC recommended a series of implementation activities, including the selection of high-priority subsets of practice and system level measures that could measured and reported in the near future. Other jurisdictions developing systems for monitoring and reporting on primary care performance can benefit from lessons learned in Ontario related to stakeholder and patient engagement and resources requirements. If properly aligned, similar processes in other provinces can build the foundation for a coordinated and sustainable approach to measure primary care performance in Canada.

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Managing Complexity in Primary Health Care: Developing and piloting a person-centred mobile application for patients with complex chronic disease and disability

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Patients with complex chronic disease and disability (CCDD) have multiple chronic conditions, experience symptoms that impact their daily lives, and are among the highest users of the health system. Our objective was to develop a patient-centred mobile application to improve care for patients with CCDD in primary care settings. A multi-phased user-centred design method was used to build a tool to meet both CCDD patient and provider needs. Development and usability testing was conducted with patients and providers from the Bridgepoint Family Health Team in Toronto, Ontario and experts in the fields of eHealth, multi-morbidity symptomology, and CCDD patient needs. Initially, focus groups with CCDD patients and their caregivers and interviews with providers and experts were conducted to identify user-needs. A prototype was refined through working groups with patients, providers and experts. Finally, a 4-week usability pilot was conducted to assess the tool's efficiency, effectiveness, satisfaction and learnability. After conducting and qualitatively analyzing data from four focus groups with 14 patients and caregivers, eleven interviews with seven primary health care providers, and five expert interviews, a final prototype of the tool was developed. The tool includes features to support patient and provider needs, such as a patient journal, treatment plan, and care team communication. The tool also includes features to support the needs of healthcare providers, such as electronic health records and reminders for appointments. The tool is currently being piloted in primary care settings in Toronto, and preliminary results suggest that it is effective in improving patient and provider satisfaction. Further evaluation will be conducted to determine the impact of the tool on both patient and provider outcomes.

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Les médecins de famille peuvent-ils réellement contribuer à prévenir l’incapacité prolongée de travail secondaire à un trouble dépressif? 

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La dépression constitue une cause importante d’absentéisme, ce qui interpelle les médecins qui doivent certifier l’absence-maladie et encadrer le retour au travail ( RAT). Malgré leur potentiel pour prévenir l’incapacité prolongée, les pratiques des médecins restent peu documentées et leur pertinence, souvent mise en doute. Notre objectif : décrypter ces pratiques. Nous avons réalisé une série d’entrevues semi-structurées avec des médecins de famille (n=13) et des professionnels de la santé mentale (n=6). Les participants ont été recrutés au Québec dans deux secteurs présentant un contraste dans la disponibilité de leurs ressources publiques en santé mentale (ex : délai pour une consultation psychiatrique et une psychothérapie). Une analyse thématique des transcriptions d’entrevues a été réalisée, d’abord en segmentant le corpus en unités de sens, puis en classifiant ces unités selon une série de thèmes prédéterminés et d’autres, émergents. Une analyse transversale a ensuite permis de révéler des patrons entre les pratiques étudiées. Nos résultats révèlent que l’enjeu du travail constitue une préoccupation partagée par les médecins rencontrés, mais qu’il existe de la variation dans la façon dont cette préoccupation se traduit dans leurs pratiques. Deux profils se distinguent. Le premier se caractérise par une intégration de l’objectif de RAT à l’objectif de traitement dès la signature de l’arrêt de travail et par la mise à contribution du milieu du travail, quoique de façon indirecte. Le second se caractérise par une pauvreté d’actions précoces orientées vers le RAT et par des actions teintées d’une attitude suspicieuse envers le milieu de travail. Quel que soit le profil de pratique, cependant, l’action concertée des médecins avec les autres professionnels de la santé impliqués demeure l’exception plutôt que la règle. Certaines pratiques médicales documentées dans notre étude (profils 1 notamment) concordent avec les modèles d’intervention reconnus en prévention de l’incapacité prolongée de travail. Ces résultats soulignent, d’une part, le rôle significatif des médecins de famille en la matière, et, d’autre part, ouvrent des avenues pour la formation continue.

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Les patients ressources, acteurs incontournables dans l’amélioration des soins aux patients ayant vécu une amputation traumatique du membre supérieur

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Cette recherche porte sur l’évaluation de l’apport de patient ressource au Centre d’expertise en réimplantation et revascularisation microchirurgicale d’urgence (CEVARMU) du Centre hospitalier de l’Université de Montréal (CHUM) afin de favoriser la réduction de la perception du handicap chez ces patients. LE CEVARMU est le seul centre d’expertise en réimplantation au Canada. Depuis 2010, il fait appel, sur une base ponctuelle, à d’anciens patients ayant terminé leur processus de réadaptation afin d’accompagner et de soutenir les patients dans leur propre processus de soins. Considérés comme des partenaires à part entière de l’équipe, ces patients ressources rencontrent les patients hospitalisés ou qui sont en processus de réadaptation sur une base bénévole afin de témoigner de leur expérience et de s’assurer que les patients participent à l’élaboration des plans de traitement qui répondent à leurs besoins et qu’ils les comprennent bien. Les analyses préliminaires des entrevues réalisées auprès de professionnels (n=7), de patients ressources (n=4) et de patients (n=10) et de la documentation produite par le CEVARMU, ont pu mettre en évidence la nature de l’intervention réalisée par les patients ressources auprès de patients et sa complémentarité par rapport aux interventions des professionnels du Centre. De plus, les analyses ont pu mettre en évidence que cette intervention permet d’améliorer l’adhésion au traitement, de réduire potentiellement de 15% la perception de l’handicap par les patients, et d’avoir un impact positif sur leurs expériences de soins. Enfin, une résistance des professionnels à la venue de ce nouvel acteur dans les soins notamment au regard de la rédistribution des rôles et des identités a également été mis en évidence. La formalisation des savoir-faire du patient ressource au CEVARMU est un moyen prometteur pour augmenter l’auto-efficacité et l’adhésion aux traitements des patients. Ce modèle de formalisation démontre un potentiel élevé de transférabilité aux autres secteurs de la santé pour favoriser un continuum de soins du patient intégré soutenu par l’expertise du patient ressource.

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Le ‘benchmarking’ au sein des organisations de réadaptation: l’utilisation d’indicateurs de performance et les facteurs d’influence

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L’Association des établissements en déficience physique du Québec (AERDPQ) regroupant les Centres de réadaptation en déficience physique (CRDP) de la province a développé deux outils de performance afin de stimuler la comparaison et l’amélioration de la performance de leurs organisations membres. L’objectif de cette étude était de comprendre comment les indicateurs de performance inclus dans ces outils ont été utilisés et explorer les facteurs qui ont favorisé ou restreint cette utilisation. Démarche : des entrevues semi-structurées avec des informateurs clés des CRDP ont été réalisées. Une analyse thématique s’appuyant sur les théories de l’implantation des innovations a été effectuée afin d’identifier les facteurs d’influence. Les CRDP ont été catégorisés en utilisateurs importants vs faibles des indicateurs de performance. L’utilisation était catégorisée d’importante si l’utilisation était ciblée et/ou politique (axée sur le changement) et catégorisée de faible si elle était passive. Au total 16 établissements ont accepté de participer, représentant 87% des régions socio-sanitaires du Québec. De ces 16 CRDP, 10 ont fait une utilisation importante des indicateurs de performance et 6 en ont fait une utilisation faible. Trois facteurs principaux ont permis de distinguer les utilisateurs importants des utilisateurs faibles: les caractéristiques des outils de performance, le leadership des décideurs et les ressources disponibles. Quatre facteurs communs ont été identifiés à travers les 16 CRDP peu importe leur niveau d’utilisation des indicateurs de performance: la compatibilité de l’information de performance avec les besoins organisationnels, la nécessité de se doter d’indicateurs de performance, la complexité / simplicité de l’information de performance et le soutien offert aux CRDP par leur association AERDPQ. L’étude démontre l’importance de définir les besoins spécifiques de ‘benchmarking’ des organisations de santé afin d’identifier la nature des indicateurs de performance nécessaires à une analyse comparative pertinente et de qualité.

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Le ‘benchmarking’ au sein des organisations de réadaptation: l’utilisation d’indicateurs de performance et les facteurs d’influence
New developments in the policy context of migration of health professionals from Kenya
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This research sought to understand the context of migration of health professionals in Kenya both internally and internationally and the potential of scaling up mid-level cadres in health system strengthening. This phase of the research examined the new policy developments and their impact on migration. Kenya is one of 57 countries identified by the WHO as facing a critical shortage in health professionals. A number of policy developments have influenced the context of migration. Data collection took place from August 2012 to February 2013 in Kenya. A mixed-methods approach was used including in-depth interviews and quantitative secondary data. A total of 21 in-depth interviews were conducted with key policy influencers in the health system from five main sectors: government, development partners, training institutions, health professional bodies and health institutions. Secondary data on the health system and policy context complemented the in-depth interview findings. Significant strides have been made in addressing the policy context of migration for health professionals: development of a HRH policy, an update to the Health Policy and changes in governance through a new constitution. There has been an increase in the number of accredited training institutions for health professionals. The limited data on migration of nurses shows a decrease in migration; however, no specific data exists on migration of health professionals. All stakeholders agreed that there are shortages: in some cases due to maldistribution (doctors and nurses) while in others there are sufficient numbers trained, but a lack of absorption into the health system (mid-level cadres such as clinical officers). Health professionals and policy influencers differed on approaches to mitigate the current shortages. Migration as a theme needs to be addressed proactively to ensure that the current gains are not lost. The various strides in policy development present a promising future to the management of HRH in Kenya; however, the translation of policy into practice requires time and sustainable financing.

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Participatory health councils and good governance: healthy democracy in Brazil?
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PHCs are advisory bodies operating at all levels government that encourage citizen participation to monitor Brazil’s health system. Despite their expansive reach, their real impact on health policies is inconclusive. We therefore aimed to examine whether PHCs offer meaningful opportunities for open participation and influence in the health policy process. We conducted a methodological triangulation of a traditional literature review between the years 2000-2013 in English and Portuguese, 38 semi-structured interviews with health council members was undertaken as well as a quantitative analysis of PHC data from the Sistema de Acompanhamento dos Conselhos de Saúde (SIACS) database. Qualitative interpretive content analysis was used to analyse the interview data. We used the United Nations Economic and Social Commission for Asia and the Pacific’s (UNESCAP) definition of good governance as an organizational framework for our themes that were analysed according to qualitative interpretative content analysis. We learned that PHCs fall short in many of the categories of good governance. Government manipulation of the agenda and leadership of the PHCs, delays in the implementation of PHC decision-making, a lack of training of council members on relevant technical issues, the largely narrow interests of council members, the lack of transparency and monitoring guidelines, a lack of government support and a lack of inclusiveness are a few examples that highlight why PHCs are not as effective as they could be. PHCs appear to have limited impact on the health policymaking process. In order for PHCs to fulfill their mandate, a rethinking of their governance structures, processes, membership, and oversight is required. If change is resisted, PHCs will remain largely limited to a good idea in theory but disappointing in practice.

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Patient experience with self-care support for chronic physical conditions and depression: Results of a randomized trial
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Among primary care patients with chronic physical conditions and co-morbid depression: 1) to compare patient experiences with self-care support received for their chronic condition(s) versus their depression; and 2) to assess the effect of telephone coaching for depression self-care on patient experiences of support. The sample comprised patients in a randomized trial of lay telephone coaching in a depression self-care intervention. Patients had at least one chronic physical condition and co-morbid depression (PHQ-9 score 10+ and/or use of antidepressants). At the 6-month follow-up, patients completed 2 scales from the Patient Perceived Continuity for patients who see Multiple Providers scale assessing: 1) evidence of a care plan (6 items, score range 0-6) and 2) provision of self-management information (4 items, score range 1-5). Separate scales assessed 1) care of the chronic physical condition(s) and 2) care of the depression. Scales were completed by telephone or in a paper version. The sample comprised 93 patients (89% of eligible patients who completed the 6-month follow-up). Mean age was 53.1 (s=11.2) and 85% were female. Patients had higher mean scale scores for their physical conditions vs their depression both regarding evidence of a care plan (2.5 vs 1.7, p<0.01) and provision of self management information (mean 3.7 vs 3.3, p<0.01). These differences persisted after adjustment for mode of administration. Overall, the coaching intervention was not significantly associated with the scale scores, either for physical conditions or depression, after adjustment for mode of administration. Among primary care patients with a chronic physical condition and comorbid depression, telephone coaching was not associated with perceptions of self-care support from health care providers. Patients report that they are more likely to receive self-management information and a care plan from their providers for chronic physical conditions than for depression.

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Psychiatric Medications Prescribed for Adolescents and Young Adults in Western Canada
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Treating young people with serious mental illness optimally involves psychosocial interventions, often in combination with prescribed medications closely supervised by a physician. This study examines trends in prevalence rates and treatment profiles for adolescents and young adults who are prescribed mood and antipsychotic medications. A seven year (2007/08 to 2013/14) prospective cohort study was conducted to examine prescription patterns for drugs associated with mood and antipsychotic disorders among individuals aged 15 to 24. This was done using Canadian Institute for Health Information's National Prescription Drug Utilization Information System (NPDUIS) data for select jurisdictions (B.C., Saskatchewan, Manitoba, and First Nation and Inuit Health Branch). Population-based rates were used to profile the demographic characteristics of the cohort. Treatment profiles, including prevalence and polypharmacy rates, were constructed for mood and antipsychotic prescription cohorts separately. There is an increase in prevalence rates for all jurisdictions. The prevalence rate is increasing among the younger ages. Prevalence rates are higher in urban areas with a trend toward increasing disparity between patients in urban versus rural areas. There are differences in the treatment profiles for mood and antipsychotic cohorts. Both cohorts have increasing prevalence rates, however, the increase for the antipsychotic cohort is entirely accounted for by those who are also dispensed mood medication. The antipsychotic cohort has a significantly higher polypharmacy rate than the mood cohort. Understanding the utilization and treatment patterns for young people who are prescribed medications to physical conditions or depression, after adjustment for mode of administration. Among primary care patients with chronic physical conditions and comorbid depression, telephone coaching was not associated with perceptions of self-care support from health care providers. Patients report that they are more likely to receive self-management information and a care plan from their providers for chronic physical conditions than for depression.

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Quality Indicators for End-of-Life Care in Ontario
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As Ontario's population ages, the focus on availability and quality of end-of-life (EOL) care has increased across healthcare settings. A team of researchers conducted evidence-based reviews that supported recommendations for EOL care in Ontario. The objective of this work was to develop quality indicators that map to these recommendations. We conducted a scoping review to identify research describing the development, characteristics, or descriptions of numerators and denominators, of relevant indicators. We also searched grey literature and identified indicators selected by other EOL care initiatives within Ontario. We used a modified Delphi process to conduct an online prioritization survey that asked panel members, who were mainly experts involved in the evidence based reviews, to rate each indicator based on importance, actionability, and validity using a 7-point likert scale for each criterion. The panel then convened to review the survey results (median scores) and select a final list of indicators. From a list of over 700 unique indicators, we chose 86 that met the scoping review inclusion criteria. We then shortlisted 52 of these indicators for the prioritization survey based on mapping to the recommendations, relevance to Ontario or Canada, and being adequately defined. The panel chose a proposed list of indicators after reviewing the median scores and discussions over three meetings. Throughout this process, additional indicators were suggested and selected as well. As a result of the discussions, the panel agreed upon a list of 21 indicators for further review and refinement. The final list consisted of outcome and process indicators for the recommendations related to: interprofessional, team-based care; advanced care planning; determinants of place of death; education for informal caregivers; and cardiopulmonary resuscitation. Improving EOL care has been identified as a priority for the province's healthcare system by several stakeholders, including those involved in this work. The quality indicators identified by our scoping review and expert advisory panel discussions will provide a means of measuring improvements in Ontario's approach to EOL care.

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Real-world cost effectiveness of stroke units in Ontario. A matched cohort analysis
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Compared to General Ward (GW) care, integrated Stroke Unit (SU) post-stroke care has been shown to improve health outcomes and increase healthcare costs. Whether these outcomes can be observed in real-world care in Ontario is unknown. This study examines the relative cost-effectiveness of SU care in providing post-stroke care using real-world data. A cost-effectiveness analysis (CEA) was conducted using matched Ontario administrative data and published literature. The analysis took the Ministry of Health and Long-Term Care perspective and used a discount rate of 5%. The incremental cost per quality-adjusted life year (QALY) gained was the primary outcome in the CEA. Cumulative 5-year costs were extracted directly from the matched data. Inverse probability weighting methods were applied to control for censoring. Because utility values were not available from the matched cohort, modified Ranking Scale values at discharge were mapped to utilities. The time horizon and the inception cohort were varied in sensitivity analyses. 3,743 patients receiving SU care were identified, 1,989 of which were possible to be matched to controls. Care in SUs was non-significantly more costly compared to GW care ($103,508 vs $102,835. Diff = $673[-$7,155-$8,500]). Patients receiving SU care experienced quality adjusted life year gains (1.943QALYs vs 1.814 QALYs, QALYs gained=0.129[0.033-0.224]). Probabilistic sensitivity analysis showed a 43% chance that SUs reduce costs and increase QALYs and a 86% chance that are cost-effective above a $50,000/QALY threshold. The cost-effectiveness of SUs compared to GWs was less pronounced for shorter time horizons. Subgroup analysis across cohort years indicated differences in cost-effectiveness across that SUs were less cost effective compared to GWs when using the 2010 cohort compared to when using the 2004 or the 2008 cohorts. SU care appears to be associated with life-expectancy and QALY gains compared to GW care without significant increases in costs. However, CEA outcomes were sensitive to the model's time horizon, and the year of the inception cohort, with more recent cohorts resulting in less favourable outcomes for SUs.

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Rethinking Traditional Models of Care: Mobile Primary Care in the North
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While Canada's health system has been slow to adopt the population-health approach, a number of healthcare organizations have re-oriented traditional models of care to address the unique needs of populations. This session will detail a model of primary care designed to meet the needs of rural populations in the north. In 2013, the Canadian Institute of Health Information conducted a national research study with senior healthcare leaders to study the population-health approach within healthcare planning and decision making in Canada. From this research, a set of case examples were identified in which traditional models of care were re-oriented to meet the needs of communities and improve access to care for vulnerable populations. Using a unique multimedia case study methodology in 2014, the present case study documents the NorWest Community Health Centre (CHC) in Thunder Bay, Ontario – a primary care centre that adapted its care model for a rural northern Ontario context. Thematic analysis of the results highlighted healthcare challenges in the northern context, the modified model of care, leadership and program requirements, and the health impact on populations served. Unique challenges associated with delivering care in northern Ontario included geography and economies of scale, isolation, and a growing seniors population. The modified model of care included a primary care mobile van to bring primary care and other health and wellness services to ten remote communities north of Thunder Bay. This northern CHC used a community engagement model working with local volunteers and community centres to improve access to and quality of care, and to achieve improved patient and community outcomes. Challenges associated with quantitative data, health indicators, and appropriate comparators in the northern context were identified. This case study highlights a population-health approach that was used to re-orient a traditional primary health care model to establish a needs-based program for the north. Strategies from this case study can be adapted to other challenging healthcare contexts to address health system efficiency and population-health outcomes in Canada.

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The Effect of Electronic Medical Record (EMR) Implementation on Communication Between Pharmacists and Clinicians
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The purpose of this study is to determine how EMR affects communication between pharmacists and primary care clinicians. We aim to determine how EMR affects the number and type of faxed communication requests from pharmacists. We hypothesize that after several years of using an EMR, communication patterns will have changed. To conduct this study we will perform a retrospective chart analysis comparing faxed pharmacy communications captured before and after the implementation of an EMR at a family medicine academic teaching unit in Winnipeg. The analysis will span 3 months of requests during the era of paper charting and 3 months, 3 years after implementation of a provincially approved EMR. This information will be abstracted into data collection tables. The population under study will be made up of primary care clinicians (Family Physicians and Nurse Practitioners) at the Family Medical Centre in the Department of Family Medicine and their patients' pharmacists. We expect that there will be less communication requests from pharmacists in the time period using EMR documentation, in particular relating to ‘clarification requests’ and ‘incorrect dosing’ notifications. There is a paucity of data in this area in primary care populations. If our hypothesis is true, then we can conclude that the use of an EMR has a positive effect on the communication between pharmacists and clinicians as shown in other areas in the health care system.

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Typologie de l’affiliation à un médecin de famille, une mesure construite à partir des banques de données administratives

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Le fait d’avoir ou non un médecin de famille influence l’utilisation des services de santé. Cette information n’est toutefois pas facilement disponible dans les banques de données médico-administratives (BDA). Notre objectif est de documenter, dans les BDA, l’affiliation des patients à un médecin de famille (MF) et ses différentes dimensions. Nous avons caractérisé l’affiliation des patients à un MF à l’aide de trois dimensions de la relation médecin-patient repérables dans les BDA : l’inscription des patients, la réalisation de certains types d’examens et la concentration des visites en clinique de première ligne auprès d’un MF, tout sur une période de deux ans. Pour ce faire, un algorithme hiérarchique a été développé en utilisant les données sur les services médicaux RAMQ pour les années financières 2008-09 et 2009-10, concernant les patients montréalais âgés de 20 ans ou plus (n=1 248 249). L’algorithme a permis d’identifier une affiliation à un MF chez 68,1% des patients montréalais : 23,4% étaient affiliés via l’inscription (auprès d’un médecin dans un groupe de médecine de famille ou comme patients vulnérables); 21,3% via la réalisation d’un ou plusieurs examens complets majeurs (sans inscription); 12,7% à partir d’une concentration des visites de 75% ou plus auprès du même MF (sans inscription ni examen complet majeur) et 10,5% parce qu’ils avaient effectué une seule visite à un MF sur deux ans (sans inscription ni examen complet majeur). L’ajout de l’examen complet majeur à une mesure d’affiliation qui combinerait seulement inscription et concentration des visites (incluant les patients n’ayant effectué qu’une visite) permet d’identifier une affiliation à un MF chez 11,8 % de patients montréalais. La variable que nous avons construite constitue un « proxy » intéressant de la mesure du fait d’avoir un MF à partir des BDA. Ses différentes catégories permettront une analyse détaillée du phénomène d’affiliation, tant au regard des caractéristiques des patients, que de l’impact de différents types d’affiliation sur différents «outcomes».

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Using natural language processing for detecting adverse events from electronic health record data: A validation study

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Measuring adverse events (AEs) is necessary for quality improvements but current detection methods are inaccurate. We determined the accuracy of a potential alternative, the natural language processing (NLP) of electronic health record data, for detecting three highly prevalent AEs: a) deep vein thrombosis (DVT), b) pulmonary embolism (PE) and, c) pneumonia. A validation study was conducted at a university health network in Montreal (Canada). We randomly sampled 6,000 narrative radiology reports performed between 2008 and 2012; 2,000 from patients with a suspected DVT/PE, and 4,000 from patients having undergone a radiological examination of the lungs. We manually identified DVT, PE and pneumonia within each report, which served as our reference standard. Using a bag-of-words approach, we trained support vector machine (SVM) models predicting DVT, PE and pneumonia. SVM training and testing was performed with nested 10-fold cross-validation, and the average accuracy of each model was measured. On manual review, 324 (16.2%) reports were DVT-positive, 154 (7.7%) were PE-positive and 640 (16.0%) were pneumonia-positive. The SVM model predicting DVT achieved sensitivity of 0.80 (95%CI: 0.76-0.85), specificity of 0.98 (95%CI: 0.97-0.99) and positive predictive value (PPV) of 0.89 (95%CI: 0.85-0.93). The SVM model predicting PE achieved sensitivity of 0.79 (95%CI: 0.73-0.85), specificity of 0.99 (95%CI: 0.98-0.99), and PPV of 0.84 (95%CI: 0.75-0.92). The SVM model predicting pneumonia achieved sensitivity of 0.83 (95%CI: 0.78-0.88), specificity of 0.98 (95%CI: 0.97-0.99) and PPV of .88 (95%CI: 0.83-0.94). Statistical NLP can accurately identify AEs from narrative radiology reports. The SVM models validated in this study could assist prevention efforts by guiding the design, implementation and the evaluation of interventions aimed at minimizing their incidence.

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Vulnérabilité périnatale et retombées d’un programme de soutien à domicile : regard sur les relevailles (1/2)

GENEVIEVE ROCH
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L’expérience de la naissance suscite de nombreux besoins pouvant accentuer la vulnérabilité. Les centres de ressources périnatales (CRP) dispensent un programme de soutien postnatal à domicile appelé «relevailles». Les objectifs visent à décrire les dimensions de vulnérabilité, les besoins motivant le recours aux relevailles et leurs retombées. Recherche collaborative en trois volets s’appuyant sur l’intégration de méthodes mixtes. Les résultats présents ici sont issus d’un volet qualitatif intéressant aux retombées des relevailles auprès des familles utilisatrices. Dix-sept entretiens individuels et trois entretiens de groupe auprès de parents utilisateurs de relevailles (N = 28) ont été réalisés dans trois CRP situés dans différentes régions du Québec. Un cadre de référence sur la vulnérabilité périnatale inspiré de Lessick et al. (1992) et Rogers (1997) a appuyé une analyse de contenu réalisée avec le soutien de QDA Miner. Les retombées du programme de relevailles auprès des familles se traduisent par trois grands constats : 1) les familles expriment des dimensions biologique, psychologique et sociale de vulnérabilité; 2) les besoins motivant le recours aux relevailles relèvent principalement des composantes restauratrice (dormir), instrumentale (aide tâches/bébé et autres enfants) et d’autogestion (répit, temps pour soi); 3) les retombées de ce programme auprès des parents vont au-delà des dimensions de vulnérabilité exprimées et des besoins qui motivent le recours aux relevailles, ce qui se traduit notamment par des retombées cognitives (apprentissages). Certains enjeux liés à la disponibilité des services, la santé de la mère ou de l’enfant et la présence de fratrie, interviennent sur le façonnement de ces constats. Les résultats permettent de dégager les particularités d’un programme de soutien postnatal à domicile offert par des CRP en contexte québécois. Vue sous l’angle de l’innovation sociale, ce programme de « relevailles » gagne à être mobilisé afin de maximiser le mieux-être des familles et le développement des enfants.

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2015 CAHSPR Conference

The CIHR Institute of Health Services and Policy Research (IHSPR) would like to congratulate the 2014-15 Article of the Year and Rising Star award winners. **We encourage you to meet and congratulate the winners at the conference!**

CIHR-IHSPR Article of the Year

**“Introduction of Surgical Safety Checklists in Ontario, Canada”**


**David Urbach** (MD, MSc) is Professor of Surgery and Health Policy, Management and Evaluation at The University of Toronto (U of T), a Scientist at the Institute for Clinical Evaluative Sciences (ICES), and Head of the Research Division of Support, Systems and Outcomes at the Toronto General Hospital Research Institute.

**Nancy Baxter** (MD, PhD, FRCSC, FACS) is an Associate Professor in the Department of Surgery and Institute of Health Policy, Management and Evaluation at the U of T and a Senior Scientist at ICES.

CIHR-IHSPR Rising Stars

**Leah Smith** (PhD) is currently a postdoctoral fellow at Queen’s University, where she continues her research on the short-, intermediate-, and long-term effects of the HPV vaccine and Ontario’s Grade 8 HPV vaccination program.


**Lianping Ti** (MPH) is a PhD candidate in the School of Population and Public Health at the University of British Columbia. Her research focuses on the delivery and efficacy of healthcare systems for people who use illicit drugs.


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THE COMMONWEALTH FUND and Canadian Foundation for Healthcare Improvement (CFHI) invite promising mid-career professionals—government policymakers, academic researchers, clinical leaders, hospital and insurance managers, and journalists—from Canada to apply for a unique opportunity to spend up to 12 months in the United States as a Harkness/CFHI Fellow in Health Care Policy and Practice. Established by The Commonwealth Fund in 1925, the Harkness Fellowships were modeled after the Rhodes Scholarships and aim to produce the next generation of health policy leaders in participating countries.

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CONTACT Robin Osborn, vice president and director, International Program in Health Policy and Practice Innovations, at ro@cmwf.org to inquire about the program, eligibility, and proposed projects.

Harkness Fellows as well as U.S. and international health policy experts have opened my eyes to the opportunities for us to learn from each other and to apply our knowledge to improve our own healthcare systems. My fellowship, based in Washington D.C. at the Office of the Assistant to the Secretary for Planning and Evaluation, provided me with an extraordinary opportunity to work with senior Administration officials and study bundled payments, one of the many innovative reform strategies being piloted in the United States. The experience gave me crucial insights into how the U.S. government implements and evaluates health policies, enriching my own research and thinking about knowledge translation of health system funding reforms.

Jason Sutherland (2012-13 Harkness/CFHI Fellow) Associate Professor Centre for Health Services and Policy Research University of British Columbia