



prifor 2013

THE PRIMARY HEALTHCARE PARTNERSHIP FORUM

Improving Primary Healthcare Delivery:  
Renovating, Remodeling, Rebuilding

Sheraton Hotel Newfoundland  
St. John's, NL  
Nov. 25–26, 2013

Presented by the Primary Healthcare Research Unit,  
the Atlantic Practice Based Research Network, and  
the Centre for Rural Health Studies

**PriFor 2013**

**Program & Abstracts**

As an accredited provider, Professional Development and Conferencing Services, Faculty of Medicine, Memorial University of Newfoundland designates this continuing medical activity for up to **10 credit hours** for Mainpro-M1 of the College of Family Physicians of Canada.

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## Welcome messages

### Dean of Medicine

Welcome to PriFor 2013, the fifth annual Primary Healthcare Partnership Forum. The theme of this year's forum, **Improving Primary Healthcare Delivery: Renovating, Remodeling, Rebuilding**, reflects the importance of primary healthcare reform efforts occurring in Canada and internationally. Newfoundland and Labrador has lagged behind other areas of the country and the world in this process; primary healthcare delivery in this province has changed very little over the years. Conference organizers hope that this year's event, with its focus on renovating, remodeling, and rebuilding primary healthcare delivery will jump start the discussion and initiate innovative action regarding primary healthcare reform in this province.



This year's forum brings together a variety of practitioners and researchers in field of primary healthcare from Newfoundland and Labrador with their colleagues from other parts of the country and abroad. Over the next two days, you will have many opportunities to share ideas and become inspired about primary healthcare research and the potential for primary healthcare reform in this province.

Under the leadership of Dr. Marshall Godwin and the Primary Healthcare Research Unit (PHRU), PriFor has become a proven venue for the dissemination of primary healthcare research and program information. At PriFor meetings, primary healthcare researchers, practitioners, and policy makers come together to network, share ideas, present results of research, hear ideas and concepts, and build research capacity.

I hope you enjoy the conference, and I look forward to seeing you all back again for PriFor 2014.

*Dr. James Rourke*

### Director of the Primary Healthcare Research Unit

Primary healthcare reform began ten to fifteen years ago in most of the rest of Canada, but has yet to truly see the light of day in Newfoundland and Labrador. Ontario, Alberta and Quebec are especially well ahead in this regard, with the majority of family physicians now being part of interdisciplinary teams providing primary healthcare to patients. The PriFor Planning Committee decided eight months ago to focus the theme of PriFor 2013 on primary healthcare reform. The title of this year's PriFor theme is **Improving Primary Healthcare Delivery: Renovating, Remodeling, Rebuilding**. Our keynote speakers will all focus on primary healthcare reform in Canada and internationally, and we have brought together a panel of local policy makers and decision makers to discuss their vision for the future of primary healthcare Newfoundland and Labrador.



PriFor 2013 continues to bring together oral presentations, posters, and workshops on research and healthcare delivery programs in our province and across Canada. PriFor's focus is, and continues to be, on research and scholarly activity. It is a forum where researchers, providers, and policy makers can meet to share their work, their ideas, and their visions. This year PriFor is two full days this year, rather than a day and a half—a testament to its growth and popularity. Following PriFor, on Wednesday, Nov. 27, the NL Chapter of the College of Family Physicians of Canada is holding a one-day invitational meeting to continue the discussion on primary healthcare reform in Newfoundland and Labrador and plan the next steps.

So enjoy this year's conference, and plan to return next year for PriFor 2014.

*Dr. Marshall Godwin*

## Welcome messages

### Director of the Centre for Rural Health Studies

It gives me great pleasure to welcome you all to the fifth annual Primary Healthcare Partnership Forum. This conference brings together a broad range of experts from across Atlantic Canada and beyond. Together, we will explore issues as diverse as the education of medical students, residents and health policy researchers, clinical research, occupational health and complementary and alternative medicine.

The theme for PriFor 2013, **Improving Primary Healthcare Delivery: Renovating, Remodeling, Rebuilding**, is one that I am particularly passionate about. I will be focusing my research on topics related to this theme in the coming years in hopes of further strengthening the evidence base around primary healthcare. As many of you are aware, this evidence suggests that a strong system of primary healthcare not only improves the health of the population it serves, but also saves the healthcare system money.

As in previous years, we are lucky to have the very generous support of many sponsors. I'd particularly like to highlight the contribution of the Newfoundland and Labrador Medical Association, without whom we would not have been able to invite a particularly distinguished list of research and policy experts this year, among other things. These experts will teach us about primary healthcare reform both in Canada and abroad. I hope that these talks and the remaining conference sessions will play an integral role in shaping the best system of healthcare for Newfoundland and Labrador.

Thank you all for joining us and for helping to make PriFor a success. We look forward to seeing you back in the future!

*Dr. Kris Aubrey-Bassler*



### PriFor Planning Committee

Greetings, and welcome to PriFor 2013!

On behalf of the PriFor Planning Committee for the fifth annual PriFor conference, I am delighted to welcome you to this event. The annual PriFor conference provides a welcoming and supportive environment where primary healthcare researchers, especially those who work in rural and remote areas, can get acquainted with one another and share their experiences.

The committee has made every effort to ensure the success of this conference and we are delighted with the quality of the submissions and the keynote speakers who will share their wisdom with us. We also look forward to the panel discussion, which concludes the conference on Tuesday afternoon. If you are interested in participating in or contributing to primary healthcare reform, please join us at the panel discussion.

This conference is an excellent opportunity to meet with front-line healthcare practitioners, researchers, academics and decision makers to share your points of view. It creates an opportunity for networking, collaboration and for the building of trust relationships.

We look forward to meeting you in person; this conference promises to be a most interesting and enjoyable event!

*Dr. Shabnam Asghari*



## Plenary session

Monday morning, Nov. 25  
9:15–10:15 a.m.

### Primary Healthcare Reform: The International Experience

Dr. Ross Baker



G. Ross Baker is a professor and director of the new M.Sc. in Quality Improvement and Patient Safety at the Institute of Health Policy, Management and Evaluation, University of Toronto. Ross is also Co-PI of the IDEAS program that is developing state of the art QI training in Ontario based on the well-known Intermountain Healthcare Advanced Training Program.

Ross is currently leading a team of researchers who are following 17 teams who are engaging patients in service design, research and planning in a project funded by the Canadian Foundation for Healthcare Improvement and doing case study research on patient engagement strategies in the US, UK, Canada and France.

In October 2008, Ross published a book, *High Performing Healthcare Systems: Quality by Design*, which analyzes leadership and organizational strategies in seven health care systems that have been successful in using improvement tools and knowledge to transform outcomes.

Ross has been a board member of the Saskatchewan Health Quality Council since 2005 and he served as a member of the King's Fund (London, UK) Commission on Leadership and Management in the NHS in 2010–2011.

## Plenary session

Tuesday morning, Nov. 26

8:50–9:50 a.m.

### Primary Healthcare Reforms in Canada Over the Past 10 years

**Dr. Brian Hutchison**

Brian Hutchison is a professor emeritus in the Departments of Family Medicine and Clinical Epidemiology and Biostatistics at the Centre for Health Economics and Policy Analysis at McMaster University, co-chair of the Canadian Working Group for Primary Healthcare Improvement and senior advisor for primary care to Health Quality Ontario.

From 2002–2005, he was the director of the McMaster University Centre for Health Economics and Policy Analysis (CHEPA). He served as founding editor-in-chief of healthcare policy from 2004–2009, and president of the Canadian Association for Health Services and Policy Research from 2010–2011. He practiced comprehensive family medicine for five years in a fee-for-service group practice, followed by 25 years in a McMaster University academic family practice.

Brian held a National Health Research Scholar Award from Health Canada from 1994 to 1999. In 2004, he was the recipient of the Health Services Research Advancement Award presented by the Canadian Health Services Research Foundation. He also received a Lifetime Achievement Award in Family Medicine Research from the College of Family Physicians of Canada in 2008. Brian was selected as the 2013 Hall Laureate by the Justice Emmett Hall Foundation, and delivered the Emmet Hall Memorial Lecture, “From Hall to Now: Reflections on Canadian Medicare from a Primary Care Perspective”, at the 2013 Annual Conference of the Canadian Association for Health Services and Policy Research.

Brian’s areas of research and policy interest include organization, funding and delivery of primary and community care, needs-based health care resource allocation and funding methods, provider payment methods, quality improvement and preventive care.



## Plenary session

Tuesday afternoon, Nov. 26

1:30–2 p.m.

### Primary Healthcare Reforms in Ontario Over the Past 10 Years

Dr. Ruth Wilson



Dr. Wilson is the president of the North America region of WONCA, the World Organization of Family Doctors. A practicing family physician and educator, she is vice president (medical and academic affairs) of Providence Care, a hospital in Kingston, Ontario. A professor of family medicine at Queen's University, she was chair of the department for ten years. From 2001–2004, she served as chair of the Ontario Family Health Network, a provincial government agency created to implement primary care reform in Ontario. This effort laid the groundwork for the widespread primary care models in Ontario including family health teams.

Her practice as a family physician includes eleven years in remote communities in Canada, and 22 years in Kingston, Ontario, where she includes obstetrics in her practice. Her international experience includes helping establish family medicine in the immediate post-conflict situation in Bosnia and Herzegovina.

She is a past president of College of Family Physicians of Canada, and a past chair of the Canadian Medical Forum.

Wilson's research interests are in women's health, aboriginal health, and the lessons from these areas that affect the determinants of health. She is co-author of the women's health chapters of the

Oxford Textbook of Primary Care, and editor of *Implementing Primary Care Reform: Barriers and Facilitators*. She is chair of the National Drug Scheduling Advisory Committee.

She is the recipient of a Canada 125 Medal. In May 2002, Wilson received an honorary Doctor of Laws from Thompson Rivers University. In 2010, Wilson was named one of two Five-Star Doctors by WONCA, the World Organization of Family Doctors. Also in 2010, she was named one of Canada's Top 100 Most Powerful Women. She received a Diamond Jubilee Medal in 2012.



## Plenary session

Tuesday afternoon, Nov. 26  
2–2:30 p.m.

### Primary Healthcare Reforms in Alberta and the Patient Medical Home

Dr. Cathy MacLean

Dr. Cathy MacLean received her MD from Dalhousie University in 1985 and followed with her family medicine residency there.

She established a family practice at the Moncton Medical Clinic in 1987 and was soon teaching residents and medical students in her comprehensive practice that included obstetrics, hospital work, palliative care and emergency. She moved to the University of Western Ontario in 1992, where she became Undergraduate Family Medicine Director. In 1997, she took over the same role at Dalhousie. From 2007 to 2012, Dr. MacLean was professor and head of the Department of Family Medicine at the University of Calgary.

During her time at UWO, Dr. MacLean completed a master's in clinical science in family medicine, and later received a Masters in Business Administration from Saint Mary's University in Halifax. She has been active in teaching throughout her career at both the undergraduate and post graduate levels, receiving awards for teaching from the medical students at UWO, the 2006 Clinical Faculty Teaching Award from the family medicine residents at Dalhousie and the Dalhousie University Community of Scholars Award for Excellence in Medical Education that same year.

On the national front, Dr. MacLean has been involved with the College of Family Physicians of Canada for many years, serving on various committees and the national executive. She served two years as president of the Nova Scotia College of Family Physicians and was president of the College of Family Physicians of Canada in 2009–2010. She is currently on the Triple C Implementation Taskforce, chairs the national Patient Education Committee and also serves on the Patients Medical Home steering committee.

Dr. MacLean's tenure as department head at the University of Calgary saw significant growth for the department: They have an alternate funding plan, have undergone significant expansion in both undergraduate and post-graduate programs, introduced inter-professional team-based care in three new academic teaching clinics, received full accreditation of the residency and, as of July 2012, fully implemented the new Triple C Family Medicine competency-based curriculum. In 2011, the department celebrated 45 years of training family physicians in Calgary and completed a history project documenting the many successes of the department since 1966.

In March 2013, Dr. MacLean started with Memorial University as chair of the Discipline of Family Medicine.



# Panel Discussion on the Future of Primary Healthcare in Newfoundland and Labrador

The theme of this year's forum leads nicely into this special feature to wrap up the conference. The panel includes representatives from the province's regional health authorities, the Newfoundland and Labrador Medical Association, and the Newfoundland and Labrador College of Family Physicians. Each will share their respective views on primary healthcare reform—the subsequent interactive discussion is open to any and all conference attendees who wish to participate.

Immediately following PriFor, on Wednesday, Nov. 27, the Newfoundland and Labrador Chapter of the College of Family Physicians of Canada is holding a one-day invitational meeting to continue the discussion on primary healthcare reform in Newfoundland and Labrador and plan the next steps. It is our hope that the dialogue at the panel contributes valuable input to their discussion and indeed, the future of healthcare in our province.

The members of the panel include:

- **Wendy Graham**, President-Elect, Newfoundland and Labrador Medical Association
- **Charlene Fitzgerald**, President, Newfoundland and Labrador College of Family Physicians
- **James Rourke**, Dean of Medicine, Memorial University of Newfoundland
- **Alice Kennedy**, Vice President Regional Long Term Care/Community Support Services, Eastern Health
- **Rosemarie Goodyear**, Acting CEO, Central Health
- **Dennis Rashleigh**, Vice President Medical Services, Western Health
- **Michael Jong**, Vice President Medical Services, Labrador-Grenfell Health
- **Larry Alteen**, Director of Physician Services, Department of Health and Community Services

If you are interested in primary healthcare reform, please join us at the panel discussion. We welcome and encourage your participation and input.

## Highlights and key points

- Thank you to our sponsors; please visit their booths in the exhibitor and poster area. Special thanks to the Newfoundland and Labrador Medical Association, who provided exceptionally generous support to this year's forum.
- Conference starts with registration and continental breakfast at 8 a.m. on Monday. Breakfast will be served in Salon B on both days; Tuesday is a hot breakfast, which also starts at 8 a.m.
- Breaks are in Salon A with the posters and exhibitors.
- Lunch will be served in Salon B. The award for Primary Healthcare Researcher of the Year will be presented to Dr. Cheri Bethune during lunch on Tuesday.
- **Posters:** This year, there are two full-day poster sessions. Those presenting posters should have them up on their designated board in Salon A by 8:30 a.m. Presenters are asked to stand by their posters during the designated time for their day (10:15–11 a.m. on Monday; 9:50–10:20 a.m. on Tuesday). Extra time is also allotted during the lunch break for poster viewing.
- **Oral presentations/workshops:** There are three rooms with presentations/workshops running concurrently on each day. The rooms are Salons B, C, and D. All presenters should have received a letter indicating the room and time of their presentation. Please give your presentation (on USB flash drive or CD/DVD) to your room monitor or one of the IT people at least an hour before the block of sessions in which your presentation is scheduled.
- **Plenary sessions:** There are four talks in Salon B, each conveying experiences and views on how primary healthcare reform has happened elsewhere:
  - On Monday morning, Dr. Ross Baker, director of the M.Sc. in Quality Improvement and Patient Safety at University of Toronto and Co-PI of the Ontario IDEAS training program, will provide an international review of primary healthcare reform.
  - On Monday afternoon, Dr. Brian Hutchinson, co-chair of the Canadian Working Group for Primary Healthcare Improvement and senior advisor for primary care to Health Quality Ontario, will speak on reform in different parts of Canada.
  - On Tuesday afternoon, Dr. Ruth Wilson, president of the North America region of WONCA and vice president (medical and academic affairs) of Providence Care in Kingston, Ontario, will discuss her experiences with reform in Ontario.
  - Also on Tuesday afternoon, immediately following Dr. Wilson's talk, Dr. Cathy MacLean, the recently appointed chair of the Discipline of Family Medicine at Memorial University, will share the Alberta perspective; specifically, the Patient Medical Home.
- In recognition of a full Tuesday afternoon, but without wanting to lose the momentum of the final plenary talks that a full break might precipitate, we've included a small break to get up and stretch before the interactive panel discussion begins.
- The conference will conclude on Tuesday afternoon with the **Panel Discussion on the Future of Primary Healthcare in Newfoundland and Labrador**. Representatives from the province's regional health authorities, the Newfoundland and Labrador Medical Association, and the Newfoundland and Labrador College of Family Physicians will share their perspectives on primary healthcare reform, followed by an interactive discussion with any and all conference attendees who wish to participate. We welcome and encourage your input.
- **Cocktail reception:** On Monday, at the end of the afternoon sessions for the first day, there will be a cocktail reception for all registrants. This runs from 4–6 p.m., and will be held in the Court Garden. Set to relaxing live entertainment, delicious hot and cold hors-d'oeuvres will be served, and a complimentary beverage provided. This is a great chance to unwind and converse with your fellow conference attendees.
- Please feel free to approach any of the conference staff if you need help. They will be wearing **RED** name tags.

# Conference agenda

Monday

Monday, Nov. 25			
8–9 a.m.	Registration & continental breakfast Salon B		
9–9:15 a.m.	Welcome & opening remarks Salon B		
9:15–10:15 a.m.	<b>Primary Healthcare Reform: The International Experience</b> Dr. Ross Baker Salon B		
10:15–11 a.m.	Research poster viewing / Exhibitor viewing / Refreshment break Salon A		
11–12:40 p.m.	Mental Health Salon B	Teaching & Learning in Medical Education Salon C	Physical Activity/ Chronic Disease Workshop Salon D
12:40 p.m.–2 p.m.	Lunch / Research poster viewing Salon B / Salon A		
2–4 p.m.	Variety Pack Salon B	Health & Physical Activity Salon C	Scholarly Writing Skills Workshop Salon D
		Risk Factors for Cancer Salon C	
4–6 p.m.	Cocktail reception Court Garden		

# Conference agenda

Tuesday

Tuesday, Nov. 26			
8–8:50 a.m.	Hot breakfast Salon B		
8:50–9:50 a.m.	<b>Primary Healthcare Reforms in Canada Over the Past 10 years</b> Dr. Brian Hutchison Salon B		
9:50–10:20 a.m.	Research poster viewing/Exhibitor viewing/Refreshment break Salon A		
10:20 a.m.–noon	Primary Care Delivery Salon B	Access to Healthcare Salon C	GIS Health Workshop Salon D
Noon–1:30 p.m.	Lunch/Research poster viewing Salon B/Salon A		
1:30–2 p.m.	<b>Primary Healthcare Reforms in Ontario Over the Past 10 Years</b> Dr. Ruth Wilson Salon B		
2–2:30 p.m.	<b>Primary Healthcare Reforms in Alberta and the Patient Medical Home</b> Dr. Cathy MacLean Salon B		
2:45–3 p.m.	Stretch break Salon B		
3–4:30 p.m.	<b>Panel Discussion on the Future of Primary Healthcare in Newfoundland and Labrador</b> Salon B		

# Sessions in detail

Monday morning

## Mental Health

<b>Room:</b> Salon B	<b>Facilitator:</b> Gary Tarrant	<b>Monitor:</b> Cassidy Brothers
11:00 a.m.	Addressing the Gap for Mentally Ill Seniors with Technology	Lisa Adams See abstract on page 30
11:20 a.m.	Caregiver Perspectives of Palliative and End of Life Care for Individuals at End-Stage Alzheimer's Disease in Newfoundland and Labrador: A Qualitative Phenomenological Approach	Barbara Mason See abstract on page 19
11:40 a.m.	The Experience of an Emergency Caesarian Section: Can Primary Health Care Providers Assist Women to a More Positive Outcome?	Julie Sullivan See abstract on page 31
12:00 p.m.	Strongest Families: Improving Access to High Quality Care	Patricia Lingley Pottie See abstract on page 28
12:20 p.m.	The Kittiwake Network of Wellness (KNOW): A Cost-Effective Mental Health Initiative for the 21st Century	Ryan B. Norman See abstract on page 32

## Teaching & Learning in Medical Education

<b>Room:</b> Salon C	<b>Facilitator:</b> Leslie Rourke	<b>Monitor:</b> Amelia Moffatt
11:00 a.m.	Building a Scholarly Research Program for Rural and Remote Family Medicine Faculty	Cheri Bethune See abstract on page 18
11:20 a.m.	Costs to Community Preceptors for Precepting a Family Medicine Resident	Bill Eaton See abstract on page 20
11:40 a.m.	Value and Impact of Professional Literature Searches on Academic and Clinical Practice	Lindsay Alcock Glynn See abstract on page 33
12:00 p.m.	Medical Students Attitudes towards Online Social Networking and Patient Care	Sandra Cooke-Hubley See abstract on page 25
12:20 p.m.	Experiential Learning Strategies for Developing Humanistic Skills in the Faculty of Medicine	Martha Traverso-Yepetz See abstract on page 22

## Physical Activity & Chronic Disease Workshop

<b>Room:</b> Salon D	<b>Facilitator:</b> Greg Sherman	<b>Monitor:</b> Julia Kawamoto
10:20 a.m.	Overcoming the Barriers to Physical Activity and Health Behavioural Changes to Tackle Chronic Diseases	Fabien Basset See abstract on page 35

## Sessions in detail

Monday afternoon

## Variety Pack

Room:	Facilitator:	Monitor:
<b>Salon B</b>	<b>Norah Duggan</b>	<b>Réanne Meuse</b>
2:00 p.m.	Medicalization of Poverty: Low Income Lone Moms and Mental Health	Diana L. Gustafson See abstract on page 26
2:20 p.m.	Perceptions of Hospitalization of the Bariatric Population	Karen Martin See abstract on page 28
2:40 p.m.	CPCSSN Validation Study	Marshall Godwin See abstract on page 21
3:00 p.m.	External Factors That Influenced Decision-Making Regarding the Liberation Procedure: A Qualitative Study Among People with Multiple Sclerosis	Michelle Ploughman See abstract on page 22
3:20 p.m.	Sex Differences in Risk Factors for Adverse Outcomes in Diabetes: A Proof of Concept Study Utilizing Electronic Medical Record (EMR) Data	John Knight See abstract on page 29
3:40 p.m.	Is There Anyone Out There? The Effectiveness of In-Person and On-Line Public Engagement Methods in Central Newfoundland	Peter Wilton See abstract on page 23

## Health &amp; Physical Activity/Risk Factors for Cancer

Room:	Facilitator:	Monitor:
<b>Salon C</b>	<b>Kath Stringer</b>	<b>Shannon Fisher</b>
2:00 p.m.	The HealthSTEPS Program: Health Skills Tools and Education for Parents	Lynn M Frizzell See abstract on page 32
2:20 p.m.	NeuroFIT Improves Quality of Life and Community Integration Among People with Moderate to Severe Neurological Disabilities	Jennifer Shears See abstract on page 26
2:40 p.m.	Long-Term Exercise Adherence in Chronic Disease: Findings from the Canadian Survey of Aging with Multiple Sclerosis	Michelle Ploughman See abstract on page 24
3:00 p.m.	Diet, Lifestyle and Colorectal Cancer: A Newfoundland Perspective	Peizhong Peter Wang See abstract on page 21
3:20 p.m.	An Investigation of Cancer Rates in the Argientia Region, Newfoundland and Labrador, Canada.	Pauline Duke See abstract on page 17

## Scholarly Writing Skills Workshop

Room:	Facilitator:	Monitor:
<b>Salon D</b>	<b>Patti McCarthy</b>	
2:00 p.m.	Awakening the Right Brain and Hushing the Left Brain: Enhancement of Scholarly Writing Skills in an Academic Setting	Cheri Bethune See abstract on page 34

# Sessions in detail

Tuesday morning

## Primary Care Delivery

Room:	Facilitator:	Monitor:
<b>Salon B</b>	<b>Kris Aubrey-Bassler</b>	<b>Jacqueline Fortier</b>
10:20 a.m.	Shea Heights Community Health Centre as Interprofessional Model of Primary Healthcare and Teaching	Cheri Bethune See abstract on page 30
10:40 a.m.	The Quality and Costs of Primary Care in Newfoundland and Labrador (Qualico PC NL)	Julia Kawamoto See abstract on page 33
11:00 a.m.	Laying a Foundation for Primary Health Care in Newfoundland During the 1920s–1930s	Jim Connor See abstract on page 24
11:20 a.m.	The BETTER (Building on Existing Tools to Improve Chronic Disease Prevention and Screening in Family Practice) Project: A Qualitative Study	Donna Manca See abstract on page 30
11:40 a.m.	PAASSPORT: Primary Care Advanced Access Study— Spreading the Practice and Optimizing Inter-professional Resources and Treatment	Deborah Kopansky-Giles See abstract on page 27

## Access to Healthcare

Room:	Facilitator:	Monitor:
<b>Salon C</b>	<b>Pauline Duke</b>	<b>Cassidy Brothers</b>
10:20 a.m.	Community-based Service Models for Seniors	Stephanie O'Brien See abstract on page 20
10:40 a.m.	Renovating, Remodeling and Rebuilding with Telehealth Support	Joanne Reid See abstract on page 29
11:00 a.m.	Cancer Screening and Wait Times and Wait Time-Related Satisfaction	Maria Matthews See abstract on page 18
11:20 a.m.	Creating a Failsafe System for Women with Abnormal Cytology	Joanne Rose See abstract on page 21

## GIS Health Workshop

Room:	Facilitator:	Monitor:
<b>GIS Lab*</b>	<b>Shabnam Asghari</b>	
11:00 a.m.	A Case Study of Demographic Change in Newfoundland and Labrador	Alvin Simms See abstract on page 35

*\*This workshop is being held at the Memorial University GIS lab (SN 2001). Registration is limited to 10 people; there is a sign-up sheet at the registration desk. Complimentary return transportation will be provided leaving from the Sheraton at 10:30 a.m.*



# Poster presentations

## Monday

Room: Salon A

Monitors: Andrea Pike & Ricky Cullen

1	Portrait of Chronic Pain in Newfoundland and Labrador	Heather Foley See abstract on page 45
2	The Psychosocial Impact of Living with Risk for a Genetic Disorder with a High Risk of Sudden Cardiac Death	Holly Etchegary See abstract on page 50
3	Investigating Celiac Disease in Newfoundland and Labrador	Jacqueline Fortier See abstract on page 42
4	The Effect of Biologic Therapies on the Risk of a Major Adverse Cardiac Event (MACE) in Patients with Moderate to Severe Psoriasis	Shane A. Randell See abstract on page 47
5	Program Evaluation of an Enhanced Model for Rural and Remote Family Medicine Training	Réanne Meuse See abstract on page 45
6	Assessment of Palliative Care Needs of People with End-Stage Renal Disease (ESRD) on Dialysis	Victor Maddalena See abstract on page 38
7	Who's Cooking? Understanding Young Adults' Behaviours and Attitudes Towards Cooking in Canada	Courtney O'Neill See abstract on page 51
8	An Inquiry into Stigma within Mental Health Care Policy	Sonya Bowen See abstract on page 36
9	The Experience of Gaining Weight Above National Guidelines in Pregnancy: Insights From the Stories of Pregnant Women	Cynthia Murray See abstract on page 48
10	An Update for Primary Healthcare Practitioners on the Prevalence of Obesity in Atlantic Canada	Cynthia Murray See abstract on page 37
11	Evaluation of an eLearning Module for Teaching Medical Students to Conduct an Effective Well-Baby Visit Using the Rourke Baby Record	Leslie Rourke See abstract on page 40
12	Optimizing Health Care Delivery in Personal Care Homes in Newfoundland and Labrador	Gary Tarrant See abstract on page 43
13	Digital Epidemiology Chronic Disease Tool (DEPICT): Visualization of Health Data for Chronic Disease in Newfoundland and Labrador	Shabnam Asghari See abstract on page 39
14	The Effect of an Intensive Nurse Home Visit Program on Self-Assessment of Health and on Social Engagement in the Independently Living Oldest Old	Danielle O'Keefe See abstract on page 47

# Poster presentations

Tuesday

Room: Salon A

Monitors: Andrea Pike & Ricky Cullen

1	The Impact of a Poster Campaign: Can it Influence the Acceptance of Breastfeeding by Residents of Rural Newfoundland and Labrador?	Alissa Vieth See abstract on page 48
2	Medical Student Health Care Needs, Practices and Barriers to Care	Janet Bartlett See abstract on page 43
3	The Causal Role of Smoking in the Risk of Colorectal Cancer: A Mendelian Randomization Analysis	Zhi Chen See abstract on page 46
4	Assessing Pain: The Deaf Community's Experience	Victor Maddalena See abstract on page 37
5	Delivery of Palliative Care by International Medical Graduates in Remote and Rural Newfoundland and Labrador	Fiona O'Shea See abstract on page 39
6	Cancer Patients' Perceptions of Wait Times' Causes	Maria Mathews See abstract on page 38
7	Osteoarthritis and Delivery of Care in Newfoundland and Labrador: A Spatial Analysis Study	Jennifer Woodrow See abstract on page 44
8	Health-Selective Migration Following Diagnosis with Diabetes in Newfoundland and Labrador	Oliver Hurley See abstract on page 41
9	The Anti-Liberation Procedure Decision-Making Experience for People Living with Multiple Sclerosis: Lessons Learned for Primary Healthcare Providers	Cynthia Murray See abstract on page 46
10	The Pro-Liberation Procedure Decision-Making Experience for People Living with Multiple Sclerosis: Opportunities and Challenges for Primary Healthcare Providers	Cynthia Murray See abstract on page 49
11	Medical Geography: A Promising Cross-Disciplinary Program	Shabnam Asghari See abstract on page 42
12	A Four-Step Health Promotion and Community-based Intervention for Cervical Screening within Two Communities Located in Rural Eastern Newfoundland	Dawn Mercer See abstract on page 36
13	Health Coaching to Effect Lifestyle Behaviour Change: A Clinical Trial of Individuals with Pre-Disease	Cassidy Brothers See abstract on page 41
14	Utilization of EMR and EHR Data for Research and Health System Use in Newfoundland and Labrador	John Knight See abstract on page 50

# Abstracts

## Oral Presentations

### Addressing the Gap for Mentally Ill Seniors with Technology

Dr. Lisa Adams

**Context:** Seniors are often one of the most difficult populations to assess for mental illness merely because of their own fear, embarrassment and stigma, their obscured presentation of symptoms and the education and expertise in geriatric psychiatry that frontline clinicians lack. However, if mentally ill seniors were adequately assessed, diagnosed and hence treated, they would perhaps experience a shorter length of stay in hospital, fewer rates of admissions and hence, less costs; creating for the hospital an enhanced clinical efficiency.

**Objective:** The main goal of this study was to develop an assessment tool so that seniors in an ER can be adequately assessed, diagnosed and treated for mental illness symptoms and disorders.

**Target Audience:** This topic should be of great interest to frontline clinicians who have the potential to interact with and care for seniors who have mental health concerns, as well as policy makers, and government officials who are seeking to become more clinically efficient and cost effective in health service delivery.

**Description:** The assessment tool developed in this research takes the form of a computer application whereby its algorithm content includes not only key symptoms, diagnoses and treatment for mentally-unwell seniors, but it also includes the national clinical guidelines for mentally-ill seniors and the diagnostic criteria of the DSM-IVR.

**Conclusion:** This evidence and practice informed computer application is now fully developed, but needs to be piloted and evaluated in an appropriate setting.

### An Investigation of Cancer Rates in the Argentia Region, Newfoundland and Labrador, Canada

Pauline Duke, Jacqueline Fortier

**Context:** The Argentia region of Newfoundland & Labrador (NL), Canada housed an American Naval Base from the 1940s–1990s. The Base was the site of chemical and biological research trials and other activities that left behind an array of toxic and hazardous chemicals, many of which are known cancer-causing agents. Cancer rates for the Argentia region have been thought to be high compared to the rest of the province, although no systematic review has been conducted. **Objective:** To determine if the Argentia region has a higher incidence of cancer compared to the rest of the province. **Design:** Secondary data analysis. Cancer diagnosis information from the NL Cancer Registry was used to determine the incidence of cancer in Argentia region. This rate was compared to cancer incidence rates in Stephenville, a region that house another military Base; Botwood, a community with no Base; and the overall incidence rate in the province of NL. Incidence rates were combined with Canadian Census data to determine standardized incidence ratios (SIRs). **Participants:** All persons in NL diagnosed with cancer between 1985 and 2009. **Main Outcome Measures:** ORs and SIRs for all cancers, brain cancer, colorectal cancer, and lung cancer. **Results:** The odds of having cancer were higher for those living in the Argentia region when compared to the province of NL as a whole based on the ORs. SIRs are being calculated, and will be available at the conference. **Conclusion:** This study will assess whether the Argentia Region of NL which housed an American Naval Base for some time is more cancer-burdened than other regions of the province as well as the province as a whole.

## Building a Scholarly Research Program for Rural and Remote Family Medicine Faculty

Cheri Bethune, Shabnam Asghari, Patti McCarthy, El-Bialy Rowan, Marshall Godwin, Wendy Graham, Kris Aubrey, Vernon Curran, Ford Bursey

**Context:** Clinical faculty report numerous barriers to participating in scholarly research activities such as lack of time, resources, and skill. Rural and remote family medicine faculty experience additional barriers such as geographic and professional isolation, as well as reduced access to professional development opportunities.

**Objective:** To identify and prioritize skills and services that rural and remote clinical faculty need to engage in research and scholarship.

**Design:** Overall this is a mixed-methods multiphase project comprised of I) identifying priority research skills for rural and remote faculty and an appropriate knowledge translation process; II) curriculum design, development and implementation; and III) program evaluation.

The reported results are based on data collected in Phase I which included

10 key informant interviews with medical scholars, faculty development experts, one focus group with rural and remote family medicine faculty in Newfoundland and Labrador (NL), a systematic literature search and an environmental scan.

**Participants:** A snowball sampling method was used to select a number of nationally recognized medical scholars and academic experts on clinical faculty development for the key informant interviews. Interviews were conducted until data saturation was achieved. The focus group consisted of 15 community-based preceptors practicing/teaching in rural or remote settings. Purposeful sampling was used to include junior and senior faculty, new and experienced scholarly researchers, and from different regions of NL.

**Outcome Measures:** An Initial list of priority topics for a scholarly research program, faculty and program needs, and an appropriate teaching and learning framework.

**Results:** Preliminary analyses demonstrate that rural faculty face particular barriers to participating in scholarship, such as limited access to academic services like library and statistical services, and opportunities to network and collaborate with other faculty members. One key recommendation that has emerged is the establishment of a provincial research support network with local experts providing mentorship and assistance. Participants also stressed the importance of having a venue to exchange ideas and share research with other rural faculty.

**Conclusions:** Successful implementation of a scholarly research program tailored to the needs of rural and remote family medicine faculty requires dedicated research support, mentorship, and a curriculum utilizing synchronous and asynchronous learning.

## Cancer Screening and Wait Times and Wait Time-Related Satisfaction

Maria Mathews, Dana Ryan

**Context:** Routine cancer screening is believed to find cancer at earlier stages but does it decrease wait times and improve wait time-related satisfaction?

**Objective:** To examine differences in wait times and interval specific satisfaction among screening program participants and non-participants. We considered the interval from first visit with a health care provider for cancer symptoms to diagnosis.

**Design:** Retrospective, observational survey

**Participants:** Breast and prostate cancer patients who presented at clinics across Newfoundland and Labrador and were diagnosed between January 2009 and June 2011.

**Instrument:** The survey gathered information about dates in the care seeking process, satisfaction with wait times, clinical and screening history, and socio-demographic characteristics.

**Outcome Measures:** For each cancer type, we calculated median wait time for first visit with a health care provider to diagnosis. Wait time was recoded as short (less than the median) or long (greater than or equal to the median). Satisfaction was measured on a 5 point scale and recoded as dissatisfied (1-2) and satisfied (3-5). We compared the wait time and satisfaction of four groups of patients: 1) participated in regular screening and whose cancer was detected by a screening test (screen/screen), 2) participated in regular screening and whose cancer was detected through symptoms (screen/self), 3) did not participate in regular screening and whose cancer was detected by a screening test (no screen/screen), and 4) did not participate in regular screening and whose cancer was detected through symptoms (no screen/self).

**Results:** The median wait times and satisfaction were: breast: 47.5 days, 67.5% satisfied; prostate: 104.5 days, 68.5% satisfied. Among breast cancer patients, there was no difference in the wait times of the four groups and a smaller proportion of screen/self participants were satisfied with their wait than the other groups. Among prostate cancer patients, a larger proportion of screen/self participants had long wait times and were dissatisfied with their wait than the other three groups. There was no difference in the waits and satisfaction of the three other groups for either breast or prostate cancer patients

**Conclusions:** Participation in regular screening did not decrease wait times or improve wait-related satisfaction. The findings suggest that expectations related to screening influence perceptions of wait times. More research is needed to test these findings with larger samples.

### Caregiver Perspectives of Palliative and End of Life Care for Individuals at End-Stage Alzheimer's Disease in Newfoundland and Labrador: A Qualitative Phenomenological Approach

Barbara Mason

**Context:** The purpose of this research is to examine the experiences of individuals at end-stage Alzheimer's disease in relation to palliative and end of life care. Much research into Alzheimer's disease focuses on caregiver burden, financial costs, pathology and cures for the disease. Little research exists that examines the quality of death for this population. **Objective:** The primary goal of this research is to explore the experiences of familial caregivers regarding palliative and end of life care for individuals at end-stage Alzheimer's. **Design:** This is a qualitative, phenomenological study that focuses on the uniqueness of individual experiences and meanings. Between 7–10 people will be engaged in this research. Participants must have been familial caregivers of individuals at end-stage Alzheimer's in Newfoundland who had been deceased for between six months and five years. In-depth interviews and a focus group are used to capture detailed narratives and experiences. **Outcome Measures:** Thematic analysis of the data generated from participant interviews are used to identify common and unique themes among caregiver experiences. **Results:** This research is ongoing. **Conclusions:** The problem being posed in this research relates to whether people at end-stage Alzheimer's disease are receiving timely and adequate palliative and end of life care that ensures they are afforded a dignified death through the minimization of pain and suffering. **Target Audience:** This research is meant to address individuals who are interested in the areas of health services and policy research, continuum of care across the life span, Alzheimer's disease, palliative and end of life care, aging, and patient-centred care.

## Community-based Service Models for Seniors

Stephanie O'Brien

**Context:** Seniors in Newfoundland and Labrador are living longer and with more chronic disease than ever before. At the same time, informal support networks for seniors are eroding as younger generations migrate within the province or leave the province altogether. The province's health and social services systems are challenged with providing support to enable seniors to live at home as long as possible.

**Objective:** To synthesize the evidence for the effectiveness, equity, feasibility and acceptability of models of integrated care, including primary medical care, community care and social services, in supporting seniors with ADL/IADL disabilities and mild to complex chronic health conditions to remain at home as long as possible, and to interpret the evidence in the context of Newfoundland & Labrador.

**Design:** This Contextualized Health Research Synthesis Program (CHRSP) project employed a meta-review methodology that synthesized evidence from systematic reviews and other types of review literature. Key informant interviews and focus groups were used to identify contextual factors that may have an impact on the reported effectiveness, equity, feasibility and acceptability of an integrated care model in Newfoundland and Labrador.

**Outcome Measures:** The primary outcomes of interest were the effects of integrated care models on seniors in terms of quality of life, healthcare utilization, and residency status; features of effective models of integrated care; and the feasibility and acceptability of implementing models of integrated care in Newfoundland and Labrador.

**Results:** Umbrella organizational structures, multidisciplinary case management with a shared geriatric assessment, organized provider networks, and aligned financial incentives are features associated with effective models of integrated care, which, in turn, are associated with improved quality of life, reduced healthcare utilization, and with keeping seniors at home for longer periods of time. Certain aspects of integrated care are already occurring in parts of the province.

**Conclusions:** Integrated care may increase a senior's ability to remain at home while maintaining an acceptable quality of life. Although there are challenges to implementing umbrella organizational structures and financial incentives in NL, it is encouraging that several communities, even with limited resources, are capable of multidisciplinary case management and informally organized provider networks.

## Costs to Community Preceptors for Precepting A Family Medicine Resident

Bill Eaton

**Purpose:** To conduct a pilot project exploring the costs, both in time and money, incurred by both rural and urban community based family medicine preceptors who teach family medicine residents from Memorial University on long term rotations.

**Methods:** A sample of 34 physicians who are affiliated with Memorial University as a preceptor to resident trainees was used for this analysis. Self-reported time and financial costs experienced when trainees are present in the clinic were assessed by questionnaire.

**Results:** The majority of preceptors (88%) were paid fee for service, with 63% having a university appointment. Only 60% of preceptors reported that they received financial compensation from the medical school for their resident supervision. Sixty-two percent of respondents indicated that there were extra expenses associated with setting up their clinic to accommodate a practicing resident and the vast majority indicated that it does increase daily work hours by at least 1 hour. However, 87% of preceptors indicated that having a resident in their clinic is either cost neutral, or increases the income of the clinic.

**Conclusion:** This pilot study suggests that supervising Family Medicine residents over long-term rotations in the ambulatory setting does increase daily work hours by at least 1 hour but does not place major financial burdens on their clinics. These findings encourage physicians to be involved in residency education and highlights that residents can contribute positively to the income of a clinic.

### CPCSSN Validation Study

Marshall Godwin

The Canadian Primary Care Sentinel Surveillance Network (CPCSSN) is multi-disease electronic record surveillance system; essentially CPCSSN is a Canadian database of chronic disease. Using 400 charts of NL patients, we attempted to validate the CPCSSN case definitions for each of the eight chronic diseases studied: HTN, DM, depression, OA, COPD, dementia, PD, and epilepsy. First charts were reviewed by an RA and then physicians completed a form in which they indicated which of their patients had any of the eight conditions studied. Results are not yet available but will be analyzed using inter-rated reliability. This work is of paramount importance to the CPCSSN project as it will allow us to evaluate the extent to which we are able to accurately identify patients having these conditions from within each practice. This is important not only for us and our purposes of chronic disease surveillance but also ensures that the data we provide back to sentinels on their patients is as accurate as possible.

### Creating a Failsafe System for Women with Abnormal Cytology

Joanne Rose

**Context:** The Cervical Screening Initiatives program has recently introduced a failsafe system for women with abnormal cytology. For women who have no record of timely follow up in the health care system after an abnormal pap report, a three step reminder process is initiated.

**Objective:** To describe the failsafe system, the role of the health care provider and the communications with women directly.

**Description:** The recall system is a series of individual letters prompted in an algorithm triggered by the severity of the Pap diagnosis. The first and second letters are sent to the attending health care provider who collected the pap and when necessary to the alternate care provider. If there is no success in updating the woman's follow up care, the third letter is sent directly to the woman. In this way, women have the information to assist them to make informed choices about their Pap test status.

**Evaluation:** The process initiated in January 2012, with the letters to women starting October 2012. Evaluation of the process impact and outcome is underway. This will be complete October 2013. The final description will include the # of women in the follow up queue, the success in learning the women's status through the physician/health care providers, and the success of the outreach to women themselves.

### Diet Lifestyle and Colorectal Cancer: A Newfoundland Perspective

Peizhong Peter Wang

**Background:** Newfoundland and Labrador (NL) has one of the highest incidence rates of colorectal cancer (CRC) in the world. In the past decade, a multidisciplinary team two Canadian provinces (NL and ON) launched a comprehensive research project involving more than 4,000 CRC cases and controls. One of the important mandates was to explore how various lifestyle and dietary factors work together to give rise of CRC. The objectives of this presentation are to: 1) highlight major epidemiological findings to date, and 2) discuss planned future research projects.

**Methods:** Incident colorectal cancer cases were identified from population-based cancer registries in the two provinces. Controls were a random sample of residents in each province, aged 20-74 years. Personal history questionnaire (PHQ), family history questionnaire (FFQ), and food frequency questionnaire (FFQ) were used to collect study data. Binary analyses and multivariate regression analyses were used to evaluate the association of various lifestyle and dietary factors with CRC risk.

**Main Results:** Smoking, pickled red meat intake and N-nitroso compounds were significantly associated with elevated risk of CRC in NL population. Alcohol drinking increased the risk of CRC only in obese individuals. Total energy intake was associated with higher risk of CRC in NL and ON populations. Total calcium, vitamin D intakes, riboflavin, and folate were found to decrease the risk of CRC in both NL and ON population. Lifestyle and dietary factors play important role in CRC occurrence in NL and ON populations. Future research efforts will be made toward gene-environment interaction in relation to CRC.

**Conclusion:** While lifestyle and dietary factors play important role in CRC occurrence both provinces, their relative importance varies. Future research efforts will be made toward gene-environment interaction in relation to CRC.

### **Experiential Learning Strategies for Developing Humanistic Skills in the Faculty of Medicine**

Dr. Martha Traverso -Yepez, Jill Allison, Natalie Beausoleil, Fern Brunger, Chris Kaposy, Rebecca Schiff

**Context:** Our project brought together a group of faculty members at the Division of Community Health and Humanities in the Faculty of Medicine as a teaching/learning community. As a group of social science and humanities specialists teaching in the domain of academic medicine, we sought ways to develop, share, and put into practice experiential learning strategies in our respective courses. These strategies encouraged students to engage with concepts and ideas in creative ways. We recognized the potential to develop the humanistic skills and abilities of graduate and undergraduate students in the Faculty of Medicine, as a complement to the more instrumental, technical knowledge of the health sciences.

**Objectives:** The first aim was to create a professional development community to promote an educational environment of support and innovation that fostered the sharing of creative teaching and learning methods. The second aim was to develop innovative teaching and learning methods to promote critical thinking, reflexivity and reflection as lifelong professional skills for students of all health sciences. We recognize the importance of taking such skills into the workplace to meet the expected roles of the health professional.

**Target Audience:** This program is aimed at faculty members teaching within the discipline of health sciences, wishing to take part in an innovative, collaborative teaching strategy that helps both students and teachers to think critically and creatively.

**Evaluation:** Participating faculty members evaluated the program design through reflexive and reflective thinking and writing about their own teaching, the use of standard student's evaluations during the course, and with the use of one minute papers to solicit student feedback for specific teaching activities.

**Conclusion:** This grant facilitated a unique teaching/learning community in our Division. The program provided the opportunity to build on collegial strengths and validate what we already knew. It also facilitated creative common ground for the purpose of educational professional development in a safe and affirming environment. It has provided participants with skills for future teaching and is an excellent model for collegial capacity building for professional growth and development within an academic division or department.



## External Factors That Influenced Decision-Making Regarding the Liberation Procedure: A Qualitative Study among People with Multiple Sclerosis

Michelle Ploughman, Murray C, Murdoch M, Harris C, Hogan S, Stefanelli M.

**Purpose/Rationale:** Many people with multiple sclerosis (MS), upon hearing of the initial research findings by Dr. P. Zamboni and subsequent anecdotal evidence, have strongly endorsed the 'liberation' procedure, often placing them at odds with health care and research communities. We explored how people with MS made decisions when considering the controversial 'liberation' procedure as a treatment for MS.

**Materials/Methods:** Fifteen participants from a local MS clinic (8 who had the procedure within the previous 6 weeks and 7 who had decided against having the procedure) participated in face-to-face open-ended semi-structured audiotaped interviews exploring their decisions and expectations surrounding the procedure. Transcribed text was independently coded by three investigators experienced in content analysis. The coding scheme was modified through an iterative consensus-based approach. Themes and subthemes were interpreted and described.

**Results:** Participants (those who had the procedure and those who did not) described both 'Motivating Factors' and 'Hesitating Factors' that influenced their decision making regarding the controversial 'liberation' procedure. Motivating factors included family enthusiasm, communities rallying around them, newspaper, television and radio reports, a perceived neutral health team, a sense that the procedure was a low risk, simple fix, among others. Hesitating factors included foreign health care, ability to travel, cost, and evidence being out of alignment with a trusted source, among others.

**Conclusion:** Our study findings confirm that the 'liberation' procedure has highlighted a new health information and decision-making reality. The health care consumer weighed the strength of influencing factors that were often external to their health team.

## Is There Anyone Out There? The Effectiveness of In-Person and On-Line Public Engagement Methods in Central Newfoundland

Peter Wilton

Public engagement has emerged as a very pertinent topic in Canadian healthcare. However, there remains much work to be done on the evaluation of public engagement. Helping decision makers understand the differences between different mechanisms of engagement will help future organizers identify methods suitable for their exercise.

My research centers on an evaluation of in-person and on-line engagement methods used in a public engagement exercise being conducted in central Newfoundland by Central Health and its community partners. Focus Groups were held throughout Central Newfoundland between February and March 2013, an on-line engagement component was open to the public between April and June 2013. The stated objective of the engagement exercise is to understand what values the public consider important in healthcare and community development decision making.

The differences between the two methods of engagement will be evaluated according to a three point evaluative framework:

- Representativeness will aid in determining which method is more representative of the public. Demographic information of participants will be collected and compared.
- Participant experience is important as public engagement exercises should be independent, well defined, fair exercises that provide sufficient resources to the public. A questionnaire will identify whether participants felt differently about either mode of engagement.

- Lastly, the expectations of the steering committee will be evaluated. This will help identify whether one method in particular better met their expectations and was therefore a better fit for their context. Interviews with organizers were held prior to the start of engagement process, and will occur again afterwards to determine if their expectations were met.

Preliminary results from the Focus Groups sessions suggest that participants were generally quite unrepresentative of the Central area demographics. Participants tended to be older, more educated and female. Focus Group participants also viewed the process quite favorably, although had reservations about the nature and scope of the exercise. On-Line results are forthcoming.

## Laying a Foundation for Primary Health Care in Newfoundland during the 1920s–1930s

Jim Connor

Primary health care in Newfoundland before confederation with Canada in 1949 is usually portrayed within the province as lacking or substandard. Yet contemporary evidence from external observers is at odds with such an assessment: a US Assistant Surgeon General believed provision for medical care at public expense was more effectively developed in Newfoundland than anywhere in the United States; and a noted hospital consultant concluded the “boat service has been very helpful” in transporting doctors and shuttling between nursing stations and nearby hospitals, and that the island’s unique cottage hospital system was “of tremendous value to the people...the qualifications of the doctors in the service are high...the hospitals are quite well equipped and the surgical results have been excellent.”

Due to these conflicting perspectives we investigated the suitability of primary health care to remote parts of the island of Newfoundland in the 1920s and 1930s. Employing mixed research methods based on physician diaries and autobiographies, patients’ letters, clinical and hospital records, and government reports, we describe the range, forms, and models of patient care available for these decades, all of which suggest that while there never was a centralized system of healthcare there did exist a workable healthcare framework (an “ecosystem”). We conclude that the cottage hospital system gleaned from Scotland, along with British doctors and nurses, and a steady stream of American visiting physicians and medical students from Harvard, Yale, and Johns Hopkins, provided quality primary health care in many rugged coastal communities. Indeed, the lack of centralization was likely highly advantageous given the scattered and isolated nature of these settlements. During these two decades, a majority of settled areas had access to care from a multidisciplinary range of primary healthcare practitioners and institutions—much more than is generally believed to have been the case.

## Long-Term Exercise Adherence in Chronic Disease: Findings from the Canadian Survey of Aging with Multiple Sclerosis

Michelle Ploughman, John D. Fisk, Mark Stefanelli, Serge Beaulieu, Chelsea Harris, Stephen Hogan, Nancy Mayo, Katherine Knox, RuthAnn Marrie, Paul O’Connor, Sarah Morrow, Luanne Metz, Penelope Smyth, A. Dessa Sadovnick, Marshall Godwin.

**Purpose/rationale** In Multiple Sclerosis clinics, one of the most important questions patients ask is, “What should I expect in the future and how will the disease progress?” Our older clients with MS are a wealth of knowledge about aging with a chronic disease. We hypothesized that both modifiable factors (e.g. mood, resilience) and non-modifiable factors (financial security, education, level of disability, etc.) would influence long term exercise adherence in older people with MS.

**Methods:** We surveyed a purposeful sample of 742 older people with MS in Canada who were 55 years of age and older with MS symptoms for more than 20 years. Participants were recruited from MS clinics in all provinces and through newspaper ads and MS Society chapters. The survey was comprised of multiple patient-reported outcomes that were chosen based on initial qualitative studies and a minimal set of previously validated instruments that measured the specific domains; exercise, diet, alcohol use, smoking, social support, financial security, activities, mental and cognitive health, functional ability, co-morbidity, health-related quality-of-life (QoL) and disease characteristics. We used stepwise regression to examine factors that influenced exercise participation.

**Results:** Based on our previously published health factors model, we entered the modifiable and non-modifiable factors into stepwise regression with activity score on the Simple Lifestyle Indicator Questionnaire as the primary outcome. Three factors together explained 44% of the model variance ( $P < 0.05$ ); level of disability measured by the Barthel Index, resilience measured by the Resilience Scale and years of education.

**Conclusion:** Resilience is the competence and ability to cope effectively when faced with adversity. Older people with MS who demonstrate resilience are likely more able to alter the exercise environment and modify techniques to overcome challenges and maintain physical activity in the long term.

### Medical Students Attitudes towards Online Social Networking and Patient Care

Sandra Cooke-Hubley, Michele Neary

Although there have been a number of anecdotal reports of medical students' misuse of Online Social Networking (OSN) sites, few quantitative or qualitative research studies have been conducted on this subject. The objective of this project was to examine medical students' current use of and attitudes towards using OSN to interact with patients and to determine if differences exist between pre-clerkship and clerkship students.

**Method:** 129 pre-clerkship and clerkship students completed a survey designed by the authors to gauge current activity and future intentions towards using OSN to interact with patients.

**Results:** Facebook activity was found to be high among all respondents with 98% reporting they have an active account and 90% accessing the site at least once a day. Although a low proportion of students endorsed the use of OSN to interact with patients, a greater number of pre-clerkship students were in favor compared with clerkship students. Conversely, in scenarios where physicians were depicted making decisions about interacting with patients using OSN, a higher percentage of clerks agreed with the actions of the physicians whether the action was appropriate or inappropriate.

**Conclusions:** These findings indicate that most medical students are conscientious users of OSN and few would use sites such as Facebook to connect with patients for medical purposes. However some pre-clerkship students were more agreeable with interacting with patients for social reasons which may reflect a lack of awareness about potential consequences. Although clerkship students may be more knowledgeable about the issues surrounding OSN use, they are likely influenced by activities of senior physicians' use of OSN sites, which may have consequences if these actions are inappropriate. This study suggests practices of OSN affects all levels of medical trainees as well as senior physicians as role models and recommends updating medical education to include discussion of this topic.

## Medicalization of Poverty: Low Income Lone Moms and Mental Health

Diana L. Gustafson, Jill S. Brake

**Context:** In May 2013, CBC News quoted Dr. Gary Bloch, a Toronto family medicine practitioner as saying, “I do see poverty as a disease.” But is poverty a treatable medical problem? Social scientists would argue that poverty is not a disease but a systemic social problem reinforced, in part, by social policies and practices. The World Health Organization, the Public Health Agency of Canada, and internationally known scholars recognize income as the single most important determinant of health. These divergent concepts of poverty provided the stimulus for a systematic literature review that explored how poverty is constructed in research about lone mothers with poor mental health.

**Objective:** To describe and analyze how health and social science researchers conceptualize the links between poverty and mental health in lone mothers in higher income, social democratic countries.

**Design:** We searched subject-specific electronic databases using keywords about lone mothers, poverty and mental health. All primary research studies published in English-language, peer-reviewed journals in the last ten years were eligible for inclusion. National differences were controlled by limiting the search to studies conducted in higher-income, social democratic countries with established social welfare programs. We assumed an interpretive, social constructivist approach to the coding and analysis of selected articles.

**Findings:** Our preliminary analysis supports the hypothesis that the experiences of low-income, lone mothers with poor mental health are medicalized, rather than cast as a negative health outcome resulting from a systemic social problem. Poverty as disease, specifically mental illness, is an established conceptualization that has been resistant to the social determinants approach to health.

**Conclusions:** The implications of these findings will be considered in light of research on the medicalization of motherhood, the medicalization of women’s reproductive autonomy, and the medicalization of education. The persistent medicalization of lone mothers’ mental health may galvanize, in the public imagination, the classification of lone moms as the “undeserving poor” and inform the mobilization of resources (e.g., toward supporting professional services for pathologized mental illness and away from addressing inequitable distribution and access to human and material resources for the poor). The medicalization of poverty also expands health professional terrain by recasting social problems as health problems and redirects authority for change from social policy makers to physicians and health professionals.

## NeuroFIT Improves Quality Of Life and Community Integration among People with Moderate to Severe Neurological Disabilities

Jennifer Shears, Michelle Ploughman, Chelsea Harris, Stephen Hogan, Sherry Squires, Jason McCarthy

**Purpose/Rationale:** We partnered with a community organization (YM/YWCA) to develop, implement and test a community exercise program to improve participation among people who rarely progress their mobility outside their homes or participate in former life roles.

**Methods:** Participants were recruited following discharge from an outpatient rehabilitation service. They had to be diagnosed with a neurological condition, be able to walk for at least 3m with assistance and walking aid and be evaluated by their doctor. The program, modified from the programs TIME and FAME, and supervised by a physiotherapist, ran 2Xwk for 10 weeks. The 10 circuit stations consisted of structured progressively challenging functional activities. To promote further independence participants were also instructed on the use of equipment within the

facility. We recruited and trained university students to provide 1:1 assistance. Participants' mobility (6MWT, Timed Up and Go), strength (grip), mood (Hospital Anxiety and Depression Scale), participation (Frenchay Activities Index) and quality of life (QoL) were measured before and after the program and again at 4 month follow-up.

Results: The 29 participants (stroke n=18, ABI n= 7, Parkinson's n=2 MS n=2), divided into 3 groups, made expected modest improvements in mobility (4.8±8.9s Timed Up and Go). More importantly, they increased participation (2.6/45±3.9 Frenchay) and reported better QoL (14.5/100±26) and mood (-2.6/42±5.9 HADS) which was maintained at follow-up. There were three falls and one participant withdrew due to an unrelated medical complication. Oversight by a physiotherapist was required to safely modify tasks. A Facebook group facilitated volunteer recruitment; essential to provide 1:1 and sometimes 2:1 supervision.

Conclusion: This carefully-designed, supervised and physiotherapist-monitored community exercise program improved participation, mood and QoL among persons with moderate to severe neurological disability.

### **PAASSPORT: Primary Care Advanced Access Study—Spreading the Practice and Optimizing Interprofessional Resources and Treatment**

Deborah Kopansky-Giles, Yee-ling Chang

Introduction: In the 2009 Commonwealth Fund survey, less than half of Canadians were able to access a healthcare provider (45%) the same or next day and 33% of Canadians waited 6 days or more to be seen by a primary care physician or nurse. An innovative approach to optimizing practice management, "open-access" or "advanced access" scheduling, has been proposed as a method to address provider access. Through improved access to one's interprofessional (IP) health team, continuity of care has been shown to increase with a subsequent decrease in repeat demand for the provider. By combining the advanced access concept with IP collaboration we expect to observe an increase in healthcare access and improvement in patient clinical outcomes and satisfaction.

Aims: In the Department of Family and Community Medicine at St. Michael's Hospital, a study team has been working to implement this model in our medical clinics and also to expand this model to IP health care providers including chiropractors in the department with the objective to evaluate the model of IP team-based advanced access. Objectives include evaluating the:

1. Open access scheduling feasibility for all providers
2. The 'max-packing' concept for patients requiring IP healthcare interventions (providing multiple services and providers on the same day)
3. The impact of open access on patient satisfaction for both family physician and chiropractic provider practices

Methods: This mixed-methods project involves the implementation of open access to healthcare providers, both physicians and chiropractors, at the St. Michael's Hospital Department of Family and Community Medicine. This involves the measurement of practice metrics of 3rd next available appointment (TNA) and appointment supply and demand. Patient satisfaction surveys were also collected from patients in waiting rooms for both chiropractic and family physician practices. Focus groups were also conducted to gather provider perspectives.

Results: Preliminary results have indicated that open access scheduling has reduced the wait times for patients requiring rapid access to their provider and that it has shortened the time period for the 3rd NAA. Initial results have also indicated an improvement in both patient and provider satisfaction with this model of delivery.

**Conclusions:** Through the use of open access in interprofessional care, we envision significant benefits including: improved and timely access to health services, increased comprehensive healthcare and decreased healthcare resource use such as emergency and walk-in clinic care. Early study outcomes have indicated that the open access model is helping to realize these benefits.

### Perceptions of Hospitalization of the Bariatric Population

Karen Martin

Obesity is a significant health problem that is associated with morbidity and mortality. Obese individuals are at a greater risk for numerous health problems. Bariatric patients also experience unique health conditions and have problems accessing services. If admitted to an acute care hospital, lengths of stay can be long and complicated, equipment can be inadequate and attitudes can be discriminatory. This study examined the perceptions of hospitalization of the morbidly obese in two acute care facilities in a rural centre. Semi-structured interviews were conducted with nine participants with a BMI of greater than 40. Data was analyzed using thematic content analysis. Four themes emerged, with lack of communication, inadequate equipment and limited space being prevalent. In understanding the larger persons experience in hospital health professionals can be educated on the unique needs of this population so that a supportive and caring environment can be provided to all patients regardless of class, race, gender or status. There is a need for further inquiry into obese person's experiences in hospital, at home and in the community. The daily and societal challenges mimic those in healthcare and the research is limited.

### Strongest Families: Improving Access to High Quality Care

Dr. Patricia Lingley Pottie

**Context:** Pediatric mental health disorders are common. Untreated conditions negatively impact academic performance, social relationships and family functioning. Few receive timely intervention due to barriers imposed by the current system. **Objective:** Strongest Families, an evidence-based, psychologically informed distance education delivery system was designed to remove barriers to care. The goal is to provide early, effective mental health intervention to prevent problems from becoming worse and more difficult to treat.

**Target audience:** Strongest Families was designed with a family-centred care focus, ensuring convenient referral access and regular progress updates for primary care physicians. **Description:** Strongest Families targets specific problem areas with intervention programs that have been tested in randomized trials and shown to overcome Oppositional Defiant, Attention Deficit/Hyperactivity and Anxiety Disorders. Interventions consist of evidence-based materials (hand books, audio and videos) and weekly telephone coaching. Families begin to learn cognitive-behavioural based skills soon after the referral is received. The coach facilitates learning and successful skill implementation to help overcome the child's problems. Coaches customize each program depending on the needs of the family and work flexible hours to provide telephone sessions at times convenient for the family (i.e., days, evenings, nights). Coaches are highly trained, highly monitored non-professionals who follow protocolized scripts.

**Evaluation:** Strongest Families has been integrated as a services program in many areas across Canada. Outcomes are consistently measured and reported to referring agents. Results show strong treatment effects across all pediatric mental health domains as well as informant mood and family functioning. Moreover, the attrition rate is less than 10% and families are highly satisfied.

**Conclusion:** Strongest Families' distance model is highly effective and most families adhere to and complete the intervention. Typical barriers to care, including stigma, are virtually eliminated. Strongest Families is a promising, cost-effective solution to increase timely access to mental health services.

## Renovating, Remodeling and Rebuilding with Telehealth Support

Joanne Reid

**Context:** The Provincial Telehealth Program continues to experience growth and success. The focus of this presentation is to highlight the benefits and successes in bringing health care closer to home.

**Objectives:** Provide an overview of the Telehealth Program highlighting the benefits to both patients and health care providers. Encourage integration of Telehealth within existing practice to augment service provision and decrease travel, in the current climate of fiscal restraint.

The provincial Telehealth Program has experienced significant growth since it began in 2006, expanding from 390 consults in its first year to over 12,490 consults in 2012-13. This increase has been experienced in several service areas including nephrology, oncology, medical genetics, endocrinology, haematology, operational stress injury (OSI) and general surgery consults.

Chronic disease management (CDM) and access to specialty services is the strategic focus of the Telehealth program. Diabetes education, an initiative under the CDM umbrella is being realized through Telehealth. Since Newfoundland and Labrador has the highest prevalence of diabetes in Canada, diabetes education is essential in promoting healthy lifestyles, disease prevention and progression.

Of particular interest, one service that is only available to Newfoundland and Labrador residents through the Telehealth Program is the OSI clinic. This service provides a specialized mental health service to Veterans, eligible members of the RCMP and releasing members of the Canadian Forces who are encountering ongoing difficulties because of service-related psychological injury and traumatic events. This service is extremely important to the residents of Newfoundland and Labrador, for both short and long-term treatment, as no such program exists in the province.

**Target Audience:** Health care providers/clinicians, administrators, program managers and directors.

**Conclusion:** The Telehealth Program promotes expansion of existing services and moving forward with new initiatives to assist in improving access to health care for residents of Newfoundland and Labrador, regardless of location. The program has recently established the sixty-fourth Telehealth community site.

## Sex Differences in Risk Factors for Adverse Outcomes in Diabetes: A Proof of Concept Study Utilizing Electronic Medical Record (EMR) Data

Dr. John Knight, Jeff Dowden, Madonna Murphy, Dr. Kayla Collins

**Context:** Diabetes has long been known to be associated with cardiovascular morbidity and mortality. Although research has shown women with diabetes to be at increased risk for cardiovascular morbidity and mortality relative to males, evidence is conflicting. Observed sex differences in cardiovascular and monitoring/treatment risk factors in individuals with diabetes offer possible explanations for differences in outcomes.

**Objective:** The objective of the study was to examine sex differences in risk factors in individuals with diabetes and how they relate to patient outcomes.

**Design and Participants:** As part of an EMR pilot project we constructed a cross-sectional study by linking EMR data from Newfoundland and Labrador family physician practices within the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) to four years of health administrative data including hospital abstracts, physician claims and death records. Patients meeting EMR criteria for diabetes comprised the study sample.

**Instrument and Outcome Measures:** Patient data on cardiovascular risk factors, diabetes monitoring and medication utilization were extracted from EMR data. Information on outcomes including mortality, cardiovascular/renal co-morbidity, health care services utilization and costs were obtained from health administrative data. Descriptive statistics were used to determine sex differences in risk factors and outcomes and multivariate regression analysis was used to examine utility of risk factors in predicting outcomes while controlling for covariates.

**Results:** Females were found to have lower diastolic blood pressure, lower blood pressure monitoring rates, lower utilization of oral diabetic and anti-hypertensive medication, but higher specialist utilization than males. Males were found to have higher rates of ischemic heart disease (19.0% vs. 11.7%) and cerebrovascular disease (6.9% vs. 4.0%). Multivariate regression analysis showed anti-hypertensive therapy to be associated with reductions in cerebrovascular disease [odds ratio (OR): 0.370, 95% confidence interval (CI), 0.147-0.936] and cardiovascular mortality (OR: 0.274, CI: 0.150-0.720) in females but not in males.

**Conclusions:** Although the study findings may suggest that females with diabetes should be monitored more closely and treated more aggressively with anti-hypertensive therapy, the results should be interpreted with caution given the cross-sectional design, the short time frame of the study, and the limited adoption and coverage of EMRs in the province.

### **Shea Heights Community Health Centre as Interprofessional Model of Primary Healthcare and Teaching**

Cheri Bethune, Lisa Bishop, Norah Duggan, Stephen Darcy

The Shea Heights Community Health Centre began as a pilot project in the early 1970s as a collaborative effort between the community, Department of Health and Memorial University Faculty of Medicine to address the primary health care needs of an underserved community.

It continues as an extremely functional model of interprofessional, community-based primary care that provides exemplary care and interprofessional teaching. We will compare this practice with the principles of the “patient’s medical home” which is a primary care model promoted by the College of Family Physicians of Canada.

### **The BETTER (Building on Existing Tools to Improve Chronic Disease Prevention and Screening in Family Practice) Project: A Qualitative Study**

Donna Manca

**Context:** Primary care is the setting for most chronic disease prevention and screening (CDPS) maneuvers. The BETTER project developed and tested an approach that built on existing evidence and applied it to the primary care setting. This mixed methods project included a pragmatic cluster randomized controlled trial in 8 practices (4 in Ontario and 4 in Alberta) and involved 2 interventions: 1) practice level facilitation and 2) patient level facilitation. A qualitative sub-study was conducted to assess the patient level facilitation intervention, involving a Prevention Practitioner (PP).

**Objectives:** To better understand the patient level facilitation intervention including the development of the necessary skills, perceived barriers and facilitators, and to explore the feasibility and sustainability of the BETTER approach to CDPS.

**Design:** A modified grounded theory methodology was used to understand and explore the PP’s role. Study investigators conducted 8 individual semi-structured interviews and 7 focus groups, which were taped and transcribed.

**Participants:** Purposeful sampling included participants involved in any capacity with the BETTER Project.



**Intervention:** Trained by BETTER, the PP determined which CDPS maneuvers the patient was eligible to receive and through shared decision-making and motivational interviewing, developed a unique, individualized “Prevention Prescription” with the patient.

**Outcome Measures:** An interview guide ensured all areas were covered and helped to standardize the interview process. An audit trail documented research activities. Journals, field notes and memos were also captured and shared by the researchers. Coding involved constant comparisons and theoretical coding followed open coding.

**Results:** The BETTER approach introduced a framework for CDPS that facilitated the development of relationships with patients and clinicians. Other perceived aspects of this intervention included a comprehensive, personalized, multi-disease approach to prevention; integration of care; and expansion of the scope of some allied health professionals. Participants stated that this approach was well received by patients as it provided time and opportunities to identify patients’ CDPS priorities and to focus on areas patients wished to address.

**Conclusions:** The BETTER approach to CDPS provides a framework to transform from disease focused approaches to a personalized, comprehensive integrated approach, which may be adapted to different practice settings to address CDPS.

### **The Experience of an Emergency Caesarian Section: Can Primary Health Care Providers Assist Women to a More Positive Outcome?**

Julie Sullivan

**Context:** Women who are anticipating a “normal” birth and experience an emergency caesarian section (EmCS) because of unanticipated events during labour and/or delivery report emotional distress in the postpartum period. Some women have been diagnosed with posttraumatic stress disorder. However, few qualitative studies have been conducted with this population to understand other consequences of EmCS, what contributes to the distress, or needs of the women at this time. **Objective:** The objective of the study was to understand women’s experiences with EmCS and some of the needs expressed by the women to improve this experience. **Design:** Qualitative study using phenomenology as described by van Manen in “Researching Lived Experiences”. Thematic analysis was used for data analysis. **Participants:** Ten women 19 years and older living in Eastern Newfoundland who had a healthy infant via an EmCS within the past year participated in the study. An EmCS was defined as one that is performed in an obstetric emergency, where complications of pregnancy occur suddenly during the process of labor and swift action (decision to CS incision time  $\leq$  30 minutes) is required to prevent the death of mother, child(ren) or both. **Data Collection:** Data were collected by conversational interviews with the women using open ended questioning about her EmCS. A brief demographic questionnaire was used to describe the participants. **Results:** Six predominant themes captured the essence of the women’s experiences: (a) disruption of a “normal” birth; (b) losing control; (c) pervasive sense of fear and urgency; (d) being alone without needed support; (e) losing touch with reality; and (f) missing out on feeling like a mother of a newborn. **Conclusions:** There is a prevailing sense of loss associated with an EmCS and women need assistance from their caregivers both during the event and in the postpartum to resolve some of the negative effects of the EmCS. Ensuring the woman has support throughout the emergency and good follow-up by her primary care provider would help lessen some of the negative psychological effects of the emergency.

## The HealthSTEPs Program: Health Skills Tools and Education for Parents

Lynn M Frizzell, Patricia M Canning, Melissa Blake

The goal is to develop a program to promote healthy growth in young children and thus to prevent the development of overweight and obesity and its co-morbidities such as type 2 diabetes, health problems that are at high and ever increasing rates in children. Since it is very difficult to reverse these problems, prevention is the key and yet there is a dearth of effective prevention programs. HealthSTEPs is being produced as a kit including prepared presentations and demonstrations along with supporting resources for use in Family Resource Centres (FRCs) across Canada particularly for those in for rural and remote communities. In many such communities, FRCs represent the only formal support for families and therefore are in a position to play a critical role in health promotion. The partnership between MUN researchers and the rural Gander Bay FRC ensures that the program and methods will be adaptable to rural and remote areas throughout Canada, areas that have different challenges to healthy eating and living than urban areas and whose populations are rarely considered in developing programs for children and families. HealthSTEPs will capitalize on the established FRC staff-participant relationships and will also use the anticipatory guidance approach. We are using focus groups and questionnaire methods to gather information from the sample target group in order to build on the research literature and what we learned in the initial information-gathering phase (2012-13) to apply to the development of the program. This information will be presented. We expect that there will be a 6 to 8 sessions addressing such things as portions, TV and other screen activities, meal preparation. What is particularly important is the ways that information will be presented and the strategies used to motivate parents to provide the healthiest environment possible. In 2013-14 a pilot of HealthSTEPs and an evaluations will be conducted in a number of rural FRCs in the Province. Changes will be made as needed and it is hoped to launch the national HealthSTEPs in the winter of 2015.

## The Kittiwake Network of Wellness (KNOW): A Cost-Effective Mental Health Initiative for the 21st Century

Ryan B. Norman

The Kittiwake Network of Wellness (KNOW) was formed through the collaborative efforts of a number of community members in New-Wes-Valley. The KNOW formed in response to increasing demand for mental health services along the Kittiwake Coast, coupled with a high level of stigma around mental illness and a lack of current public education around 'bad nerves' and mental health. Facing particular challenges and issues within the context of a stifled out-port NL economy the KNOW sought core program funding that would embed peer support programming for mental health consumers within a community-based organization with broader health and well-being mandate. The KNOW received support in the form of a Provincial Wellness Grant from the provincial Department of Health and Community Services for 2012-2013. The mental health peer support aspect involved weekly self-help sessions facilitated by a Peer Supporter and monthly mobile clubhouse activities. A general Men's Wellness Day also went ahead in November and involved 58 local men. Participants express that the peer support group has been vital to their continued well-being in the community, and local health care workers report that the KNOW has lightened workloads of traditional health care workers significantly. Both findings are consistent with an emerging base of international literature suggesting the cost-effectiveness of peer support programs for mental health consumers. The KNOW can be seen as a primary health care best practice to inform the structuring of effective community-based mental health services. Such community-based services will likely continue to gain importance within the constrained economic realities of increasingly deregulated global markets, particularly in rural and remote areas with limited access to mainstream mental health services.

## The Quality and Costs of Primary Care in Newfoundland and Labrador (Qualico PC NL)

Julia Kawamoto

**Context:** The QUALICO PC study is an international study that began in Europe in 2010 and has since been rolled out across Canada beginning in 2013 with the goal of identifying characteristics of strong primary healthcare systems and the effects that primary healthcare systems have on health system performance.

**Objective:** To assess comprehensiveness and patient experiences within the province of Newfoundland and Labrador. To enable the comparison of primary health care performance in the province with other provinces and countries. To compare the comprehensiveness and patient experience with clinical outcomes using linked administrative data.

**Description:** Self-administered surveys are being used to collect data from general practitioners and their patients. Physician and patient survey data will be linked to health record data to determine the degree that health outcomes and usage of health care services are associated with physician practices, and patient characteristics, experiences, and values. The data collected will be compared between provinces and between all other participating countries, allowing each country to compare its performance and also make recommendations for improving the quality of primary healthcare.

**Participants:** One physician per practice, identified using the College of Physicians and Surgeons of Newfoundland and Labrador (CPSNL) database. The goal is to recruit 75 practices and 750 respondents. Eligible patients are > 18-90 years of age, read English, and not cognitively impaired. Providers choose a day representative of their practice to consecutively administer the patient survey.

**Instruments:** Four self-administered surveys were completed: 1 provider, 1 practice, nine patient experiences, and one patient values surveys. Practices were provided an honorarium of \$200 for their participation.

**Outcome measures:** Practice and provider characteristics (funding, access); Patient reported quality of care (continuity, interpersonal communication).

**Results:** Data collection will be completed by August 2013. Preliminary results from 60 enrolled practices are expected to be similar to that of other provinces that have already completed data collection.

**Conclusions:** The results of the Newfoundland and Labrador component of this international study will contribute to our understanding of the quality and comprehensiveness of primary care in the province.

## Value and Impact of Professional Literature Searches on Academic and Clinical Practice

Lindsay Alcock Glynn, Alison Farrell

**Introduction:** The Health Science Library, an academic and hospital library at Memorial University of Newfoundland, offers a literature search service to faculty, staff and health care providers. Within a twelve-month period over sixty literature searches were requested. An unsolicited email of thanks from a recipient of the service was the impetus to determine the overall perceived value and impact of literature searches performed by librarians. Given the varied population of users we were able to determine value and impact related to both clinical and academic environments.

**Methods:** Using the critical incident method of subject selection, all those who requested literature searches during a twelve-month period were invited to complete a survey regarding their experience with and their perceived value of the service. The survey was designed to elicit general satisfaction with the service, identify the nature of the infor-

mational need, determine whether or not the information was utilized clinically or academically, whether or not the information was used in an evidence-based practice model, what was impacted by the information utilization, and how much perceived value was placed on the impact.

Results: Results indicate that literature searches performed by health librarians are perceived as high in value and impact for both clinical and academic purposes. Respondents reported that literature search support resulted in improved publications/presentations, improved academic evaluation, evidence based practice, and improved clinical evaluation/assessment.

## Workshops

### Awakening the Right Brain and Hushing the Left Brain: Enhancement of Scholarly Writing Skills in an Academic Setting

Cheri Bethune, Patti McCarthy, Shabnam Asghari, Cecile Badenhorst

Objectives: Participants in this workshop will have an opportunity to:

1. Understand fundamental concepts/principles related to scholarly writing by clinical academia
2. Recognize opportunities and challenges of scholarly writing in a clinical setting
3. Identify best-practice evidence for scholarly writing
4. Develop a conceptual framework for a scholarly writing project
5. Explore creative writing techniques

Content: This workshop will entail a description of key concepts, theoretical principles, best-practice evidence and competencies related to scholarly writing within a clinical context. Participants will be provided with opportunities to conceptualize a scholarly writing project and explore creative writing techniques. Participants will be provided with a workbook that will guide them through the various workshop activities, summarize scholarly writing strategies, list practical academic writing resources and will therefore serve as a practical resource for future scholarly work.

Method: 1-Introduction/Goals; 2-Lecturette: key concepts, theoretical principles, and competencies related to scholarly writing; 3-Buzz groups/Large group discussion: Opportunities and challenges for scholarly writing by clinical faculty; Where to publish; 4-Lecturette: Scholarly writing frameworks; best-practice evidence; creating a writing identity; critical academic writing skills; 5-Dyads/Activity/Presentations: Writing for Publication in 5 Minutes: Identifying key elements of a scholarly writing project; Presentation to large group; 6-Lecturette: Conceptualizing Research and Scholarly Writing; Creative Techniques; 7-Individual Activity: Mind Mapping; Free Writing; 8-Summary: Strategies for minimizing the barriers to writing; Scholarly writing techniques; Creative writing styles; Self-motivation techniques.

Prerequisite knowledge: Participation in this workshop does not require any specific prior knowledge on the subject matter. A general interest in the engagement of scholarly research and writing is important.

## GIS Health Workshop: A Case Study of Demographic Change in Newfoundland and Labrador

Alvin Simms, Shabnam Asghari, James Valcour

Content: From 2006 to 2011 many regional towns, with health and other public services experienced population growth in excess of 14%. A close examination of the demographic cohorts within these towns suggests the increasing population is in the older age cohorts. For example, Clarenville's total population increased by 14.4% from 2006 to 2011, however when assessing increases by age cohort the 0–14 group increased by 8.4% while the 65+ cohort increased by 29.1%. There is evidence of a shift in the population pyramid whereby in the long term communities cannot sustain their population by natural replacement. This creates several issues for health policy as well as other aspects of a community's well-being such as: [1] changes to the demand and type of health services required and [2] the ability of a community to adapt to the needs of an ageing population.

Within this context the workshop will use Canadian Census data to examine both population change and demographic shift in Newfoundland and Labrador communities. The use of GIS analytical and mapping tools will reveal both the spatial and temporal changes between the 2006 and 2011 census periods.

Objectives:

- [1] How to use the ArcMap user interface
- [2] How to import data and create ArcMap project files
- [3] How spatial and non-spatial data are linked in a GIS
- [3] How to organize data to analyze and map population/demographic changes
- [4] How to create graphs, statistics and hardcopy maps in ArcMap

Method: The workshop will inform participants on how the geographical aspects of their analysis, when relevant, improves their understanding of the breadth and scope of a potential health issue or solution to a problem. In this case the participants will learn about:

- [1] The importance of geographic location—where something is happening
- [2] The question of geographic distribution—is an event randomly distributed or clustered
- [3] Geographic association—do changes occur where there are pre-existing conditions
- [4] Geographic interaction—are changes linked to other events or places
- [5] Geographic change—changes over time and space or what causes growth and decline

Prerequisite knowledge: Participations should be familiar with basic statistics.

The workshop is designed for maximum 10 participants.

## Overcoming the Barriers to Physical Activity and to Health Behavioural Changes to Tackle Chronic Diseases

Fabien Basset, Liam Kelly, Linda Rohr, Erin McGowan, and Duane Button

The proposed workshop aims to discuss the potential of physical activity and health behavioural changes to tackle chronic diseases in Newfoundland and Labrador. In doing so, we will first define and delimit the role of kinesiologists who conduct a fitness appraisal, design exercise programs, and supervise training sessions in addition to monitor participants' progress. We will then explore the potential of a referral system involving primary care physicians

and certified kinesiologists that might enhance health care for patients with, or at risk for, chronic disease in this province. We shall finally review the major modifiable risk factors that could be managed through physical activity and health behavioural changes and how the inclusion of certified kinesiologists within the primary health care setting might be an effective approach to achieving sustained health improvements. During the workshop the audience will experience some of the strategies implemented by kinesiologists to elicit health benefits for all ages and abilities.

## Posters

### **A Four-Step Health Promotion and Community-based Intervention for Cervical Screening within Two Communities Located in Rural Eastern Newfoundland**

Dawn Mercer

**Objective:** To utilize elements of population health, health promotion and community-based initiatives in a four step intervention that strengthen and build community capacity to influence and change attitudes toward screening behavior and ultimately increase participation in cervical screening.

**Participants:** Women in two rural communities located in Eastern Newfoundland twenty years of age and older, with no history of a Pap test in the previous twelve months.

**Setting:** Two rural communities located in Eastern Newfoundland and Labrador.

**Intervention:** The implementation of a sixteen week, four stage community-based health promotion intervention that includes: Stage I (Community Profiling), Stage II (Stakeholder Engagement and Strategic Planning), Stage III (Promotion, Education and Time-lines) and Stage IV (Evaluation).

**Outcomes:** Documented annual cervical screening attendance pre-intervention and post-intervention, which were approximately 13% from 2005-2009 (pre-intervention), to current screening rates, which are 48% respectively in 2010 (post-intervention). And a comparison of the number of women identified through the profiling process (pre-intervention) to the number of women that attended screening clinics (post-intervention).

**Conclusion:** The process of mobilizing community stakeholders to implement a targeted sixteen week community-based health promotion intervention was very successful in overcoming identified barriers and improving cervical screening rates. Through physician chart audits and community profiling it was identified that 97 women were under screened or never screened; and of the 97 women 93 attended cervical screening clinics within the intervention timeframe. This intervention, as a template or guide, has the potential to replicate success and improve cervical screening attendance in other rural settings.

### **An Inquiry into Stigma within Mental Health Care Policy**

Sonya Bowen

**Context:** Stigmatizing ideas about mental illness permeate society. Contemporary normative assumptions about mental illness have been shaped by a long complex history of stigma towards those living with a mental illness. Within medical practice there are assumptions and practices related to the management of mental illness which are also culturally shaped. **Objective:** My research examines whether and how these long-standing culturally rooted assumptions about mental illness (for example, the association of mental illness with violence) are subtly embedded in contemporary health care policy. In this presentation, I present preliminary results of my findings. **Design:** The qualitative method of discourse analysis, supplemented by key informant interviews, was used to analyze the policies. **Participants:** Key informant health care professionals and mental health program managers were consulted to

contextualize the policy analysis. Results: Mental health care policies draw on and perpetuate assumptions that aid in maintaining stigma within society. Examples of mental health care policies will be outlined, such as the non-smoking policy and policies for staff identification badges. The policies will be deconstructed and re-framed by describing how they would look if developed under three different ethical frameworks: consequentialism, deontological ethics and the ethics of care. Conclusion: I conclude with recommendations for how mental health policy development can be re-focused to contribute to reducing stigma within the healthcare system.

### **An Update for Primary Healthcare Practitioners on the Prevalence of Obesity in Atlantic Canada**

Dr. Cynthia Murray, Gordon Walsh, Dr. Sarah Connor Gorber

**Context:** As indicated by a body mass index (BMI) greater than or equal to 30 kg/m<sup>2</sup>, obesity is a risk factor for cardiovascular disease, type 2 diabetes, several types of cancer, asthma, gallbladder disease, osteoarthritis, and chronic back pain. Most estimates of obesity rely on self-reported data, which are susceptible to bias and error. **Objective:** The study objective was to determine the prevalence of obesity in Atlantic Canada using correction equations based on measured data. **Design:** Secondary data analysis of the 2007-2008 Canadian Community Health Survey (CCHS). **Participants:** Of the 17,126 Atlantic Canadians who participated in the 2007-2008 CCHS, measured height and weight (MHW) data were collected on a sub-sample of 318 adults. **Instrument:** The CCHS collects data on health status, health care utilization, and health determinants for the Canadian population. **Outcome Measures:** To obtain corrected BMI estimates for the entire sample, correction equations were developed in the MHW sub-sample. Then, separate multiple regression models for men and women were used to predict BMI using the self-reported counterpart as the independent variable. **Results:** In the Atlantic Provinces, pre-correction percentages of obesity for men ranged from 21.2% to 25.8%, whereas post-correction percentages spanned 30.1% to 33.5%. For women, pre- and post-correction percentages ranged from 21.1% to 23.3% and 27.0% to 29.2%, respectively. **Conclusions:** The results demonstrate that obesity is significantly more widespread in Atlantic Canada than previously believed, especially among men. **Implications of the results** include the need to re-evaluate the relationships between obesity and chronic diseases.

### **Assessing Pain: The Deaf Community's Experience**

Victor Maddalena, Sandy LeFort

There is a very limited literature examining deaf people's perceptions of pain. A study by Maddalena, O'Shea and Murphy (2012) found deaf people experience many challenges at end of life, including assessing pain and symptom management. Because ASL is a visual language common descriptors of pain lean towards visual descriptions rather than expressions of how the pain feels. This current study aims to develop effective pain assessment and management tools specifically for deaf people.

The issue of assessing pain has broader implications as deaf people seek health services for various ailments, for example, assessing pain to assist with differential diagnosis of cardiac pain, acute abdominal pain, migraine headaches, cancer related pain, etc.

From the perspective of the health professional it is important to have access to tools to assist with the assessment of pain. Assessing the type, intensity and duration of pain are all important considerations when assessing pain.

In this pilot study we examine:

1. Deaf people's understandings and perceptions of pain and their experiences with health professionals regards assessment of pain;

2. ASL interpreters experiences with providing interpreting services for deaf people, in particular those experiences related to visits with health professionals related to pain assessment;
3. Tools to assess the type, intensity and effectiveness of pain interventions, including follow-up to assess the effectiveness of pain treatments.

The poster will provide an overview of the deaf community and some of the challenges experienced by deaf people and clinicians as they seek to describe pain. We will also present the research literature on deafness and pain assessment, a description of the pilot research study and preliminary results.

### Assessment of Palliative Care Needs of People with End Stage Renal Disease (ESRD) on Dialysis

Victor Maddalena, Brendan Barrett, Fiona O'Shea, Peter Wang

End stage renal disease (ESRD) is the irreversible loss of kidney function whereby the kidneys are no longer able to support life. The principal mode of treatment for patients with ESRD is dialysis and in very limited cases, kidney transplants. Palliative care measures for ESRD patients include pain and symptom management, advance directives, resuscitation orders and, if they are receiving home dialysis, a home assessment of care needs.

While there is research examining the palliative care needs of patients with ESRD receiving dialysis, there is a lack of research examining the differences between the needs of patients who die at home and those who die in hospital, as well as rural/urban comparisons between the two. This study aims to answer the question: "What are the palliative care needs of patients with ESRD?" by interviewing caregivers of ESRD patients who underwent at-home or in-hospital dialysis and subsequently passed away. Interviews will take place in each of the four regional health authorities and will also include stakeholders, such as physicians, nurses, pastoral care and social workers. The aim of the research is to better understand the challenges faced by patients (and their families) with ESRD and their palliative care and end of life care needs. The poster will provide an overview of the research literature on the subject area generally, a description of our research project and preliminary results.

### Cancer Patients' Perceptions of Wait Times' Causes

Maria Mathews, Dana Ryan, Donna Bulman

**Context:** What do patients perceive as causes of waits when seeking cancer care? Are specific causes associated with wait-related satisfaction or dissatisfaction?

**Objectives:** We explore cancer patients' care seeking experiences to understand the causes of wait times and their relationship with wait-related satisfaction and dissatisfaction.

**Design:** Qualitative retrospective, observational study

**Participants:** Sixty urban, semi-urban and rural patients (n=60) with breast, prostate, lung or colorectal cancer.

**Intervention** In-depth qualitative interviews to explore perceptions of the waits they experienced in the detection and treatment of their cancer. Interview transcripts were coded using a thematic approach.

**Outcome Measures** We asked each participant to describe their experiences from onset of symptom to start of treatment at the cancer clinic and their satisfaction with waits at various intervals.

**Results:** Patients identified five groups of wait time causes: 1) Patient- related (e.g. vacations, illness and co-morbidities, symptoms awareness, etc.); 2) treatment-related (healing time, side effects, preparation time, further testing, etc.); 3) system-related (e.g. staff shortages, nosocomial infection, poor coordination, missed tests, supply short-



ages, etc.); 4) physician-related (e.g. dismissing symptoms, poor follow-up, absence, etc.); and 5) other causes (e.g. weather, flooding, holidays). There was no pattern between the causes and patients' satisfaction and dissatisfaction with their wait times.

Conclusions: Although patients identified multiple causes of wait times, there was no pattern between causes of waits and satisfaction. More research is needed to examine the underlying sources of wait time dissatisfaction.

### **Delivery of Palliative Care by International Medical Graduates in Remote and Rural Newfoundland and Labrador**

Fiona Marie O'Shea

Context: Non-western trained international medical graduates (IMGs) contribute significantly in provision of medical care in remote/rural NL. Some IMGs may have received undergraduate medical education in countries that have not integrated palliative care as a core component of health care or education. Traditionally most IMGs remain in remote/rural areas for one to two years before relocating to urban centres. Frequent turn-over of IMGs is presumed to have a negative impact on continuity of care for patients and families living with life limiting diseases requiring palliative care.

Objective: To determine how palliative care delivery is experienced by non-western trained international medical graduates as compared to Canadian medical graduates and, to understand how palliative care delivery is experienced by patients, families and carers in remote\ rural NL.

Design: Case study methods are used in this qualitative research. The study consists of eight cases. Cases will be purposively selected by the Palliative Care Coordinator or designate. Each case will consist of a physician, patient and up to three others from a recognized circle of care. In four cases the physician will be a non-western IMG. Cross case comparison will be made with the remaining four cases with Canadian medical graduates. Semi-structured interviews, field notes, reflexive journaling and public web documents will be used to collect data. Interview data will be analyzed using a grounded theory approach.

Participants: Participants will be fluent in English,  $\geq$  eighteen years, and live in rural/remote areas. Patient participants will be living with a serious illness, receiving palliative care and be cognitively intact. Eighteen to forty participants will be interviewed.

Outcome Measures: The outcomes will be an inductive, explanatory theory of the experience of palliative care in remote/rural NL.

Results (anticipated): Outcomes will inform carers, educators and policy makers about the experience of palliative care delivered by IMGs in remote/rural NL. Areas for improvement will be identified which will benefit IMGs, patients, families and carers.

### **Digital Epidemiology Chronic Disease Tool (DEPICT): Visualization of Health Data for Chronic Disease in Newfoundland and Labrador**

Shabnam Asghari, Alvin Simms, Marshall Godwin, Kris Aubrey, Kayla Collins, James Valcour, Masoud Mahdavian, Richard Cullen

Background: Newfoundland and Labrador rates among the poorest of the Canadian provinces in the prevalence of chronic diseases such as diabetes and heart disease. Access to up-to-date and relevant information about chronic disease status and the usage of health care services is vital for policy level decision-making and research about chronic disease management. The emerging field of digital epidemiology utilizes the vast amount of electronic data that

exists due to revolutionary advances in electronic communications. The spatiotemporal information system framework provides the ability to store, analyze and represent this type of information in geographic space and time using Geographic Information Systems (GIS). Provincial healthcare plan databases and electronic medical records are excellent sources of electronic health information.

**Aims:** To develop a dynamic information tool on chronic disease in NL using available provincial health data sources.

**Methods:** This is a secondary analysis of existing individual and group level data. Existing databases are used to describe and document of chronic diseases, in this phase only diabetes of NL adults aged 20 and older. Statistical analysis includes estimations of age/sex specific rates, standardized rates and disease trends concentrating on spatial, temporal, and demographic factors as well as choropleth maps and spatiotemporal analysis including spatial autocorrelation and geographic weighted regression.

Using SAS and SQL programming all data will be integrated with Geographic Information System (GIS) software and prepared for the online system which consists of two interfaces – one for pre-computed values, another for user-defined parameters.

**Results:** A user-friendly information system, accessible online, displays diabetes information (prevalence, incidence, outpatient and inpatient service utilization in NL) as animated/motionless tables, graphs or maps instantly. It allows users, and particularly decision makers to query existing databases in the province at different geographical levels, and adjusted for different variables. A demo will be presented.

**Conclusions:** Information systems to support policy planners, practitioners, and researchers would facilitate the ability to bring evidence-informed approaches into chronic disease policy. The system put up-to-date and relevant information literally at the fingertips of policymakers, researchers, and educators.

### **Evaluation of an eLearning Module for Teaching Medical Students to Conduct an Effective Well-Baby Visit using the Rourke Baby Record**

Dr. Leslie Rourke

**Context:** This project evaluates an eLearning module designed to teach medical students how to conduct an effective 6 month well-baby visit using the resources of the Rourke Baby Record (RBR). E-Learning has gained popularity as a new approach to medical education. The RBR is an evidence-based validated structured system for well-baby/well-child care from one week to five years of age that is widely used by Canadian family physicians. Well-baby/well-child visits are becoming increasingly important with the emerging evidence that early childhood development and experiences affect not only learning, but also lifelong physical, mental and emotional health. The module began as a medical student summer research project and included an instructional design specialist. **Objectives:** To assess medical student knowledge of well-baby care and the RBR before and after completing the eLearning module and to obtain student feedback regarding the content, clinical applicability, and web delivery of the module. **Design:** Pre/post test consisting of 10 multiple choice questions to evaluate knowledge gains; Satisfaction survey components: demographic information; module content, module navigation, overall impressions. Completion and evaluation of the module were required for course participation marks, but students could opt out of having their data included in the research study. Health Research Ethics Board approval was obtained (#12.151). **Participants:** Over 100 medical students from two stages of training at Memorial University of Newfoundland: during the second year pediatric clinical skills course, and during the third year rural family medicine clerkship rotation. **Outcome Measures:** Knowledge gains, satisfaction re module content, clinical applicability, and web delivery. **Results:** Final results will

be presented. Judging from the first 39 participants' data, it is anticipated that the module will be well received and will show significant knowledge gains. Conclusions: The conclusions will influence future use of this module and development of new modules.

### **Health Coaching to Effect Lifestyle Behaviour Change: A Clinical Trial of Individuals with Pre-Disease**

Cassidy Brothers

CVD is the leading cause of death in Canada and NL has the highest prevalence of CVD in the country. Targeting the risk factors for CVD can help decrease the likelihood (or delay the onset) of developing overt CVD. The purpose of this study is to determine if, compared to usual care, a six-month program of health coaching in those with pre-disease (pre-hypertension and pre-diabetes) but without pre-existing CVD is an effective strategy to change lifestyle behaviour and prevent or delay onset of CVD. Participants in the intervention group receive six months of health coaching with a nurse trained as a health coach. Two of the six meetings are group meetings. The usual care group does not receive an intervention and acts as a control group. As of June 2013 we have 87 participants enrolled and recruitment is ongoing. We aim to enroll 200 participants and hope to have preliminary results by fall 2013.

### **Health-Selective Migration Following Diagnosis with Diabetes in Newfoundland and Labrador**

Oliver Hurley, Alvin Simms, Shabnam Asghari

Context: Newfoundland and Labrador (NL) has a higher prevalence of diabetes than any other Canadian province. Several characteristics of the NL population place it at a high risk for diabetes e.g., older population, high prevalence of obesity, highest pre-diabetes rate, and the near lowest median income in Canada.

Geographical disparities have been shown for diabetes in previous studies. However, the environment that influence on the development of diabetes may not have been the same environment in which they are identified as patients with diabetes. It is reasonable that some patients diagnosed with diabetes are forced to migrate into lower cost housing or move into places where the health services are available for the treatment.

Objective: To describe mobility patterns of patients with diabetes in NL and to evaluate if health-selective migration confounds the relationship between diabetes and deprivation.

Design: This is a retrospective cohort study. A cohort of patients diagnosed with diabetes in Newfoundland and Labrador will be followed for five years or until the end of the study whatever come first.

Study participants: Patients newly diagnosed with diabetes aged 20 years and older between 1998 and 2008 were identified using provincial medico-administrative data.

Analysis: Statistical analysis includes estimations of age/sex specific rates, standardized rates concentrating on spatial, temporal factors as well as choropleth maps and spatiotemporal analysis including spatial autocorrelation and geographic weighted regression.

Outcome Measures: This study will examine the spatial-temporal migration patterns of patients in order to measure migration to larger communities where critical health services are available for the treatment of their chronic disease.

Anticipated Results: It is expected that age will be a determinant of the probability that a given patient might move to a larger community in order to avail of better health-care services. It is expected that younger patients are more likely to migrate to larger communities and that older patients are less likely to migrate.

Conclusions: Migration may change patterns of mortality and morbidity and contribute to the geographical disparity in health outcomes among these patients. Health-selective migration may also support the association between deprivation and diabetes.

### Investigating Celiac Disease in Newfoundland and Labrador

Pauline Duke, Jacqueline Fortier

Context: Celiac disease (CD) is an autoimmune disorder treated by adherence to a gluten-free diet. European countries in particular, have a high prevalence of CD. Newfoundland & Labrador (NL) has a genetically homogeneous population primarily of European descent. It is therefore reasonable to postulate that NL may also have a higher prevalence of CD. Many physicians in this province feel that CD is likely underdiagnosed in this province. Our European ancestry and the possibility of underdiagnosing combined with the complications/morbidity associated with CD provide a compelling case to investigate CD in this province. Objective: To determine the number of patients tested for CD over a 5 year period as well as the test positivity rate, patient demographic profile, and morbidity and healthcare utilization characteristics associated with a CD diagnosis. Design: Secondary data analysis. Data linked through a common identifier will be extracted from datasets at the NL Renal Lab, MCP billing database, as well as morbidity and healthcare utilization datasets held by the Newfoundland and Labrador Centre for Health Information (NLCHI). Main Outcome Measures: Number of tTG tests, positivity rate of tTG test, endoscopy referral, morbidity, mortality and healthcare utilization. Results: In progress; preliminary results may be available at time of conference. We anticipate that the diagnosis rate of CD in NL will be higher than that evidenced in other areas of North America, more closely related to rates found in European nations, and that CD in NL will be related to increased morbidity and use of healthcare services prior to diagnosis. Conclusion: The primary goal of this study is to determine what CD “looks like” in this province. That is, we believe this investigation will allow us greater insight into the number of patients with CD and factors related to this illness in our province.

### Medical Geography: A Promising Cross-disciplinary Program

Shabnam Asghari, Alvin Simms, James Valcour

Context: The increasing usage of Geographic Information Sciences (GIS) and spatial analysis in health studies is creating a demand for specialists who have some expertise in both GIS and health studies. To address this gap in our academic program Medical Geography courses were developed. These courses represent a cross-disciplinary program in Geography and Health including a teaching collaboration between faculty from the Department of Geography and the Faculty of Medicine. The courses are available to graduate students in Geography, Epidemiology, Community Health, Public Health and Medicine who are interested in pursuing a career in Medical Geography. The courses also offer opportunities for practicing health professionals to enhance their knowledge and skills.

Objectives: To provide theory and methods for analyzing and interpreting the spatial aspects of health events and services while training specialists who have expertise in both GIS and health studies.

Target audience: Policy planners, practitioners, researchers and educators who are interested in evidence-informed approaches to public health and health policy, as well as individuals with an interest in, or working in, Medical/Health Geography.

**Description:** The courses focus on the application of spatial analysis to health issues and how to spatially integrate and analyze health and population data. An overview of recent developments in the field of Medical Geography with an emphasis on the analysis of electronic health data, estimation of the disease risk, detection of high risk areas, and access to health services will be presented using examples of supervised learning projects on healthcare issues in Newfoundland and Labrador.

**Conclusion:** The increasing usage of GIS and spatial analysis in health-related studies is creating a demand for specialist who has expertise in both GIS and health-related studies. The offering of the Medical Geography courses and the graduate program in Medical Geography provides new career opportunities for graduate students in Geography, Health and Medicine as well as other disciplines.

### Medical Student Health Care Needs, Practices and Barriers to Care

Janet Bartlett

**Context:** Medical students experience higher levels of depression, anxiety and general psychological distress than age-matched peers. The prevalence of psychological distress among medical students, in the United States and Canada, range from 13–24%;7–18% with substance use disorders (Dyrbe, Thomas, Shanafelt, 2006). Despite reported health needs, medical students are reluctant to seek help for mental health issues which can result in inappropriate self-care practices and impairment. Suicide rates are higher among medical students and physicians (16–27%) than the general population (11.5%). Medical students report unique barriers to care at individual, provider, and system levels which reflect issues related to stigma and the medical school environment. **Objective:** The aim of the current study is to determine the prevalence of psychological distress among medical students in comparison with the general population, explore personal health care needs and practices, including help-seeking, and identify barriers to care. **Design:** A cross-sectional design will be employed with administration of a survey at particular points in the students' training. **Participants:** Medical students in years one through four attending Memorial University of Newfoundland and Dalhousie University; all students in the specified range will be eligible to participate. The estimated sample size based on eligibility is approximately 600 students. **Instrument:** Instruments or databases utilized will include the Kessler Distress Scale (K10) (Kessler et al., 2003), the Canadian Community Health Survey Database (Statistics Canada, 2012), and the Medical Student Health Care Survey (Roberts, Franchini, McCarty, & Warner, 2000). **Outcome measure:** The primary outcome measures will include the prevalence of distress among medical students, rates of help-seeking for mental health issues, reported health care needs, practices, and barriers to care. **Results:** It is expected that students will report high levels of distress, low rates of help-seeking, preference for informal and off-site care, inappropriate self-care practices, and institutional barriers to care. **Conclusions:** Medical students report higher levels of distress than the general population yet are reluctant to seek help for mental health issues, resulting in inappropriate self-care practices with potentially long-term health and career consequences. Causes of distress and system-based barriers to care need to be addressed at curriculum and policy levels.

### Optimizing Health Care Delivery in Personal Care Homes in Newfoundland and Labrador

Gary Tarrant

**Context:** As the proportion of seniors NL's population grows, so too does the need for long-term care facilities. An important segment of this population includes those who are no longer able to live safely in their homes but do not require the level of care provided in nursing homes. In NL this type of care is provided by provincially regulated, private operators in PCHs. In this context, communication between different healthcare providers and other important stakeholders is often fragmented leading to poorly coordinated healthcare delivery. **Objective:** To engage key stakeholders in an interview process to determine their perspectives on healthcare delivery for residents in PCHs

in general and with specific reference to communication and coordination of care. Design: Qualitative description. Setting: Eastern Health Authority, NL, CA. Participants: PCH owners/managers (5-10), health authority case managers assigned to the PCH program (5-10), family physicians caring for residents of PCHs (5-10), officials with the provincial department of health and community services (5). Outcomes: Key themes emerging from our interview data will be identified according to a number of criteria including relevance to the research objective, frequency with which a piece of information is mentioned, the amount of text taken up to address an issue, and emphasis (e.g., emphatic or emotional speech). Results: Data has not yet been analyzed; preliminary results will be available at the time of presentation. We anticipate the study will result in a comprehensive summary of the experiences and opinions of key stakeholders responsible for the coordination of care in PCHs. Conclusion: This study will explore how health-care services in PCHs could be better optimized by improved coordination and integration of key stakeholders and healthcare providers. This will allow us to develop an appropriate and sustainable intervention to improve coordination of care and health outcomes that can be rigorously evaluated.

### **Osteoarthritis and Delivery of Care in Newfoundland and Labrador: A Spatial Analysis Study**

Jennifer Woodrow

Context: Osteoarthritis (OA) is the most prevalent kind of arthritis, affecting more than three million Canadians, and is the most common form of arthritis found in seniors. Research indicates that OA poses a significant economic and humanistic burden on society and will continue to do so as the population ages. Over the past 30 years, the population of Newfoundland and Labrador (NL) has aged faster than any other jurisdiction in Canada and this trend is expected to continue. Consequently, it is anticipated that there will be a substantial increase in the prevalence of OA in NL and thus the need for treatment/management services will increase. A detailed picture of the geographic distribution of OA in NL and the availability of associated treatment/management services does not exist.

Objectives: (1) Determine the geographic distribution and socio-demographic characteristics of the NL population with OA; (2) Determine the number/location of the following treatment/management services: hospitals/clinics, family practitioners, physiotherapists, occupational therapists, chiropractors, registered dietitians, orthopedic surgeons, rheumatologists, pharmacists, fitness facilities; (3) Determine areas of the province that have inadequate access to these services.

Design: Descriptive statistics will be used to analyze socio-demographic characteristics of prevalent OA cases. Geographic Information System software will be used to map the distribution of OA throughout the province. Network Analysis techniques will be employed to identify the closest OA treatment/management services for each town and the cost associated with travelling to each. An overall accessibility score will be computed for each town based on total travel cost for all services in order to identify regions of the province that have limited access to treatment.

Participants: Physician-diagnosed OA data will be obtained through the NL Centre for Health Information from the Clinical Database Management System and Medical Care Plan physician claims.

Anticipated Results/Conclusion: Given the low population and vast dispersion of rural communities in NL, it is hypothesized that some communities have inadequate care for individuals with OA; this problem may be amplified as the population ages. Research findings will be disseminated to government and organizations involved with the development of healthy aging and chronic disease management policy and programs.

## Portrait of Chronic Pain in Newfoundland and Labrador

Heather Foley

**Context:** It is estimated that up to 19% of Canadians have chronic pain costing the Canadian economy \$6 billion a year in direct health care costs. People with chronic pain have more frequent visits to doctors and more frequent hospital visits, surgeries and admissions than the general population. Because 'chronic pain' does not have a specific health administrative diagnosis/billing code, it is difficult to use our provincial databases to determine the incidence, prevalence and health care utilization among this group; important information required for health care planning. **Objective:** To define and evaluate an efficient algorithm for identification of incidence and prevalence of chronic pain in NL. **Design:** The study will utilize secondary data analysis of datasets created by linkages of MCP unique identifiers to the MCP Fee-for-Service Physicians Claims file, Clinical Database Management System, and Eastern Health Emergency Room Triage Data to determine a decision algorithm that will be used to create the Chronic Pain Database. **Participants:** In order to build a Newfoundland & Labrador Chronic Pain Database, the research team intends to first use MCP identifiers from groups known to have chronic pain. Further validation will be performed using a group known not to have chronic pain obtained from the Canadian Community Health Survey. **Intervention/Instrument:** To create the Chronic Pain Database, the final decision algorithm will be applied to the dataset formed by linking the MCP Registry File to the three administrative databases. **Outcome Measures:** The incidence, prevalence and characteristics of cases of chronic pain in the province (e.g. sex, age, co-morbid conditions, length of time with pain, health care utilization, rural/urban and health region location) will be calculated. **Results:** Since previous studies have estimated the prevalence of chronic pain at 15%, it is expected that the Chronic Pain Database will contain approximately 75,000 individuals (~15% of 500,000 pop.). **Conclusions:** Administrative claims data are population-based, accessible and cost-effective but these data are not collected for research purposes; their validity for research must be assessed. It is hypothesized that provincial administrative data are a valid source for studying the incidence and prevalence of chronic pain.

## Program Evaluation of an Enhanced Model for Rural and Remote Family Medicine Training

Réanne Meuse, Shannon Fisher

**Context:** Throughout Canada, rural and remote communities struggle with shortages of family physicians. Memorial University of Newfoundland (MUN) has introduced an enhanced model of family medicine residency training in three rural or remote pilot sites with the goal of producing more and better trained family physicians for rural and underserved areas.

**Objective:** To evaluate the enhanced model over a five year period. A process evaluation assesses the ongoing implementation of the enhanced model and an outcome evaluation assesses the overall effects in relation to intended outcomes.

**Design:** Program evaluation. **Setting:** Burin and Grand Falls, NL, Canada and Iqaluit, NU, Canada. **Participants:** A variety of key stakeholders with an interest in enhanced rural and remote training and improved access to family physicians including current and past residents of the family medicine residency program at MUN, preceptors, curriculum development personnel, site staff at the training sites, general community members, and planning committee members. **Intervention:** An enhanced model of rural and remote training for family medicine residents that includes additional residents accepted into the program; enhanced curriculum, personal supports, administrative supports and educational supports for residents; and enhanced faculty development for preceptors.

**Outcome Measures:** The evaluation explores a number of evaluation questions and indicators related to relevance, design and delivery, effectiveness and efficiency of the training model, challenges, impacts on the recruitment and retention of residents in rural/remote areas and unintended effects. These are assessed through key informant interviews, surveys, administrative data analysis, and document review.

**Results:** In progress; evaluation results from the second year of program operations will be available at the time of the presentation.

**Conclusions:** The ultimate goal of the enhanced model for rural and remote family medicine training is improved access to family physicians with enhanced training in rural and remote areas.

### **The Anti-Liberation Procedure Decision-Making Experience for People Living with Multiple Sclerosis: Lessons Learned for Primary Healthcare Providers**

Dr. Cynthia Murray, Dr. Michelle Ploughman, Chelsea Harris, Michelle Murdoch, Dr. Mark Stefanelli, Stephen Hogan

**Context:** In 2009, people living with multiple sclerosis (MS) were introduced to an apparently novel treatment called the “liberation procedure,” which was based on a new theory of MS proposed by Dr. Zamboni and his colleagues. While hundreds of Canadians diagnosed with MS decided to have the experimental and controversial procedure abroad, others decided against it. **Objective:** To explore the experience of liberation procedure decision making for persons living with MS, who specifically decided against having the procedure. **Design:** The research design for this study was phenomenology. **Participants and Data Collection:** In-depth interviews were held with six adults with MS from St. John’s, Newfoundland and Labrador. All of the participants decided not to have the liberation procedure. **Data Analysis:** The data analysis was guided by van Manen’s approach to phenomenological inquiry. **Results:** Four themes were discovered in the stories of the participants: putting the liberation procedure under the microscope; refusing to jump or stay on the liberation procedure bandwagon; not wanting to rock the boat; and waiting for credible research results. **Conclusions:** The participants turned to primary healthcare providers and other healthcare professionals to help inform their decision making. Implications of the findings for primary healthcare practice, education, and research are discussed.

### **The Causal Role of Smoking in the Risk of Colorectal Cancer: A Mendelian Randomization Analysis**

Zhi Chen, Peizhong Wang

**Context:** Results from previous studies examining the association between tobacco smoke have been inconsistent and the causal relationship between the two is yet to be established. **Objective:** Using the rs1051730 SNP variant as an instrumental variable for smoking in Mendelian randomization (MR) analysis, the proposed study will assess the causal association of CRC risk and smoking among subjects from the provinces of Newfoundland, Labrador (NL) and Ontario (ON). **Design:** we will conduct an MR study using data collected from the existing cohort, which includes 3102 participants from ON and 1139 from NL (1380 cases and 2861 controls). **Outcome measures:** 1) Regression models will be applied to estimate the association between CRC risk and smoking, as well as the association between CRC risk and rs1051730 SNP, after controlling for potential confounding factors. 2) Possible genotype-phenotype (rs1051730 SNP-smoking) interaction will be tested by  $-2\log$  likelihood ratio test. 3) Two-stage regression will be applied to fit instrumental variable models so that the causal odds ratios of smoking can be estimated. 4) The assumption of Hardy-Weinberg Equilibrium will be tested using a chi-squared test. We hypothesize that, after controlling for possible confounders, smoking has a causal effect on the risk of CRC.



## The Effect of an Intensive Nurse Home Visit Program on Self-Assessment of Health and on Social Engagement in the Independently Living Oldest Old

Dr. Danielle O'Keefe

**Background:** The fastest growing segment of the Canadian population is comprised of seniors who are 65 years of age and older. In 2005, in Newfoundland and Labrador, seniors represented 13.1% of the population and by 2026 this percentage is projected to increase to 26.6. Recognizing the growth in the senior's population, it is important that research focuses on determining factors that will help maintain and/or improve well-being and general health.

**Objectives/Design:** To assess and improve the care of seniors who were eighty years of age and older a randomized controlled trial, the ElderCare Project, was conducted in the St. John's and surrounding areas in Newfoundland and Labrador between 2006-2011. The research reported here is a before-after analysis of the impact of the nursing intervention employed in the ElderCare Project on self-assessment of health and on social engagement in the intervention group.

**Participants/Intervention:** The intervention group consisted of 54 participants. At baseline, data was collected on utilization of social engagement activities and self-assessment of health as measured by the SF-36 Health Survey. The intervention consisted of the development of an ElderCare Plan followed by eight home visits by the research nurse. At completion of the study, data on the use of social engagement activities was once again collected and the SF-36 Health Survey was repeated.

The self-assessment of health results were analyzed using the Paired Samples T-Test and McNemar's test for related samples was used to analyze the social engagement activities data. Logistic regression was used to further analyze significant social engagement activity results.

**Results:** The nursing intervention did not result in a significant change in self-assessment of health. While there was not a significant change in the use of formal or intermediate social engagement activities from baseline to one year, statistically significant results [ $p < 0.001$ ] were found for the utilization of informal social engagement activities.

When logistic regression was used to analyse the social engagement activity data further, education level was found to be associated with increased use of all social engagement activities [Odds ratio: 4.97, 95% CI: 1.48–16.71;  $p = 0.009$ ]. Similar results were found when the logistic regression was run using informal social engagement activities [Odds ratio: 4.71, 95% CI: 1.32–16.8,  $p = 0.017$ ].

### Conclusion

The nursing intervention resulted in an increase in the participants' use of informal social engagement activities from baseline to one year. There was no significant impact of the nursing intervention on self-assessment of health or on the use of formal or intermediate social engagement activities in this elderly population.

## The Effect of Biologic Therapies on the Risk of a Major Adverse Cardiac Event (MACE) in Patients with Moderate to Severe Psoriasis

Shane A. Randell

**Context:** Psoriasis vulgaris affects approximately 2–3% of the population and is believed to cause an increase in risk of a major adverse cardiac event (MACE) due to its inflammatory nature. Biologic therapies used as treatments for psoriasis are believed to reduce this risk through their anti-inflammatory properties.

**Objective:** To determine if patients afflicted with moderate to severe psoriasis have a decrease in risk of having a major adverse cardiac event (MACE) when treated with a biologic therapy.

**Design:** This study will involve a secondary data analysis. Once the chosen data has been extracted, quantitative multivariate techniques will be used to test for relationships between outcome measures (which may be continuous or binary) as well as the comparison between therapy types and MACE prevalence.

**Participants:** This study will use data collected from the adult ( $\geq 18$  years of age) population in Newfoundland and Labrador. The projected sample size is 500–600 patients.

**Intervention/Instrument (as applies):** This project will examine biologic therapies and non-biologic therapies for psoriasis (including cyclosporine, methotrexate, UV therapy and topical corticosteroids).

**Outcome Measures:** The primary outcome will be whether or not a major adverse cardiac event (MACE) occurs. Potentially (based on what the results indicate) time-to-event and/ or severity of MACE may be considered outcomes as well. Other variables to be considered include (but are not limited to) age, age of onset of disease, gender, severity of condition, therapy type and length of therapy.

**Results:** This study is in its beginning phases and data have yet to be extracted however the predicted results would find a statistically significant decrease in the risk of having a major adverse cardiac event in psoriasis patients.

**Conclusions:** This project has not yet been completed. If there is significant evidence to support the hypothesis that biologic therapies decrease the risk of a major adverse cardiac event in patients with psoriasis, there is a potential that these therapies may become more desired as a primary treatment option for patients whom qualify (based on individual inclusion/ exclusion criteria for the considered biologic agent).

### **The Experience of Gaining Weight Above National Guidelines in Pregnancy: Insights from the Stories of Pregnant Women**

Dr. Cynthia Murray

**Context:** Given the links between: high maternal weight gain during pregnancy and large for gestational age (LGA) babies; and overnutrition in utero (i.e., large size at birth) and obesity later in life, the prenatal period provides an early and unique opportunity to promote healthy weights. High gestational weight gain is recognized as a modifiable risk factor for foetal overnutrition and macrosomia. Although interventions have been developed to help pregnant women achieve healthy weight gains, the prevalence rates of high gestational weight gain and LGA births are steadily increasing in many countries. **Objective:** To explore the experience of weight gain for pregnant women with high gestational weight gain. **Design:** The research design for this study was phenomenology. **Participants and Data Collection:** Data were collected through interviews with seven pregnant women from St. John's, Newfoundland and Labrador. **Data Analysis:** van Manen's approach to phenomenological inquiry was used to analyze the data. **Results:** The data analysis revealed four themes: being caught off guard; losing my bearings; hanging on for dear life; and hoping for the best. **Conclusions:** The participants perceived that gestational weight gain was out of their control. According to the pregnant women, they received mixed messages from primary healthcare practitioners and other healthcare providers about their weight gain. Implications of the findings for primary healthcare practice, education, and research are discussed.

### **The Impact of a Poster Campaign: Can it Influence the Acceptance of Breastfeeding by Residents of Rural Newfoundland and Labrador?**

Alissa Vieth, Janine Woodrow, Barbara Roebathan, Yanqing Yi

**Context:** Newfoundland and Labrador has one of the lowest rates of breastfeeding in Canada. The cultural attitudes of rural NL society are commonly given as one reason why women do not breastfeed.

**Objective:** The objective of this study is to utilize the Newfoundland and Labrador Provincial Perinatal Program (NLPPP) 2009 poster campaign to investigate the effectiveness of this communication channel in enhancing the perception and acceptance of breastfeeding as a normal, socially acceptable activity.

**Design:** This is a quantitative, cross-sectional study with data collected via questionnaire. A survey will be administered in shopping centres in two rural communities of Newfoundland and Labrador where breastfeeding rates are well below the provincial norm. To permit comparisons, the survey will be administered at each location on two separate days: one day with, and a second day without a display of the two posters from the 2009 campaign.

**Participants:** Convenience samples of the general public; males and females, 18 years and older.

**Intervention/ Instrument:** A survey will be developed specifically for this study and piloted on the key themes of: 1) impact of posters as a public health enhancement tool, and 2) attitudes around breastfeeding in public.

**Outcome Measures:** The quantitative data will be grouped, based upon whether posters were present or absent while subjects were surveyed. Scalar responses about attitudes on breast-feeding in different situations will be compared.

**Results:** Findings should include an identification and ranking of primary factors associated with breastfeeding in rural NL. We hypothesize that attitudes and opinions about breastfeeding will be more favourable among the subjects completing the questionnaire in the presence of the posters. Data will be collected and analyzed during this summer and results will be available for discussion in November.

**Conclusions:** Posters are but one of many ways that can be used to influence health practices and public attitudes towards them. Data are needed to confirm that posters can effectively communicate a positive breastfeeding message. The results of this research will help guide future public health programs such as interventions aimed to improve cultural attitudes about breastfeeding in public.

### **The Pro-Liberation Procedure Decision-Making Experience for People Living with Multiple Sclerosis: Opportunities and Challenges for Primary Healthcare Providers**

Dr. Cynthia Murray, Dr. Michelle Ploughman, Chelsea Harris, Michelle Murdoch, Dr. Mark Stefanelli, Stephen Hogan

**Context:** Despite the absence of reliable, scientific evidence demonstrating the efficacy of the “liberation procedure” in treating multiple sclerosis (MS), hundreds of Canadians diagnosed with MS have undergone the controversial and expensive procedure outside of Canada. **Objective:** The objective of this study was to explore the experience of liberation procedure decision making for persons living with MS, who decided to undergo the procedure. **Design:** The research design for this study was phenomenology. **Participants and Data Collection:** Data were collected through interviews with nine adults with MS, who were recruited from MS outpatient services in St. John’s, Newfoundland and Labrador. All of the participants decided to have the liberation procedure. **Data Analysis:** The transcribed interviews were analyzed using van Manen’s method of phenomenology. **Results:** The data analysis revealed two groups of participants, namely “early embracers” and “late embracers” of the procedure, with three themes for each group. The themes found in the stories of the early embracers were: jumping at a golden opportunity to get better; desperately hoping and trying to ascend from the depths of suffering to a better quality of life; and having no regrets. The themes identified in the narratives of the late embracers were: greeting the liberation procedure with skepticism; a last-ditch effort: coming around in desperation to support the liberation procedure; and risking everything: putting your life on the line to have the liberation procedure. **Conclusions:** Many of the participants spoke to primary healthcare and other healthcare professionals about the liberation procedure. The participants perceived a neutral stance on the procedure taken by healthcare professionals as being supportive of the liberation procedure. **Implications of the findings for primary healthcare practice, education, and research are discussed.**

## The Psychosocial Impact of Living with Risk for a Genetic Disorder with a High Risk of Sudden Cardiac Death

Holly Etchegary, Kathy Hodgkinson, Charlene Simmonds, Fiona Curtis, Daryl Pullman

**Objectives:** There has been no program of research on the psychosocial impact of living with risk for arrhythmogenic right ventricular cardiomyopathy (ARVC) causing sudden cardiac death (SCD) in Newfoundland and it remains a notable gap in the literature on inherited cardiomyopathies.

**Approach:** Newfoundland has a long history of molecular genetic and clinical epidemiology research on one genetic subtype of ARVC which has a high risk of SCD due to lethal arrhythmias in young people (50% mortality in affected, untreated males by 40 years of age). Twenty-three large multiplex families have been ascertained with ARVC (due to an S358L mutation in TMEM43), and clinical management of at risk family members occurs through a weekly multidisciplinary clinic. Affected and unaffected individuals from these families were approached to participate in a mixed methods project to explore the psychosocial impact of living at risk for ARVC.

**Results:** Eighteen qualitative interviews have been completed with at risk individuals thus far and 25 interviews are pending. While data saturation has not yet been reached, preliminary data analysis reveals a considerable psychosocial burden on families, including worry about one's own and children's risk of SCD, restrictions in the activities of daily life, and for some, a significant economic burden. Despite the sometimes substantial psychosocial impact, participants to date appear to be coping fairly well and attribute this in part to the close and ongoing clinical monitoring provided in our jurisdiction.

**Conclusion:** This data will be used to guide the construction of a psychosocial survey to be administered to a larger sample of affected individuals. We hope that by documenting psychosocial impacts, we can provide evidence-based information to inform decision making in all cardiac centres and improve the lives of at-risk families.

## Utilization of EMR and EHR Data for Research and Health System Use in Newfoundland and Labrador

John Knight, Kayla Collins, Madonna Roche, Jeff Dowden, Jennifer Phillips, Tracy Parsons, Neil Gladney, Terri Ann Brophy

**Context:** In Canada use of EMR and EHR systems are at relatively early stages and these systems are designed mainly for patient care. Consequently, there are many gaps in knowledge and expertise in utilization of these systems for research and health system use.

**Objective:** To investigate the feasibility of using EMR and EHR data for health and medical research in Newfoundland and Labrador.

**Design:** The project involved working through three demonstration research studies involving linkage of EMR and EHR data to provincial administrative data sources and application of process-mapping to document factors/processes involved. Topics of the three studies were:

- 1) Sex differences in diabetes risk factors and outcomes
- 2) Obesity, chronic illness and health care utilization
- 3) Psychiatric medication adherence and hospital admission

**Participants:** The study utilized EMR data on over 325,000 family physician encounters for over 25,000 patients for years 2007-2010, as well as data on over 320,000 psychiatric medication prescriptions for over 30,000 individuals in the Pharmacy Network from 2009-2011.

**Instrument/Outcome measures:** Factors and processes associated with use of EMR/EHR data for research as well as their solutions and lessons-learned were documented throughout all aspects of the research projects, from data acquisition through to data analysis and dissemination. An internal advisory committee comprised of individuals from across NLCHI representing different areas of expertise relevant to use of EMR/EHR data was created to aid in identification and documentation of processes. External partners were also consulted as needed.

**Results:** In working through the three research studies, a number of factors, issues and processes were identified that are important considerations when using EMR and EHR data for research. These have been categorized as: A) Governance, B) Approvals, C) Data processing, and D) Adoption. Each item was described according to: a) the factor (or issue), b) the process(es) and c) solutions and/or recommendations.

**Conclusions:** The use of EMR/EHR data for health system research requires consideration of multiple factors but also presents significant opportunities. The outcomes of this project may serve as a model to facilitate future research involving EMR and EHR data and contribute to continued development and evolution of e-health systems.

## Who's Cooking? Understanding Young Adults' Behaviours and Attitudes towards Cooking in Canada

Courtney O'Neill

**Context:** Canadians are increasingly disconnected from cooking due to the availability of pre-prepared foods and fast-paced lifestyles. Research shows that one's cooking skills can significantly impact their food intake and nutrition status. Individuals who do not prepare their own meals are more likely to consume high-fat, high-sodium foods, and less fruits and vegetables. It is recommended that health prevention strategies focus on educating and encouraging individuals to become more engaged in cooking to help minimize the risk of chronic disease. With minimal research investigating the cooking behaviours of young Canadian adults, it is of benefit to understand this cohort's attitudes and abilities towards cooking, and the factors influencing this behaviour. **Objective:** 1) To determine if young adults value cooking. 2) To investigate whether they are using these skills to prepare and/or cook meals. 3) To investigate barriers which might deter young adults from engaging in cooking. 4) To determine if other variables impact cooking attitudes and behaviours. 5) To enhance respondents' awareness of the impact of cooking on health. **Design:** This descriptive study uses a survey, administered in-person, to understand young adults' attitudes and behaviours towards meal preparation and cooking. **Participants:** Participants in this study are young adults attending Memorial University of Newfoundland. **Instrument:** A self-report survey has been developed specifically to address the objectives. The survey has been divided into five sections, and definitions are provided to clarify terms. **Outcome Measures:** A preliminary assessment of respondents' attitudes towards and prevalence of meal preparation and cooking skills. An identification of factors associated with respondents' attitudes and behaviours. **Results:** Results will identify and rank reasons why young adults do or do not cook, and specifically address the potential value of secondary school education in positively impacting behaviours and attitudes towards meal preparation and cooking. **Conclusions:** Young adults have been identified as an age-group who minimally cook and prepare their own food. This research should enable us to conclude, in part, why this is. Do these individuals value cooking? What barriers and exposures have led to young adults being less engaged in their meal preparation and cooking?

# Notes

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