

# Northern Health Research Conference

June 2 - 3, 2006  
Sault Ste. Marie, Ontario

Conference Abstracts and Program



Northern Ontario  
School of Medicine

The Northern Ontario School of Medicine (NOSM) welcomes you  
to the First Annual Northern Health Research Conference.

# **Northern Health Research Conference 2006**

## **Table of Contents**

Welcome message from the Founding Dean, Northern Ontario School of Medicine .....	2
Welcome message from the Mayor of Sault Ste. Marie.....	3
Welcome message from the Academic Dean, Algoma University College .....	4
Acknowledgements.....	5
Accreditation.....	5
Conference Program.....	6
Keynote Speaker Biography – Mr. Borys Chabursky .....	12
Oral Abstracts.....	13
Poster Abstracts.....	53



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## Message from the Founding Dean, Dr. Roger Strasser

Welcome to the first annual Northern Ontario School of Medicine (NOSM) Northern Health Research (NHR) Conference. We are delighted that so many researchers and health professionals, representing all corners of Northern Ontario, have come together to advance knowledge, understanding and partnerships in health research.

Research is a critical component of the NOSM curriculum. The School is committed to improving the health of Northern Ontarians, not only through our exceptional MD program, but also through our research endeavours and partnerships.

The 2006 Northern Health Research Conference has provided the opportunity to work closely with the host site, Algoma University College. We also appreciate the hospitality and support of the City of Sault Ste. Marie and the Sault Ste. Marie Physician Retention and Recruitment Program.

From among the 80 submissions received, 70 oral and poster presentations will cover a broad range of topics over the next two days. Close to 200 delegates are expected to attend.

As a delegate to this inaugural NHR Conference, you have the unique opportunity to network with colleagues and make important new contacts in the field of medical research. This book of abstracts is testament to the exceptional quality of presentations.

Over the last several months, individuals from varying backgrounds have worked diligently on the conference organizing committee. I am confident that all of us will benefit from the fruits of their labour.

Enjoy the presentations and the camaraderie!

Sincerely,

Dr. Roger Strasser  
Founding Dean and Professor



OFFICE OF THE MAYOR



*WELCOME TO SAULT STE. MARIE!*

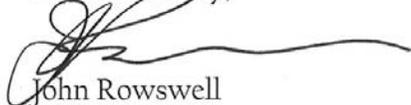
As Mayor of the City of Sault Ste. Marie, and on behalf of City Council, I am pleased to welcome you to Sault Ste. Marie as participants of the 1<sup>ST</sup> Annual Northern Health Research Conference.

Sault Ste. Marie is proud to host this conference in our naturally gifted community. What a wonderful time of year to experience the best that nature has to offer! While you are visiting, remember to take some time and enjoy our many attractions and culture. Visit our Canadian Bushplane Heritage Centre that was named the *Best Indoor Attraction* by Attractions Canada...where adventure takes off! Don't forget about the famous Agawa Canyon Tour train and relax, sit back and enjoy the rugged wilderness of Algoma Country during a 114 mile trip to Agawa Canyon Park.

Of course, if you are looking to relax, please come and enjoy a stroll along our waterfront boardwalk or take in our Sault Ste. Marie Museum, Art Gallery of Algoma, Ermatinger-Clergue National Heritage Site and the Canadian Bushplane Heritage Centre. We have it all!

Sault Ste. Marie boasts the slogan "*Naturally Gifted*", which signifies the beauty of this region and our location along the shores of both Lake Superior and Lake Huron. It also represents the citizens of our community, who will warmly welcome all of you in the friendliest of demeanours!

Yours Sincerely,

  
John Rowswell  
Mayor

*naturally  
gifted*



Dear Participant:

On behalf of Algoma University College, an affiliate-college of Laurentian University, I would like to welcome you to the campus and the City of Sault Ste. Marie.

Your participation in the Northern Health Research Conference is a strong endorsement for the Northern Ontario School of Medicine, the health needs of the people and the communities of Northern Ontario and the importance of research on these health needs in Northern Ontario. You may be aware that this pan-northern medical school held its Curriculum Workshop -- attended by over 300 participants from Northern Ontario -- in Sault Ste. Marie, providing the basis for the "made in Northern Ontario" aspects of NOSM's MD program curriculum. In addition, Sault Ste. Marie has hosted Planning Retreats by NOSM Board of Directors and Deans Strasser and Ross are frequent visitors to the Sault. NOSM has formal affiliations with the Sault Area Hospital, as well as the Group Health Centre -- an innovative multi-specialty, ambulatory healthcare organization serving 57,000 Sault Ste. Marie and Algoma District residents. Many of its physicians have joined the medical school as faculty members and undertaking important research on the health care needs of people in the north.

The importance of rural and remote health research is inestimable as a significant proportion of Canadians (approx. 1/3rd) reside in such areas. In 2001, the Canadian Institutes of Health Research undertook to identify the key components to a national health research strategy. Working collaboratively with an integrated approach -- within and between communities -- to health research will be a key factor in a Northern Ontario Health Research Strategy. The CIHR Forum identified several key themes that include: improving rural health service; understanding health status and its determinants/health risk minimization; human resource development, and five actions: clarify issues; examine, synthesize and test strategies; improve knowledge translation/policy; foster improvements in methods, pilot sites, longitudinal studies; and, act as a clearing house/repository for rural health research. Taken together, health research in Northern Ontario impacts our people, communities, environments, as well as health service and policy. The health of our residents and services are undoubtedly major factors in the sustainability and health of our communities.

I look forward to meeting you at the conference and extend a heartfelt welcome to our campus.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Perlino", written over a light grey rectangular background.

Arthur H. Perlino, Ph.D.  
Academic Dean

## **Acknowledgements**

### **Scientific Committee**

**Arthur Perlini**, Academic Dean, Algoma University College

**Silvana Spadafora**, Director of Clinical Research and Program Development, Sault Ste. Marie's Group Health Centre

**Joyce Helmer**, Interim Faculty Development Director, Northern Ontario School of Medicine

**Greg Ross**, Associate Dean, Research, Northern Ontario School of Medicine

### **Organizing Committee**

**Arthur Perlini**, Dean, Algoma University College

**Silvana Spadafora**, Director of Clinical Research and Program Development, Sault Ste. Marie's Group Health Centre

**Joyce Helmer**, Interim Faculty Development Director, Northern Ontario School of Medicine

**Greg Ross**, Associate Dean, Research, Northern Ontario School of Medicine

**Denise Smith**, Health Professional Development Coordinator, Northeastern Ontario Medical Education Corporation

**Shelley Condratto**, Administrative Assistant, Health Professional Development, Northeastern Ontario Medical Education Corporation

**Lyne Morvan**, Administrative Assistant, Research, Northern Ontario School of Medicine

**Sue Harnden**, Executive Assistant, Office of the Academic Dean, Algoma University College

### **Conference Assistants**

**Suzanne Lortie-Carlyle, Sherry Carlucci, Denise Adams, Richard Witham, Andrea Smith, Ching Yeung, Emy-Anne Adam, Cathy Coulson, Rachel Lacroix**

A special thank you to the City of Sault Ste. Marie, Algoma University College, and the Sault Ste. Marie Physician Retention and Recruitment program.

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## **Accreditation**

This conference meets the accreditation criteria of the College of Family Physicians of Canada and the Royal Physicians and Surgeons of Canada and has been accredited for 11 hours of MAINPRO®-M1 credits.

## Agenda - Friday June 2, 2006

### Friday Morning

**8:00-9:00** **Continental Breakfast / Poster Viewing**

**Introduction:** *Dr. Arthur H. Perlini, Academic Dean, Algoma University College*

**9:00-9:15** **Welcome - Dr. Roger Strasser, Founding Dean and Professor, Northern Ontario School of Medicine (NOSM)**

**Introduction:** *Dr. Roger Strasser, Founding Dean and Professor, Northern Ontario School of Medicine (NOSM)*

**9:15-9:20** **Welcome – David Oraziotti, MPP, Sault Ste. Marie**

**Introduction:** *Dr. Greg Ross, Associate Dean, Research, Northern Ontario School of Medicine (NOSM)*

**9:20-10:00** **Keynote Speaker - Mr. Borys Chabursky, President and founder of SHI Consulting**

**10:00-10:30** **Nutrition Break / Poster Viewing**

**Session Chair:** *Dr. Mamdouh Abou-Zaid, Research Scientist, Great Lakes Forestry Centre*

**10:30-10:45** *Dr. Mamdouh Abou-Zaid, Research Scientist, Great Lakes Forestry Centre; Domenic A. Lombardo, Melanie Coppens (Canadian Forest Service, Great Lakes Forestry Centre); Tom Noland (Ontario Forest Research Institute); J. Thor Arnason (Ottawa-Carleton Institute of Biology, University of Ottawa).* **Bioproducts from the Canadian Forest: Biological Diversity (Nutraceuticals and Bioactives) in Health Promotion and Disease Prevention**

**10:45-11:00** *Tara Baron, MD, FRCPC, Assistant Professor, NOSM; Judy Baird, MD, CCFP, Assistant Professor, Northern Ontario School of Medicine; Dar Malaviarachchi, MSc, Assistant Professor, Northern Ontario School of Medicine.* **A Pilot Study of the Impact of an Exercise and Nutrition Program in Grade 3 Students from Sudbury Elementary Schools**

**11:00-11:15** *Jennifer Holland, MLIS, Research Assistant, Health Information Research Unit, McMaster University; Alexander Lyubchansky, MA, MLIS, Director, Northern Ontario Virtual Library (NOVL); R. Brian Haynes, MD, PhD, Director, Health Information Research Unit, McMaster University.* **McMaster Premium Literature Service (PLUS): An Evidence-based Medicine Information Service Delivered in Collaboration with the Northern Ontario Virtual Library**

**11:15-11:30** *Kristen Jacklin, Assistant Professor, NOSM; Phyllis Kinoshameg, Wikwemikong Health Centre.* **Collaborative Community Based Research: Developing a Diabetes Research Strategy with the Wikwemikong Health Centre, Manitoulin Island**

**11:30-11:45** *Dr. Mary Lou Kelley, Director, Centre for Education and Research on Aging and Health and Associate Professor, School of Social Work, Lakehead University.* **Developing Palliative Care in Rural Communities: A Conceptual Model**

**11:45-12:00** *Jennifer Michaud, BScN, RN, Northeastern Ontario Regional Telehealth Coordinator, NORTH Network; Laurie Sherrington, RN, Northwestern Ontario Regional Telehealth Coordinator, NORTH Network.* **Home is Where the Heart Is: Videoconferenced Cardiac Rehabilitation for Rural Northerners**

**12:00-1:00** **Lunch / Poster Viewing**

## **Friday Afternoon**

**Session Chair: Dr. Myra Rutherford, Assistant Professor, Algoma University College**

- 1:00-1:15**      *Wayne Warry. Knowledge Transfer in the Aboriginal Context*
- 1:15-1:30**      *Ghislaine Goudreau, Health Promoter, Sudbury & District Health Unit. Exploring the Connection Between Aboriginal Women's Hand Drumming and Health Promotion (Mino-Bimaadiziwin)*
- 1:30-1:45**      *Bruce Minore, Research Director (Lakehead Site), Centre for Rural and Northern Health Research; Margaret Boone, Chief Operating Officer, Centre of Excellence for Children and Adolescents with Special Needs; Alison Arthur, Thunder Bay District Program Manager, Integrated Services for Northern Children; Mary Ellen Hill, Senior Researcher (Lakehead Site), Centre for Rural and Northern Health Research. Finding Ways to Provide Integrated Services for Children with Special Needs in Rural and Remote Parts of Northern Ontario*
- 1:45-2:00**      *Cathy McCullough, RN, CCN (C), CHF Clinic Nurse, Group Health Centre; Dr. D. Crookston, Physician, Health Promotions Initiatives Team, Algoma District Medical Group, Group Health Centre; Dr. M.T. Mathew, Cardiologist, Algoma District Medical Group, Group Health Centre. Leadership in Community Congestive Heart Failure (CHF) Program Decreases Re-admission Rates*
- 2:00-2:15**      *Dr. Michel A.S. Lariviere, C.Psych., Assistant Professor, School of Human Kinetics, Laurentian University; Nicole Good- Student, School of Human Kinetics, Health Promotion Program; Jacqueline Swartz- Student, School of Human Kinetics, Health Promotion Program. Community-driven Interventions for the Prevention of Childhood Obesity: A Critical Review of the Literature and an Assessment of Best Practices as They Apply to Northern and Rural Communities*
- 2:15-2:30**      *Jan Clarke, PhD, Sociology & Social Welfare, Algoma University College, Sault Ste. Marie, Ontario. Unpacking Social and Political Relations of Clinical Trials*
- 2:30-3:00**      **Break / Poster Viewing**

**Session Chair: Dr. Gayle Broad, Assistant Professor, Algoma University College**

- 3:00-3:15**      *Andrew Robinson, MD, FRCPC, Hôpital Régionale de Sudbury Regional Hospital Cancer Care. Review of Method of Detection of Contralateral Breast Cancer in Two Different Age Cohorts*
- 3:15-3:30**      *Gratien Allaire, Institut franco-ontarien & Isabelle Michel, Director, Public Health Research, Education and Development Program, Sudbury & District Health Unit. Health of Francophone Populations of Northern Ontario: Findings and Questions*
- 3:30-3:45**      *Dr. Gayle Broad, Algoma University College; Amy Boyer, BA (Hons), Research Assistant, Algoma University College and member of Batchewana First Nation. Indigenous Perceptions of Well-Being: Understanding the Strengths of Indigenous Communities*

## **Friday Afternoon - Continued**

**3:45-4:00**      *Thomas L. Noland, Research Scientist, Ministry of Natural Resources, Ontario Forest Research Institute; Mamdouh Abou-Zaid, Research Scientist, Natural Resources Canada, Canadian Forest Service, Great Lakes Forestry Centre, Sault Ste. Marie, ON P6A 2E5; Ron Smith, Research Scientist, Natural Resources Canada, Canadian Forest Service, Atlantic Forestry Centre, Fredericton, N. B., CAN, E3B 5P7; Stewart Cameron, Research Scientist, Natural Resources Canada, Canadian Forest Service, Atlantic Forestry Centre, Fredericton, N. B., CAN, E3B 5P7. **Cultivating Canada Yew for Paclitaxel Production: Prospects for Plantation Culture in Ontario***

**4:00-4:15**      *John C. Hogenbirk, MSc, Senior Researcher, Centre for Rural and Northern Health Research, Laurentian University; Ricardo Ramirez, PhD, Assitant Professor, School of Environmental Design and Rural Development, University of Guelph; Raymond W. Pong, PhD, Research Director, Centre for Rural and Northern Health Research; Kevin Houghton, CA, Telehealth Program Manager, Keewaytinook Okimakanak Telehealth; Brian Walmark, Research Director, Keewaytinook Okimakanak Research Institute; Donna Williams, RN, Regional Telehealth Coordinator, Keewaytinook Okimakanak Telehealth. **Factors Explaining Uptake of Telehealth in First Nations Communities: the Keewaytinook Okimakanak Telehealth Experience***

**4:15-4:30**      *Dr. James Goertzen, Associate Professor, McMaster University/NOSM. **Utilization of Health Services for Urgent Health Problems: Comparison Between Family Health Networks and Non Family Health Network Practices***

**Wrap Up - Dr. Greg Ross, Associate Dean, Research, Northern Ontario School of Medicine (NOSM)**

**4:30-6:00**      ***Poster Viewing***

*Friday social evening includes dinner at the Bush Plane Museum, with entertainment sponsored by the Sault Ste. Marie Physician Retention and Recruitment program*

## Agenda - Saturday June 3, 2006

### Saturday Morning

8:00-9:00 **Continental Breakfast / Poster Viewing**

**Session Chair: Dr. Silvana Spadafora, Assistant Professor & Section Leader of Internal Medicine, Northern Ontario School of Medicine (NOSM)**

9:00-9:15 *Barbara Eles, BScN RN, Sudbury & District Health Unit; Darshaka Malaviarachchi, Epidemiologist, MSc.* **Heart Health Rural Outreach Project Evaluation: Implications for Public Health and Medical Practitioners**

9:15-9:30 *Lesley McBain, Department of Georgraphy, University of Saskatchewan.* **Going Beyond the "One and Only Purpose": Resistance in Northern Nursing**

9:30-9:45 *Phyllis Montgomery, RN, PhD, School of Nursing, Laurentian University; Dr. R. Veluri, Psychiatrist, NEMHC.* **Mothering Amidst Serious Mental Illness**

9:45-10:00 *Dr. Connie H. Nelson, Professor, School of Social Work, Lakehead University; Dr. Jungwee Park, Health Statistics Division, Statistics Canada.* **Mental Health and Well-being in Northern Ontario, 2002**

10:00-10:15 *Barbara Zelek MD CCFP Marathon Family Practice; Eliseo Orrantia, MD, CCFP, MSc., Marathon Family Practice, Marathon, Ontario; Heather Poole, BSCh., McMaster University PhD candidate, Hamilton, Ontario; Jessica Strike, BSc., University of Ottawa medical student, Ottawa, Ontario.* **Home or Away? Factors Affecting Birth Choices in a Rural Community**

10:15-10:45 **Nutrition Break / Poster Viewing**

**Session Chair: Dr. Jan Clarke, Assistant Professor, Algoma University College**

10:45-11:00 *Marina Ulanova, Associate Professor, Medical Sciences Division, NOSM.* **Syk Tyrosine Kinase is an Important Regulator of Pro-inflammatory Signaling in Lung Epithelium**

11:00-11:15 *Myra Rutherford, Department of History, Algoma University College.* **Nursing In The North: What They Forgot To Mention Before We Left The South**

11:15-11:30 *Lenore Manitowabi, Program Support Worker, Noojmowin Teg Health Centre and Manitoulin First Nations Research Review Committee Member; Lorrilee McGregor, Manitoulin First Nations Research Review Committee Member.* **Guidelines for Ethical Aboriginal Research: The Development of Community-based Aboriginal Research Guidelines**

11:30-11:45 *Suzanne Lamoureux & Kerri Loney, Clinical Dietitians, Supportive Care Program & Supportive Care Oncology Research Unit of the Regional Cancer Program of the Hôpital Régionale de Sudbury Regional Hospital.* **Improving Access to Nutrition Counselling Using A Nutrition Referral Priority Rating System at the Hôpital régional de Sudbury Regional Hospital**

11:45-12:00 *Marion Maar, PhD, Medical Anthropologist, Assistant Professor, Human Sciences Division, NOSM.* **Building Collaborative Research Partnerships to Improve Diabetes Care in Aboriginal Communities**

12:00-1:00 **Lunch / Poster Viewing**

## Saturday Afternoon

**Session Chair: Dr. Tim J. Best, Assistant Professor and Section Leader of Surgery (East), Northern Ontario School of Medicine (NOSM)**

- 1:00-1:15** *T.J. Best, MD, MSc Assistant Professor and Section Leader of Surgery (East), NOSM; G. Elder, MD, Assistant Professor, Section of Surgery, Northern Ontario School of Medicine.* **Failure Pattern of Orthosphere Interpositional Arthroplasty for the Treatment of Thumb Carpometacarpal Joint Osteoarthritis**
- 1:15-1:30** *Simon Chiu MD PhD FRCP, Associate Professor, University of Western Ontario London Ontario, Consultant psychiatrist, Forensic/Adult psychiatry program, Regional Mental Health Care, St. Thomas Ontario; John Copen, MD, FRCP, Assistant Professor, Northern Ontario School of Medicine, Thunder Bay Ontario; G. Sadek, MD, FRCP, Medical Director, Methadone Clinic (Private), London Ontario; Zack Cernovsky, PhD, Professor psychiatry, University of Western Ontario, London Ontario.* **Problem Gambling in Methadone Maintained Opiate Dependence**
- 1:30-1:45** *Denis Heng, Research Associate, Centre for Rural and Northern Health Research; Raymond W. Pong, Research Director, Centre for Rural and Northern Health Research.* **The More Things Change, The More They Stay the Same: Key Factors Influencing Choice of Practice Locations of Family Physicians at Four Different Career Points**
- 1:45-2:00** *Wendy Malesh, Graduate Student - Candidate for Masters of Science in Nursing Degree, Laurentian University.* **Leaders of University Baccalaureate Nursing Programs Leadership Style: Perceptions of Faculty**
- 2:00-2:15** *Ms. Amanda Maranzan, Coordinator, Practice-Based Research, Health Sciences North/NOSM; Ms. Sue Berry, Assistant Professor, Division of Clinical Sciences, NOSM; Dr. William Montelpare, Professor, School of Kinesiology, Lakehead University.* **Research Skills Development for Health Professionals: The PracticeBased Research Initiative**
- 2:15-2:30** *Dr. Carmel M Martin, Associate Professor, Clinical Sciences, NOSM; Dr Margot Felix-Bortolotti, Ms Shelley Darling, Dr Sarah Strasser, Clinical Sciences, Northern Ontario School of Medicine.* **Virtual Office of Synthesis and Information (VOSI)**

**2:30-3:00 Break / Poster Viewing**

**Session Chair: Dr. Pauline Bragaglia, Algoma District Medical Group, Group Health Centre**

- 3:00-3:15** *Robbie Goddard, Psychometrist, St Joseph's Care Group - Lakehead Psychiatric Hospital.* **The Effects of a Smoking Ban on an Inpatient Psychiatric Program**
- 3:15-3:30** *Dr Amanda Hey, Clinical Lead, Preventive Oncology and Screening, Regional Cancer Program, Hôpital Régional de Sudbury Regional Hospital (RCP-HRSRH); Carolyn Jackson, Regional Administrator, Ontario Breast Screening Program, RCP-HRSRH; Merci Miron Black, Nurse Examiner, Ontario Breast Screening Program, RCP-HRSRH; Denise Gauthier-Frohlick, Research Officer, Supportive Care Oncology Research Unit, RCP-HRSRH.* **Image-Guided Core Breast Biopsy: Implementing Guidelines into Community Practice**
- 3:30-3:45** *Dr. Sam Fratesi, Medical Advisor to the FOOTPAD Program, Vascular Surgeon, Algoma District Medical Group, Group Health Centre.* **The FOOTPAD Program: Foot care Optimal Outcomes and Treatment for Patients in Algoma with Diabetes Program**

## **Saturday Afternoon - Continued**

- 3:45-4:00**      *Cynthia MacKay, RD, CDE, Dept Head, Algoma Diabetes Education and Care (ADEC) Program, Group Health Centre; Dr. Pauline Bragaglia, Algoma District Medical Group, Group Health Centre. **Interdisciplinary Team Approach to Insulin Adjustment Benefits the Patient with Diabetes***
- 4:00-4:15**      *Dr. Pauline Bragaglia, Algoma District Medical Group, Group Health Centre; Cynthia MacKay, RD, CDE, Dept Head, Algoma Diabetes Education and Care (ADEC) Program, Group Health Centre. **The Health Promotion Initiative in Diabetes (HPID) Outcomes Management Program at the Group Health Centre: A 5-year Experience Demonstrating Improved Outcomes That Have Been Sustained***
- 4:15-4:30**      ***Wrap Up & Evaluation: Dr. Arthur H. Perlini, Academic Dean, Algoma University College***

***Closing Remarks - Dr. Roger Strasser, Founding Dean and Professor, Northern Ontario School of Medicine (NOSM)***

**Keynote Speaker: Mr. Borys Chabursky, President, SHI Consulting**

***Biography***

Mr. Chabursky is the President and Founder of SHI Consulting, and an entrepreneur in the life science sector with substantial management experience. In the past five years, he has provided interim management for seven start-ups and is currently a member of a number of for-profit and not-for-profit boards, including the advisory boards of the *Singapore Cancer Syndicate, Medical and Related Sciences Commercialization Centre (Toronto), Ontario Cancer Research Network Tumour Bank, GEMMA, Royal Ontario Museum RPC, The Orange Circle* and *Industrial Policy Advisory Committee (IPAC)* for a large multinational pharmaceutical company.

Mr. Chabursky is an integrative thinker who has grown SHI into a globally recognized firm with clients ranging from Fortune 100 companies to internationally recognized academics. He has experience in spearheading large-scale, multi-stakeholder, global initiatives and is often utilized as an advisor by influencers and developers of government policy. In 2003, he was named one of Canada's "Top 40 Under 40".

Mr. Chabursky is a sought-after speaker at international conferences. He was invited to speak and present at 39 international conferences and events in the past three years and has also been featured by Canadian and international television, radio and print media, such as: Canadian Business, CBC, Global TV, The National Post, Site Selection, BioBusiness, Life Science Today, Biotechnology Focus, The China Post, Les Echos (French daily newspaper), Peterborough Examiner, Hamilton Spectator, and Business Executive.

# **Oral Presentations**





## **McMaster Premium Literature Service (PLUS): An Evidence-based Medicine Information Service Delivered in Collaboration with the Northern Ontario Virtual Library**

### **Principal Presenter**

Jennifer Holland, MLIS, Research Assistant, Health Information Research Unit, McMaster University

### **Other Presenters**

Alexander Lyubechansky, MA, MLIS, Director, Northern Ontario Virtual Library (NOVL)  
R. Brian Haynes, MD, PhD, Director, Health Information Research Unit, McMaster University

### **Abstract**

**Background:** Ready access to current best evidence for clinical decisions remains a challenge to practicing physicians. To better serve these information needs, we developed an online information delivery service for physicians in collaboration with the Northern Ontario Virtual Library (NOVL), called McMaster PLUS (Premium Literature Service).

**Objective:** To determine how PLUS affects the use and usefulness of critically appraised, clinically rated evidence from research, in comparison with unassisted digital library access.

**Design:** A cluster randomized controlled trial comparing two versions of PLUS.

**Methods:** Physician raters used the McMaster Online Rating of Evidence (MORE) system to assess the clinical relevance of newly published clinical studies and reviews pre-appraised for their sound methodology. Passing articles continuously updated the PLUS database. One version of the PLUS web interface offered end users email alerts and a searchable database of scientifically rigorous, peer rated, discipline-filtered clinical research literature, (full-serve component) coupled with unassisted access to the NOVL online library of journals and texts that required user-based search and retrieval (self-serve component). A second interface offered only unassisted NOVL access (self-serve).

**Results:** 203 physicians practicing in Northern Ontario were randomized to either the full-serve or self-serve interfaces. The monthly average proportion of full-serve participants logging in was 57.8% higher than for the self-serve group during the intervention period ( $p < 0.001$ ), and the proportion of non-users was 51% less ( $p = 0.022$ ). In Phase 2, the full-serve interface was made accessible to the self-serve group. Login rates of the crossed-over self-serve group (1.85 logins/month) came to match those of the full-serve group (1.75 logins/month).

**Conclusion:** Phase 1 and 2 results of the McMaster PLUS trial show increased usage for the PLUS interface that alerted its users to high quality research that is relevant and important to their particular clinical practice.

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# Developing Palliative Care in Rural Communities: A Conceptual Model

## Principal Presenter

Dr. Mary Lou Kelley, Director, Centre for Education and Research on Aging and Health and Associate Professor, School of Social Work, Lakehead University

## Abstract

**Background/objectives:** Access to palliative care services has been described as the “right of every Canadian”, however, providing palliative care is a challenge in rural and remote communities when there are no specialized programs and no providers with palliative care training. In spite of lack of resources, some rural health care providers and volunteers have taken collective action to organize and build local capacity to meet the needs of dying residents. The purpose of this research was to conceptualize the process of developing rural palliative care programs using the theoretical perspective of community capacity development.

**Methods:** Data were qualitative, consisting of nine group interviews that included 66 interdisciplinary providers involved in providing rural palliative care. Data were collected in eight rural or remote areas across Canada, and were analyzed within the NVivo software program using a process of analytic induction.

**Results:** Based on the data, an original model was created called Developing Rural Palliative Care that conceptualized four sequential and incremental phases of development: antecedent community conditions; a critical incident; creating the team; and growing the program. The model articulates the major processes and activities within each phase. Throughout the developmental process, the nature of the rural community both supported the work of rural providers and created their challenges. Working together and being community focused emerged as the over-arching keys to success. Most of the palliative care work utilized existing resources. The role of “outside experts” is discussed in the local developmental process.

**Conclusion:** This presentation is based on original research, and presents a model for developing palliative care in rural and remote communities using a conceptual framework of community capacity development. The presentation will identify the role of specialized palliative care providers in supporting regional generalist providers in their local care giving tasks.

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# Home is Where the Heart Is: Videoconferenced Cardiac Rehabilitation for Rural Northerners

## Principal Presenter

Jennifer Michaud, BScN, RN, Northeastern Ontario Regional Telehealth Coordinator, NORTH Network

## Other Presenter

Laurie Sherrington, RN, Northwestern Ontario Regional Telehealth Coordinator, NORTH Network

## Abstract

**Introduction:** Cardiac Rehabilitation (CR) results in lower death rates, reduced incidence of a second heart attack, decreased hospitalization and cardiac procedures. However, traditional CR programs capture only a small portion of the eligible population that would benefit from such services. An innovative approach has been implemented to provide patients and their families throughout Northern Ontario with CR education via video.

**Methods:** Two CR Programs in Northern Ontario delivered multi-disciplinary comprehensive sessions throughout their respective regions. All NORTH Network sites from each region were invited to register and promote the sessions throughout their communities. Data were collected and analyzed to determine participant rates as well as patient and presenter satisfaction. Finally, traditional SWOT analyses were completed.

**Results:** Three series were delivered throughout Northern Ontario. Twenty-four sites (178 people) have received cardiac focused education using the technology. All presenters agreed videoconferencing is an effective method to reach patients in rural, remote, and under-serviced areas; they are also willing to deliver future sessions. Participants were “interested, engaged and actively included” in the teaching and learning process and all reported the technology to be useful in disseminating the information.

**Conclusions:** Patients, family members, and the presenters were highly satisfied with the modality. Future series will be delivered in two-hour blocks as opposed to half or full day sessions. Videoconferenced CR Education is a valid and relevant method of reaching rural, remote, and under-serviced areas of Northern Ontario. Future research could compare the clinical outcomes of patients receiving CR Education via video versus face-to-face methods.

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# **Finding Ways to Provide Integrated Services for Children with Special Needs in Rural and Remote Parts of Northern Ontario**

## **Principal Presenter**

Bruce Minore, Research Director (Lakehead Site), Centre for Rural and Northern Health Research

## **Other Presenters**

Margaret Boone, Chief Operating Officer, Centre of Excellence for Children and Adolescents with Special Needs

Alison Arthur, Thunder Bay District Program Manager, Integrated Services for Northern Children

Mary Ellen Hill, Senior Researcher (Lakehead Site), Centre for Rural and Northern Health Research

## **Abstract**

Managing continuity in the care provided to rural residents is often difficult because so few health professionals live in the communities. The reported study examines two ways this problem can be tackled, based on a comparison of service delivery models used by Integrated Services for Northern Children (ISNC), a program for children with special mental health, health and educational needs in rural and remote parts of northern Ontario. In some cases, urban-based consulting professionals work with local residents, trained as paraprofessionals, to provide on-going care; in other cases, they rely on community volunteers. The objective was to determine which approach provides better continuity of care for this difficult to serve population.

The study was undertaken in the District of Thunder Bay, the first region covered by the program to make extensive use of paraprofessionals. Data was collected in six rural centres from: the program's client/staff database; a review of 330 randomly selected patient records; and interviews with 100 individuals, including parents or guardians of patients included in the chart reviews, care providers (paraprofessional or volunteer), and the resource group of mental health, health and education professionals based in the city of Thunder Bay.

The present paper presents selected findings from the study, comparing the volunteer "mediator" and paraprofessional "intervention worker" approaches along six dimensions: continuity of service provision (whether clients remain in touch with the service); breaks in service delivery; continuity of contact with particular providers; implementation of plans for services; co-ordination with primary care services; and co-ordination with formal and informal care givers.

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# Leadership in Community Congestive Heart Failure (CHF) Program Decreases Re-admission Rates

## Principal Presenter

Cathy McCullough, RN, CCN (C ), CHF Clinic Nurse, Group Health Centre

## Other Presenters

Dr. D. Crookston, Physician, Health Promotions Initiatives Team, Algoma District Medical Group, Group Health Centre

Dr. M.T. Mathew, Cardiologist, Algoma District Medical Group, Group Health Centre

## Abstract

Congestive Heart Failure (CHF) is the leading cause of admission and re-admission at the Sault Area Hospital (SAH), which serves a population of 125,000. It is also the number one admission diagnosis in most hospitals in Canada. Level 1 medical evidence shows that a hospital discharge transition program decreases re-admission rates.

Chronic disease management is a challenge in today's healthcare system, where financial resources are limited and communities are boxed into silos of care. Sault Ste. Marie health care providers have overcome these challenges to implement an innovative program that benefits all patients. Substantial overall savings to the health care system were realized over and above the shifting of costs from hospital to community. The three Sault Ste. Marie based health care organizations have developed a "Best Practice" program that aligns fiscal accountability with improved patient outcomes.

After studying admission and re-admission rates in our local hospital, the Health Promotion Initiatives team at Group Health Centre (GHC), in conjunction with SAH, embarked on a CHF project. The project's first phase included GHC patients only. Such outstanding results were achieved that all three health care organizations, GHC, SAH and Algoma Community Care Access Centre (ACCAC), implemented a CHF program for all patients. A 68% decrease in re-admissions at SAH was realized after one year of implementing this program community-wide. Five years later, 2005 data indicates 17% re-admission rates, a relative risk reduction of 53%.

GHC is a multi-specialty, interdisciplinary ambulatory care facility with diagnostic services and electronic medical records. With 59,000+ registered patients, it is considered a community leader in health promotion, patient care and research. The GHC model exemplifies a different approach to service delivery, involving individuals in their own care, maximizing the scope of practice of our inter-disciplinary team, and using leading-edge infrastructure and technology to help achieve better health outcomes.

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# **Community-Driven Interventions for the Prevention of Childhood Obesity: A Critical Review of the Literature and an Assessment of Best Practices as they Apply to Northern and Rural Communities**

## **Principal Presenter**

Dr. Michel A.S. Lariviere, C.Psych.- Assistant Professor, School of Human Kinetics

## **Other Presenters**

Nicole Good- Student, School of Human Kinetics, Health Promotion Program

Jacqueline Swartz- Student, School of Human Kinetics, Health Promotion Program

## **Abstract**

Rates of childhood obesity vary according to region but are especially problematic in Northern Ontario. A report from the Northern Ontario Perinatal Child Health Survey Consortium (2003) indicates that approximately thirty per cent (30.4%) of children between two to six years are overweight and seventeen per cent (17.1%) are at risk of overweight. A recent development in Sudbury has been the creation of the Obesity Prevention Steering Committee whose mandate is to reduce the prevalence of obesity among area children. This public health initiative sought to implement interventions that would have the greatest impact on rates of childhood obesity. To that end, it wished to draw from the extant scientific literature. As such, the primary goal of this project was to inform current strategies and practices such that they coincide with what science and policy views as best practices. The project critically assessed the literature with due consideration to local needs and realities. The assumption was that features of this region (e.g. geography, demographics, socioeconomic levels, and infrastructure) were sufficiently unique to require a “made in northern Ontario” approach to childhood obesity prevention. Using existing databases at Laurentian and the SDHU (e.g. PsychLit, PsychInfo, ERIC, Cochrane and Campbell Collaborations), pertinent research was identified, summarized, and integrated within the context of Northern and Rural Health. Findings underline the central role of families, schools and the community in the prevention of childhood obesity. Improving the nutritional quality of family dinners and increasing the duration and frequency of outdoor activities are considered important points of departure in community-driven child obesity prevention efforts. Organizational and policy changes at schools and in local governments are equally relevant as they create the social and physical environments supportive of nutrition and physical activity.

The current study was a collaborative effort between Laurentian University and the Sudbury District Health Unit. It was funded by a Public Health Research Initiative Grant (PHRIG).

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# Factors Explaining Uptake of Telehealth in First Nations Communities: The Keewaytinook Okimakanak Telehealth Experience

## Principal Presenter

John C. Hogenbirk, MSc, Senior Researcher, Centre for Rural and Northern Health Research, Laurentian University

## Other Presenters

Ricardo Ramirez, PhD, Assistant Professor, School of Environmental Design and Rural Development, University of Guelph;  
Raymond W. Pong, PhD, Research Director, Centre for Rural and Northern Health Research;  
Kevin Houghton, CA, Telehealth Program Manager, Keewaytinook Okimakanak Telehealth;  
Brian Walmark, Research Director, Keewaytinook Okimakanak Research Institute;  
Donna Williams, RN, Regional Telehealth Coordinator, Keewaytinook Okimakanak Telehealth

## Abstract

The Keewaytinook Okimakanak Telehealth project expanded from 9 to 23 First Nations communities during September 2003-September 2005. These communities, located in Northwestern Ontario, have historically low access to health care/education services due primarily to their geographic isolation. For instance, only one community has an all-weather road. Access to the remaining communities is by aircraft, with 60% of the communities >300 km from the nearest service centre. Telehealth is one way to improve access to health care/education services, but little is known about the uptake in remote aboriginal communities.

We investigated uptake rates and factors that may help explain differences in uptake among First Nations communities. Fourteen communities started telehealth services during the study period, but we focussed on twelve communities that had 3-15 months of data. Telehealth utilization data were converted into per capita utilization rates per month for each community. We obtained population estimates from the Department of Indian and Northern Affairs for the year 2004. Exploratory data analyses were used to determine whether differences in rate could be explained by selected demographic and socio-political characteristics.

Utilization rates in the first month ranged from 0.002 to 0.053 telehealth sessions/person/month. The lowest (non-zero) and the highest rate in any month was 0.002 and 0.097 telehealth sessions/person/month, respectively.

Preliminary analysis suggests that the highest initial rates occurred in communities with the smallest population size (less than 300 people). Early results suggest that the rates in these communities are approaching those of the other communities, including nine communities that have had telehealth services for over two years (mean=0.023 telehealth sessions/person/month for these nine communities). Community affiliation with different Tribal Councils and distance to service centre did not have an obvious effect on utilization in the first few months. Investigations into other potential explanatory factors are continuing.

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# Utilization of Health Services for Urgent Health Problems: Comparison Between Family Health Networks and Non Family Health Network Practices

## Principal Presenter

Dr. James Goertzen, Associate Professor, McMaster University/Northern Ontario School of Medicine

## Abstract

### INTRODUCTION:

Family Health Networks (FHN) and Family Health Groups (FHG) are new models of primary health care delivery recently implemented in Ontario that are designed to provide accessible and comprehensive care to patients. Family physicians in both models provide a range of services including after-hours clinics to voluntarily rostered patients.

### PURPOSE:

To examine the health services used by patients in FHNs, FHGs, and non-FHN/FHG practices for self-defined urgent health problems: personal family physician, after-hours clinic, walk-in clinic, emergency department, and telephone advisory service.

### METHODOLOGY:

Thirty-six family physicians participated (8 FHN, 16 FHG, 12 non-FHN/FHG). Patients were randomly selected from electronic billing data or rosters; patients over one year of age who had visited the practice in the previous 12 months were eligible. The self-completed mailed survey asked about urgent health problems in the previous six months and use of health services for the most recent problem. Comparisons of outcomes between the three practice models were made using the Chi square test adjusted for nesting of patients within practices.

### RESULTS:

The overall response rate was 62.3% (5884/9373), two-thirds (60.2%) of respondents were female, and mean age was 43.8 years. Prevalence of a self-reported urgent health problem in the previous six months was 23.4%. A similar proportion of patients that reported an urgent health problem from all three practice models called their family physician first (30.3-34.3 % p=n.s.) Overall prevalence of use of the emergency department was 11.4% (199/1753) among FHN respondents, 15.7% (347/2209) among FHG respondents, and 14.3% (252/1779) among non-FHN/FHG respondents (FHN vs FHG p=.006, FHN vs non-FHN/FHG p=.02). There were no significant differences in use of after-hour/walk-in clinics or telephone advisory service between the three practice groups.

### DISCUSSION:

This study suggests that different primary care practice models may affect the services patients use for their self-defined urgent health problems.

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# Heart Health Rural Outreach Project Evaluation: Implications for Public Health and Medical Practitioners

## Principal Presenter

Barbara Eles, BScN RN, Sudbury & District Health Unit

## Other Presenter

Darshaka Malaviarachchi, Epidemiologist, MSc

## Abstract

**Objective:** Healthy Living Outreach Program was developed by Sudbury & Manitoulin Districts Heart Health Project to provide chronic disease prevention information to individuals living in rural and isolated areas.

**Methods:** The availability of a heart health information package was promoted through mass mailing of a flyer to more than 4000 households in seven selected communities on Manitoulin Island and in Sudbury East. Individuals called the health unit to request the package. Consent for a follow-up telephone survey was obtained during the contact. The bilingual survey examined the usefulness, content and reach of the package. Of the 28 requests, 21 people consented to participate and 15 completed the telephone survey.

**Results:** Ninety-three percent of the respondents were very satisfied with receiving the information package through the mail. The information did effectively promote the importance of adopting a healthier lifestyle. As a result of the package, 40% of the respondents stated that they had tried heart healthy eating, while approximately one in four individuals had tried other positive behaviour changes such as being active, handling stress, and making their lives smoke-free. The main topics of interest for future information were physical activity and healthy eating. Sixty percent of the participants were interested in receiving information on all four topics: healthy eating, physical activity, stress and smoking cessation. Even though 67% of the participants reported having a doctor or nurse practitioner in their community, 73% reported that it is either not easy at all (40%) or not very easy (33%) to get health information within their communities.

**Conclusions:** The evaluation results indicate a need for health information that is readily accessible in rural and isolated communities. Health professionals have an important collaborative role to play in disseminating health information.

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# Guidelines for Ethical Aboriginal Research: The Development of Community-based Aboriginal Research Guidelines

## Principal Presenter

Lenore Manitowabi, Program Support Worker, Noojmowin Teg Health Centre and Manitoulin First Nations Research Review Committee Member

## Other Presenter

Lorrilee McGregor, Manitoulin First Nations Research Review Committee Member

## Abstract

Health organizations are often contacted by researchers who want to conduct research in Aboriginal communities, however few are prepared for the reality of how to design, implement and complete a successful project. We will discuss how Aboriginal health agencies can increase community capacity and self-determination in health research.

Noojmowin Teg Health Centre is a health access centre located on Manitoulin Island in Northern Ontario. In partnership with the three other health authorities and seven First Nations communities, staff at this centre coordinated the development of a community-based Research Review Committee. The function of this committee is to promote ethical health research in First Nations communities in the Manitoulin Island district. The committee researched local Aboriginal views on research ethics and used these Aboriginal values as the foundation for the developed of a research manual. The manual provides tools to assist communities to make informed decisions about health by providing guidelines for the review and evaluation of proposed research projects. We provide concrete strategies to empower communities to maintain ownership and control over research projects and access to research data.

Participants in this session will discuss several key elements involved in the development of research guidelines: 1) Importance of a community process for the development of research guidelines. 2) Overview of the manual for ethical Aboriginal research, the review process and importance of a sustainability plan and 3) how community-based Traditional Aboriginal values and ethics are incorporated into research and 4) the development of an Ethics and Research Review Workbook.

*Conflict: Marion Maar, Manitoulin Research Review Committee Member (NOSM)  
Joyce Helmer, Manitoulin Research Review Committee Member (NOMECE)*

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# Improving Access to Nutrition Counselling Using A Nutrition Referral Priority Rating System at the Hôpital Régional de Sudbury Regional Hospital (HRSRH)

## Principal Presenters

Suzanne Lamoureux, Clinical Dietitian, Supportive Care Program & Supportive Care Oncology Research Unit of the Regional Cancer Program of the Hôpital Régional de Sudbury Regional Hospital

Kerri Loney, Clinical Dietitian, Supportive Care Program & Supportive Care Oncology Research Unit of the Regional Cancer Program of the Hôpital Régional de Sudbury Regional Hospital

## Abstract

In this study, funded by Cancer Care Ontario Innovation Fund, a Nutrition Referral Priority Rating System (NRPRS) was developed and implemented to triage all nutrition referrals. Early nutrition intervention is critical to help maintain weight, decrease toxicities of treatments, improve overall survival and treatment response as well as improve quality of life. With the complexity of cases referred and the increased workloads, it was a challenge for the dietitians in the Supportive Care Program of the Regional Cancer Program (RCP) of the HRSRH to continue meeting the needs of all patients that required nutrition counselling. As a result, patients whose nutrition needs were deemed less urgent were not being seen. In the NRPRS, patients are graded from 1 (high risk) to 4 (lower risk) based on acuity of symptoms, weight loss and access to the centre.

In order to refine the NRPRS tool and establish baseline statistics, a retrospective chart audit (n=112) was conducted and two focus groups were held with cancer patients and caregivers. A prospective study model (n=179) was implemented to triage all new referrals using the NRPRS. The objectives of the study were to: (1) Identify existing wait times for nutrition counselling services (2) Make changes to the NRPRS to improve timely delivery of service to all patients (3) Identify patient nutrition education needs (4) Enhance fields in the workload entry system to efficiently collect data.

Two formats, an information session and a drop-in session, were offered and evaluated to address the education needs of Priority 4 patients.

The study found that 62% of the patients were rated priority 1 or 2 (required to be seen within 7 days) and 55% of patients lived up to 6 hours away from the RCP thus explaining the clinicians' challenges in meeting their heavy workloads.

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# Building Collaborative Research Partnerships to Improve Diabetes Care in Aboriginal Communities

## Principal Presenter

Marion Maar, PhD, Medical Anthropologist, Assistant Professor, Human Sciences Division, Northern Ontario School of Medicine

## Abstract

Poor health status and the need for culturally competent medical care are two of the many consequences of colonialization affecting Aboriginal communities today. Many chronic disease rates are much higher in Aboriginal communities compared with the broader Canadian population: On average, First Nations people develop type 2 diabetes at a younger age, diabetes rates are 3 to 5 times the national average and First Nations people have more serious diabetes related complications. In addition, Aboriginal communities are at a significant disadvantage with respect to access to health services and non-medical determinants of health, including labour force participation, employment and unemployment rates.

Chronic health problems such as diabetes have generally been explained as 'lifestyle' diseases in the past. However, recent research shows that a range of societal determinants of health including low income status, social exclusion and lack of access to effective health services contribute to the development of diabetes and related secondary complications.

First Nations health organization on Manitoulin Island are currently collaborating with NOSM faculty and mainstream health providers to document regional needs to improve diabetes prevention and diabetes care. This consultation is intended to be the starting point for the development of long-term research partnerships between First Nations communities and university-based researchers as well as the formation of a regional project steering committee.

Additional expected outcomes include the identification of diabetes care needs for Aboriginal patients and the identification of important social/societal determinants of health related to diabetes in Aboriginal patients. Information from this pilot will be used to leverage funding for a collaborative regional diabetes care research project and the development of a culturally competent, integrated model for diabetes care in Aboriginal communities.

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# Failure Pattern of Orthosphere Interpositional Arthroplasty for the Treatment of Thumb Carpometacarpal Joint Osteoarthritis

## Principa Presenter

T.J. Best, MD, MSc, Assistant Professor and Section Leader of Surgery (East), Northern Ontario School of Medicine

## Other Presenter

G. Elder, MD, Assistant Professor, Section of Surgery, Northern Ontario School of Medicine

## Abstract

**Purpose:** To report early clinical results of the Orthosphere interpositional arthroplasty (Wright Technology Inc, Arlington, TN) and the pathological findings in failed cases.

**Methods:** A retrospective review of six patients who underwent implantation of an orthosphere interposition between 2002-2004 was conducted. The indication for surgery was first carpometacarpal joint osteoarthritis non-responsive to conservative treatments. In cases where revision occurred, excised trapezial specimens were sent to a bone pathologist to determine a possible cause of implant failure.

**Results:** Four of 6 patients showed radiological evidence of significant subsidence (up to 8 mm) of the implant into the trapezium. Three of these underwent revision surgery (FCR interpositional arthroplasty) for recurrent pain and disability. The fourth remained symptom free with a good result at 1 year follow up despite subsidence of 7 mm, and the remaining two patients had good clinical results at a mean 18 months follow-up, although one showed a 2 mm radiolucent line around the implant but no subsidence. Pathology review of the three revised failures showed only compressive effects of the trapezial bony trabeculae with associated inflammatory reaction of synovial tissues. No third body wear particles were documented nor was there evidence of osteolysis.

**Conclusions:** Our early clinical results were a 50% failure rate within 30 months leading to revision surgery. Mode of failure based on review of pathological specimens appeared to be mechanical rather than material wear or infection. These results independently confirmed the disappointing outcomes reported by Athwal et al. for the Orthosphere interpositional arthroplasty. As such, routine use of this device for basal thumb osterarthritis cannot currently be recommended.

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## Problem Gambling in Methadone Maintained Opiate Dependence

### Principal Presenter

Simon Chiu, MD, PhD, FRCP, Associate Professor, University of Western Ontario, London, Ontario, Consultant psychiatrist, Forensic/Adult psychiatry program, Regional Mental Health care, St.Thomas, Ontario

### Other Presenters

John Copen, MD, FRCP, Assistant Professor, Northern Ontario School of Medicine, Thunder Bay, Ontario

G. Sadek, MD, FRCP, Medical Director, Methadone Clinic (Private), London, Ontario

Zack Cernovsky, PhD, Professor Psychiatry, University of Western Ontario, London, Ontario

### Abstract

**Background:** Recently, increased attention is drawn towards the substance use and psychiatric comorbidity of problem gambling. There is a paucity of studies on problem gambling in opiate dependence clients maintained on methadone.

**Objective:** In the present study, we examined the pattern of gambling: severity of gambling, craving, and consequences, and substance use and psychiatric comorbidity in a homogeneous cohort of opiate dependent subjects maintained on methadone (MD-opiate).

**Method:** We administered a battery of standardized questionnaires: SOGS (South Oaks Gambling Screen), DAST (Drug Abuse Screening Test), AUDIT (Alcohol Use Disorder Identification Test), SCL-90 (Symptom Check List), Fagerstrom Test for Nicotine Dependence (FTND) and Gambling and Substance use Urge Scale to the group of MD-opiate clients attending a certified methadone clinic in Ontario. Urine samples were taken for monitoring of methadone and substances of abuse.

**Results:** The prevalence of pathological gambling (defined by SOG score > 5) MD-opiate clients (n=60) attending the methadone clinic was statistically lower (5%) as compared with our earlier gambling study with dual diagnosis clients (15%) and other gambling studies (chi square  $p < 0.05$ ). Gambling urge paralleled the substance use urges MD-opiate pathological gamblers had more severe active psychiatric and substance use behaviour.

**Conclusion:** Our data indicate that methadone maintenance may offer protective effects against pathological gambling in attenuating impulsivity. The promising results warrant the design of a multi-site study of gambling in methadone maintenance and opiate dependence linking Southwest Ontario and Northern Ontario academic-health care Networks. We suggest that methadone program outcome can be enhanced by integrating gambling, substance use and psychiatric treatment modalities through service planning, fostering partnerships and collaboration and optimizing e-technology advances.

funded by Lawson Health Research Institute, London, Ontario

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# The More Things Change, The More They Stay the Same: Key Factors Influencing Choice of Practice Locations of Family Physicians at Four Different Career Points

## Principal Presenter

Denis Heng, Research Associate, Centre for Rural and Northern Health Research

## Other Presenter

Raymond W. Pong, Research Director, Centre for Rural and Northern Health Research

## Abstract

Where physicians choose to practice is a complex decision-making process that can be influenced by many factors. This paper examines how 19 factors were ranked in relation to their perceived importance in influencing the choice of practice location by residents and graduates of a rural/northern Ontario family medicine program. Using data collected between 2001 and 2005, our study examines inter- and intra-factor differences at four points of a physician's career. Two ways of asking this question were used: 1) Residents and graduates were asked to indicate the relative importance of different factors on influencing either their choice of future practice location; and 2) Residents and graduates were asked to indicate their top three factors of importance in influencing either their choice of future or current practice location.

In general, regardless of the way residents and graduates were asked about their perceived importance, factors such as Lifestyle of the community, Opportunity for a variety of medical experience, and Influence of spouse/partner ranked consistently near the top of the rankings of the 19 factors. The average ratings of the relative influence of all factors were generally highest for the Exit respondents and lowest for the 5-Year respondents. This study also identifies a number of factors whose influence is stable in their relative importance to influencing practice location over time, whereas other factors seem to be important only at certain points during a physician's career.

Recruitment and retention strategies geared towards increasing the number of physicians practising in Northern and rural areas of Ontario may be better informed with the knowledge of the importance that physicians attribute to certain factors when considering where they practise medicine.

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# Leaders of University Baccalaureate Nursing Programs Leadership Style: Perceptions of Faculty

## Principal Presenter

Wendy Malesh, Graduate Student - Candidate for Masters of Science in Nursing Degree, Laurentian University.

## Abstract

Leadership behavior and leader effectiveness are viewed as key organizational elements in the contemporary leadership literature, which is extensive. The most commonly described leadership styles include transformational, transactional, and passive/avoidant leadership. However, limited research has been done to examine leadership in nursing education. Hence, little is known about the leadership styles of nursing program leaders, how nursing leaders understand their leadership styles, how nursing leadership styles are perceived by nursing faculty, and contextual factors, such as the educational setting, that may influence leadership. Furthermore, the typical profile of the nursing education leaders lacks description.

This study seeks to describe the leadership styles of Ontario university baccalaureate nursing program leaders and the relationship of these styles to faculty perceived satisfaction, extra effort, and work unit effectiveness. Further, the relationship between the leadership styles and demographic data about the leader, faculty, and university will be described, as will the typical profile of these leaders. The descriptive non-experimental, correlational study is grounded in the "Full Range Leadership"(FRL) model, a trademark of Bass and Avolio (2004, p. 2). A cross-sectional survey design will be used. The survey will utilize the Multi-factor Leadership Questionnaire (MLQ) Form 5x-Short (Bass & Avolio, 1995) and three questionnaires to obtain leader, faculty, and university demographic data. Data collection will begin following ethical approval submitted for January 2006.

The findings from this research will be used in the formulation of a nursing education leadership best practice model that will support nursing education leaders to develop more effective leadership styles through reflection, feedback, support and counseling, role modeling, mentoring, and professional development. In addition, it is anticipated that curriculum for nursing leadership may be enhanced and that findings may be used by recruiters tasked with identifying effective future nursing education leaders. On a broader scope, the possibility exists for the findings to contribute to the development of leadership practice standards for nursing education executives.

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# Research Skills Development for Health Professionals: The Practice-Based Research Initiative

## Principal Presenter

Amanda Maranzan, Coordinator, Practice-Based Research, Health Sciences North/Northern Ontario school of Medicine

## Other Presenters

Sue Berry, Assistant Professor, Division of Clinical Sciences, NOSM

Dr. William Montelpare, Professor, School of Kinesiology, Lakehead University

## Abstract

The Practice-Based Research (PBR) Initiative was launched by Health Sciences North in the fall of 2003, with the goal of developing the critical thinking and research skills of health care professionals in Northwestern Ontario. In contrast to the traditional research model, the PBR model represents collaboration between the health care organization, academic institution, and health professional, bringing research out of the laboratory and into practice settings. The investigation of a clinical question by a health care professional, accomplished by the integration of research design and methodology into his/her practice setting, is the essence of PBR.

The PBR Initiative provides education, mentorship, collaborative opportunities, and research seed funding to novice health care researchers. Research teams are supported throughout the research process, from question definition and refinement, through data collection, to dissemination of results. There is also emphasis on the learning approach, accomplished through reflective learning exercises, integration of team learning concepts, and mentorship opportunities.

The PBR Initiative aims to increase the research skills of health care professionals. A program logic model was developed to aid in evaluation. This model examined program components, constraints, inputs, activities, outputs, and outcomes. Immediate outcomes such as increased knowledge and skills and team learning were evaluated, as were intermediate and long-term outcomes (such as increased presentation, manuscript submission, and publication of PBR; continued research involvement). The success of the PBR Initiative has continued into a second round of participants (in March 2006).

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## Virtual Office of Synthesis and Information (VOSI)

### Principal Presenter

Dr. Carmel M Martin, Associate Professor, Clinical Sciences, Northern Ontario School of Medicine

### Other Presenters

Dr. Margot Felix-Bortolotti, Ms Shelley Darling, Dr Sarah Strasser, Clinical Sciences, Northern Ontario School of Medicine

### Abstract

The VOSI project is an integral part of the province wide interdisciplinary Research Projects in Primary Health Care (PHC) transitions in Ontario.

**Aims:** To conduct a demonstration synthesis on interdisciplinary care literature that will inform current questions in Ontario related to new models of PHC organization - Family Health Teams. This will draw on the Primary Health Care Transition (PHCTF) major research and evaluation findings.

**Objectives:** The VOSI synthesis demonstration is formative process, being developed before the results of the PHCTF projects are published.

**Methods: Planning:** Outline initial questions—conceptual, theoretical, and operational-in a broad open format. Agree outputs with decision makers

**Collaboration:** Engage key stakeholders in refinement of questions; approaches, priority themes and their dimensions with key informants; Plan to validate approaches & findings.

**Search:** Initial search with goal of mapping perspectives and approaches with respect to question(s). Identify key conceptual papers. Evaluate these by the criteria of scholarship, and contribution to knowledge. Identify empirical papers, reports relevant to the question. Search all accessible Ontario PHCTF project material.

**Mapping:** Identify in consultation with stakeholders: key elements of the research; key actors; main findings and how derived; prevailing metaphors.

**Appraisal:** With appropriate techniques, appraise the scoped literature. Each study will be evaluated for relevance to the review question and for its validity and contribution. Extract, collate and group key results in key themes/dimensions.

**Synthesis:** Identify contributions to the questions. Develop plan for knowledge products.

**Progress: Planning and Collaboration:** Common questions identified so far from Ministry, Providers, Researchers and the National Evaluation Strategy Questions are:

How should the mix and number of providers on a multidisciplinary team reflect the needs of the community or practice population?

Research approaches, priority themes and their dimensions are being finalized with key informants and stakeholder consultation with a series of meetings including planned input from experts and intended audiences.

**Conclusion:** VOSI is leading an innovative 'participatory' approach to strategies/options for Ontario Primary Health Care Transition (PHCTF) research/evaluation synthesis and information.

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# Image-Guided Core Breast Biopsy: Implementing Guidelines into Community

## Principal Presenter

Dr Amanda Hey, Clinical Lead, Preventive Oncology and Screening, Regional Cancer Program, Hopital Regional de Sudbury Regional Hospital (RCP-HRSRH)

## Other Presenters

Carolyn Jackson, Regional Administrator, Ontario Breast Screening Program, RCP-HRSRH  
Merci Miron Black, Nurse Examiner, Ontario Breast Screening Program, RCP-HRSRH  
Denise Gauthier-Frohlick, Research Officer, Supportive Care Oncology Research Unit, RCP-HRSRH

## Abstract

The Clinical Practice Guideline (CPG) for the Care and Treatment of Breast Cancer recommends the preferential utilization of Image-Guided Core Breast Biopsy (IGCBB) in the evaluation of Bi-Rads 3 mammogram abnormalities prior to consideration of open biopsy. IGCBB can reduce both the time to diagnosis and the number of invasive open biopsies, while providing reliable pathology information to the surgeon to assist in planning if definitive cancer surgery is required. IGCBB had been underutilized at the Hopital Regional de Sudbury Regional Hospital Diagnostic Imaging Department (HRSRH-DI) for a variety of reasons including radiologist, imaging technologist and equipment shortages and the role of IGCBB not being clearly articulated to community physicians or patients.

A pilot project with family physicians in Elliott Lake was delivered between March and July 2005. The clinical pathway was redesigned to incorporate IGCBB. An educational forum with external opinion leaders and interdisciplinary breast health providers garnered support. Quality indicators based upon provincial standards were measured. The 'navigation' of patients by a project coordinator was carried out. At project completion, health care provider and patient surveys were conducted.

IGCBB patients in the redesigned clinical pathway had shorter wait-times to diagnosis (14-30 days, mean 26 days) compared to open biopsy (31-82 days; mean 60 days). Of the 42 patients with abnormal screening mammograms, nine required biopsy. Five were diagnosed by IGCBB, achieving the desired outcome of increased utilization of the procedure (12% achieved, 1.7% baseline, 10% target). Four patients were diagnosed by open biopsy, therefore also achieving the desired decreased utilization (9.5% achieved, 20% baseline, 6% target).

Despite concerns of demand vs. capacity for IGCBB at the HRSRH-DI, the increased numbers were accommodated. System redesign, education with the opportunity for feedback along the continuum of interdisciplinary healthcare providers, and informational support to patients, were all components that effectively fostered change.

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# The FOOTPAD Program: Foot Care Optimal Outcomes and Treatment for Patients in Algoma with Diabetes Program

## Principal Presenter

Dr. Sam Fratesi, Medical Advisor to the FOOTPAD Program, Vascular Surgeon, Algoma District Medical Group, Group Health Centre

## Abstract

Approximately two million persons in Canada have diabetes. It is estimated that 4-10% of those with diabetes will develop a foot ulcer. Northern Ontario's Algoma District has a high incidence and prevalence of diabetes and diabetes-associated complications such as limb amputation. Patients with these problems often succumb to complications such as heart attack and stroke.

Launched in June 2005, the FOOT PAD program is a comprehensive, practical and evidence-based program that delivers optimal foot care to patients with diabetes. Its uniqueness arises from the scope of its collaboration of providers and consumer groups, extent of interventions, and the evaluation feasibility of relevant clinical outcomes. FOOT PAD committee representatives are from Sault Area Hospital (SAH), Algoma Diabetes Education and Care (ADEC) Program, Group Health Centre (GHC), Algoma Foot Care Committee, including community nursing, foot care professionals and retail.

The FOOT PAD program resides at the Group Health Centre, a unique community-sponsored, not-for-profit, health facility serving 59,000+ patients. The GHC primary care registry of 3000+ patients with diabetes is the largest in Canada. Considered a community, provincial, and national leader in health promotion, patient care and research, the GHC model is an example of a different approach to service delivery that involves individuals in their own care, maximizes the scope of practice of our inter-disciplinary team, and uses leading-edge infrastructure and technology to help achieve better health outcomes.

Increasing awareness of the importance of foot care and regular examinations has shown to prevent amputations. On the other hand, in diabetes patients with established foot ulcers, judicious wound care as well control of smoking, blood pressure, hyperglycemia and use of certain medications decrease not only amputations but also complications such as strokes. Key components of the FOOT PAD program include an algorithm for diabetes foot care, a diagnostic assessment tool and standardized protocols.

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# Interdisciplinary Team Approach to Insulin Adjustment Benefits the Patient with Diabetes

## Principal Presenter

Cynthia MacKay, RD, CDE, Dept Head, Algoma Diabetes Education and Care (ADEC) Program, Group Health Centre

## Other Presenter

Dr. Pauline Bragaglia, Algoma District Medical Group, Group Health Centre

## Abstract

Current diabetes management focuses on optimal metabolic control. Achieving best possible glycemic control requires active participation of the person with diabetes in making adjustments to their meal plan, exercise/physical activity routine, and insulin doses.

The Group Health Centre (GHC) and Algoma Diabetes Education and Care (ADEC) Program has been using medical directives in diabetes management for the past 2.5 years. A medical directive is a written order for a drug/intervention/test/procedure that applies to a range of clients when specific conditions are met and specific circumstances exist. Medical directives being used for insulin dose adjustments, as outlined in the *ADEC Diabetes Medication Adjustment Policies and Guidelines Manual*, clarify the parameters of the insulin adjustment, patient eligibility criteria, and the specific required conditions. The established policies, procedures, and guidelines, together with the medical directive, act as the vital communication within our treatment team.

The diabetes nurse and dietitian educator, each certified in insulin dose adjustment, teach and assist patients to safely and competently adjust their insulin doses to achieve the best possible glycemic control. The nurse/dietitian educator's ability to adjust insulin is a considerable asset to both the patient and referring physician.

Data regarding the directive is collected from GHC's electronic medical record (EMR). The group examined were those on multiple daily injection insulin regimen. Factors examined include metabolic control, patient and physician satisfaction, and patient knowledge, skill acquisition and motivation to carry out self-care practices.

Medical directive use has resulted in lower A1c values, an improvement of more than 1%. Physicians are satisfied, responding that medical directives are effective and lessen their workload. Patients reported increased confidence to self-manage with 100% satisfaction.

The late Dr. Hui Lee was instrumental in promoting the use of medical directives and a team approach for diabetes management.

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# The Health Promotion Initiative in Diabetes (HPID) Outcomes Management Program at the Group Health Centre: A 5-year Experience Demonstrating Improved Outcomes That Have Been Sustained

## Principal Presenter

Dr. Pauline Bragaglia, Algoma District Medical Group, Group Health Centre

## Other Presenter

Cynthia MacKay, RD, CDE, Dept Head, Algoma Diabetes Education and Care (ADEC) Program, Group Health Centre

## Abstract

The Health Promotion Initiative in Diabetes (HPID) program (now the Algoma Diabetes Education and Care (ADEC) Program), at Group Health Centre (GHC) was featured as one of five Programs of Excellence by the National Health Council of Canada in their 2005 video and report. Originated by the late Dr. Hui Lee in 1998, the Program focuses on application of evidence based guidelines for individuals with Type 1 and Type 2 diabetes. GHC has the largest primary care registry of patients with diabetes in Canada (3,400+ patients).

Integrated care is provided by GHC's interdisciplinary team composed of primary care providers (37 family physicians and 8 nurse practitioners), specialists, dietitians, nurse educators, chiropodists and optometrists.

The aim is to maintain good health outcomes, reducing diabetes complications such as heart disease, stroke, blindness, amputation, and kidney failure. Using an interdisciplinary approach and an electronic medical record, a unique HPID template has been developed for each ambulatory non-pregnant person with diabetes greater than 18 years of age. Coordinated by the ADEC team, health promotion interventions are captured as "Good Health Outcomes In Diabetes" (GHOD) scores and made available to the primary provider.

Since 2000, a GHOD score has been maintained for each diabetes patient, resulting in improved evidence based outcomes and an overall cumulative 55% improvement from baseline. The 2005 results show further improvement in the GHOD score, particularly in blood pressure and A1c outcomes. These results demonstrate that a community based, dedicated outcomes management program that uses evidence based promotions and interventions can optimize the process of care and is sustainable. The ADEC Program can be duplicated elsewhere to assist patients and providers manage diabetes care.

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# **Poster Presentations**

# Evaluating the Use of Initial Screening for Depression for Persons with Diabetes

## Principal Presenter

Paul Apostolon, RSW, Dept Head, Counselling, Group Health Centre

## Other Presenter

Cynthia MacKay, RD, CDE, Dept Head, Algoma Diabetes Education and Care (ADEC) Program, Group Health Centre

## Abstract

Depression affects 15 – 30% of people with diabetes, double the rate of depression in the general population. Diabetes and depression appear to have a synergistic exacerbative effect. The whole patient requires care to successfully manage this chronic disease. Early screening and a detection process that identifies depression within this patient group are imperative to assisting the diabetes educator with reducing stress, anxiety and emotional distress. Tending to the psychological and emotional health of people with diabetes can improve self-care and quality of life. Incorporating routine screening into diabetes care is an evidence-based recommendation in the 2003 Clinical Practice Guidelines.

The Group Health Centre (GHC) Counselling Department began providing onsite service for the Algoma Diabetes Education and Care (ADEC) Program in January 2004. Services include an initial group session, individual assessment, stress management and relaxation classes. An early screening and detection process for depression was initiated in May 2005.

A simple two-question screening tool for diagnosing depression is used by the ADEC team. The tool provides a structured and early identification process to assist with identifying depression, better monitoring, and encouraging earlier treatment for patients with diabetes.

Data shows that 27.5% of 200 patients with diabetes who attended an initial group session indicated positive for presenting with depression. Metabolic control data will be presented at the NOSM Conference.

GHC is a multi-specialty, interdisciplinary ambulatory care facility with diagnostic services and electronic medical records. With 59,000+ registered patients, it is considered a community leader in health promotion, patient care and research. The GHC model exemplifies a different approach to service delivery, involving individuals in their own care, maximizing the scope of practice of our inter-disciplinary team, and using leading-edge infrastructure and technology to help achieve better health outcomes. GHC has the largest primary care registry of patients with diabetes (3,400+) in Canada.

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# Sepsis Mediated Cellular Dysfunction is Mediated by DFF40/CAD Induced Apoptosis

## Principal Presenter

Danielle Brabant, Ph.D. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Programme, Laurentian University

## Other Presenters

Paul Michael, Research Associate, Department of Chemistry and Biochemistry and the Biomolecular Sciences Programme, Laurentian University

Students, Department of Chemistry and Biochemistry and the Biomolecular Sciences Programme, Laurentian University : Marija Tonnos, M.Sc.; Marisa Tessier, M.Sc.; ShuHung Kung, M.Sc.; Tyler Kirwan, B.Sc.; Viktoria Kekkonen, B.Sc.

Chilakamarti V. Ramana, Faculty, Department of Medicine, Yale University

Joseph E. Parrillo, Director, Division of Cardiovascular Disease and Critical Care Medicine, Cooper University Hospital, Robert Wood Johnson Medical School

Anand Kumar, Faculty, Division of Cardiovascular Disease and Critical Care Medicine, Cooper University Hospital, Robert Wood Johnson Medical School and Section of Critical Care Medicine, Winnipeg, University of Manitoba

Aseem Kumar, Canada Research Chair, Department of Chemistry and Biochemistry and the Biomolecular Sciences Programme, Laurentian University

## Abstract

Sepsis is the systemic response to infection and can progress to severe sepsis and septic shock. Sepsis and septic shock are the leading causes of death in intensive care units in the developed world. Approximately 800,000 people are affected with sepsis every year in the United States, and 200,000 patients will succumb to the disease. Sepsis is initiated by the presence of microbes or its components which elicits a complex signalling cascade. Consequently, there is a misregulation of proinflammatory, iNOS, cell adhesion and apoptotic responses. The host response may lead to cellular damage and eventually to multiple organ dysfunction (MOD) and death. Despite the use of anti-inflammatory therapies aimed at treating the disease, there is still an increase in death rate. Hence, studies have been initiated to better understand the pathophysiological mechanism(s) involved in mediating sepsis. It has been postulated that apoptosis may play a vital role in the development of MOD associated with sepsis. We have developed a tissue culture model of sepsis which mimics the human disease. In this model we add serum derived from sepsis patients (septic serum) to a human fibroblast cell line. We have shown that septic serum treatment of human fibroblasts initiates the caspase cascade pathway and induces apoptosis. Addition of septic serum to human fibroblasts cells induced apoptosis by triggering the initiator caspase 8, the effector caspase 3 and the caspase activated DNase (DFF40/CAD). Further, we have shown that septic serum addition to human fibroblasts induces genomic DNA laddering and cell death. These data suggest that modulators of apoptosis during sepsis may provide novel therapeutics.

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## Vascular Intervention Program (VIP) Project

### Principal Presenter

Dr. David Crookston, Lead Physician, Health Promotion Initiatives Team, Group Health Centre

### Abstract

#### Introduction:

Cardiovascular disease is the primary cause of mortality in Northern Ontario. The INTERHEART Study demonstrated that nine modifiable risk factors predict over 95% of the risk of a myocardial infarction.

#### Setting:

A community-based multidisciplinary health service organization serving 59,000 rostered patients, and independent family physicians' offices in Sault Ste. Marie, Ontario.

#### Participants:

647 ambulatory adults, in the district of Algoma, Ontario, referred by their family physicians or self-referred.

#### Intervention:

Participants were stratified into low, medium, and high risk groups based on questionnaires, clinical evaluation, and history of diabetes or vascular disease. Low risk individuals (Framingham Risk Score under 12%) received usual care and were evaluated at the beginning and end of the study. Those at moderate to high risk were randomized to intervention or standard care. Intervention patients were provided with an ACTION (Assessment of Cardiovascular Treatable Intervention and Outcome Nomogram) score. The risk factors were family history, diabetes, hypertension, smoking, LDL, nutrition, abdominal girth, activity level, physiologic age, and psychosocial stress.

Intervention patients chose which risk factors to modify, received detailed individual counselling, as well as referral, as appropriate, for further nutritional, psychological, and smoking cessation counselling, and a structured exercise program. The study nurse evaluated randomized patients every 6 months for up to 18 months. Information, with consent, was shared with patients' family physicians and pharmacists to promote interdisciplinary collaboration.

#### Results:

Outcomes being evaluated are reduction in risk score, increased patients decision making, increased provider collaboration, and appropriate use of cardioprotective medications. The study will be completed in July 2006.

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# The Falls, Fracture and Osteoporosis Risk Control and Evaluation (FORCE) Study

## Principal Presenters

Sharon Cuddy, Manager, Clinical Research Department, Group Health Centre  
Maureen Cassavia, RN, Clinical Research Department, Group Health Centre

## Other Presenter

Dr. P. Ciaschini, Algoma District Medical Group, Group Health Centre

## Abstract

Falls and osteoporosis-related fractures cause substantial morbidity and mortality in the elderly and are an increasing public health concern. In 2005, the Ontario government launched the province's first osteoporosis strategy to help prevent the disease through education and early diagnosis.

The FORCE Study, spear-headed in 2001 by the late Dr. Hui Lee, has a comprehensive, community-based approach to identify and manage the population at highest risk. The 3-year randomized controlled trial evaluates the effect of a coordinated, interdisciplinary approach for fall and fracture prevention. The study team, a broad group of interested consumers, stakeholders and providers, examines the barriers and possible solutions to the successful implementation of such an integrated approach.

Two hundred community-dwelling adults over the age of 55 were recruited from high-risk groups and randomized into two streams. An economic substudy examined the disease's financial burden on the patient, family, and health care system. A coordinator assessed and managed osteoporosis and fall risk according to a protocol of evidence-based interventions.

This presentation highlights leadership in implementation of an evidence-based, integrated protocol across a broad range of existing health care and community agencies in a northern Ontario community. Development of effective partnerships in research and advancing evidence-based knowledge into practice will be demonstrated. Results will support the provincial strategy and help move evidence into practice and provide suggestions for improved, coordinated care for falls and fracture prevention.

GHC is a multi-specialty, interdisciplinary ambulatory care facility with diagnostic services and electronic medical records. With 59,000+ registered patients, it is considered a community leader in health promotion, patient care and research. The GHC model exemplifies a different approach to service delivery, involving individuals in their own care, maximizing the scope of practice of our inter-disciplinary team, and using leading-edge infrastructure and technology to help achieve better health outcomes.

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# Strategies for the Development of Knowledge to Inform Decisions in a Complex Health Care Environment

## Principal Presenter

Shelley Darling, BHSci, MHA (candidate), Research Assistant, Virtual Office of Informatin & Synthesis, Northern Ontario School of Medicine

## Other Presenters

Carmel Martin, MD, PhD, Project Lead, Virtual Office of Informatin & Synthesis, Northern Ontario School of Medicine

Margot Felix, PhD, Research Associate, Virtual Office of Informatin & Synthesis, Northern Ontario School of Medicine

## Abstract

**Aims:** To identify strategies for assembling and synthesizing information for use in policy and organizational decision making in a health care system in a realistic time frame.

**Objectives:** To review the literature on the development of evidence and knowledge to inform decisions in a complex health care environment, based upon questions that do not have readily available evidence.

**Context:** Despite extensive Primary Health Care reform research in Ontario, policy questions about system transition emerge, that are only indirectly related to existing research findings.

**Rationale:** As health care organizations expand and network, the challenges of processing of large quantities of information and finding applicable knowledge become more apparent.

Decisions made in the health care environment directly affect communities, and policy directions can directly shape populations.

**Methodology:** This paper began with planning and collaborating with decision makers, other researchers and key informants. A search was conducted that included identifying key papers, snowballing from leading literature, and internet and database searches. A mapping exercise and thematic analysis was then conducted, followed by appraisal of the existing knowledge. The final step of this iterative approach was a synthesis.

**Results & Discussion:** In order for policy makers and administrators to get sufficient knowledge to aid in decision making, it is paramount that the right questions are asked.

Clarifying questions requires an interactive consultation process. In order to manage the quantity, relevancy, and utility of mass amounts of information, a number of strategies have been adopted to assist, including systemic or scoping reviews, conceptual frameworks, and realist synthesis. Detailed search and reviewing must occur to determine the status and quality of information. Influences in the external environment must also be taken into consideration. Finally, decisions must be made, almost certainly with imperfect or incomplete knowledge.

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# Characterization of Bacterial and Viral Nucleic Acid Induced Signal Transduction Pathways that Cause Cellular Dysfunction

## Principal Presenter

ShuHung Kung, M.Sc. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

## Other Presenters

Paul Michael, Research Associate, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

Marija Tonnos, M.Sc. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

Marisa Tessier, M.Sc. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

Danielle Brabant, Ph.D. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

Tyler Kirwan, B.Sc. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

Viktoria Kekkonen, B.Sc. Student, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

Chilakamarti V. Ramana, Faculty, Department of Medicine, Yale University

Joseph E. Parrillo, Director, Division of Cardiovascular Disease and Critical Care Medicine, Cooper University Hospital, Robert Wood Johnson Medical School

Anand Kumar, Faculty, Division of Cardiovascular Disease and Critical Care Medicine, Cooper University Hospital, Robert Wood Johnson Medical School and Section of Critical Care Medicine, Winnipeg, University of Manitoba

Aseem Kumar, Canada Research Chair, Department of Chemistry and Biochemistry and the Biomolecular Sciences Program, Laurentian University

## Abstract

Sepsis and septic shock represent the systemic immunologic and pathophysiologic response to overwhelming infection. Septic deaths are typically due to early refractory cardiovascular failure (hypotension or shock) or later multiple organ failure. Septic shock is characterized by cellular dysfunction including cardiac myocyte contraction depression. Bacteria known to cause septic shock and induce myocyte contraction depression include, *E. coli* and *S. aureus*. Classically, cellular dysfunction was thought to be dependent on bacterial exotoxins such as Toxic Shock Syndrome Toxin-1 and/or bacterial endotoxin (lipopolysaccharide). Viruses such as enterovirus are known to cause myocarditis and induce a potent myocyte contraction depression, the mechanism(s) of virus induced myocyte contraction depression is not known. In this research proposal we hypothesize that myocyte cellular dysfunction is partially mediated by bacterial RNA and viral RNA. Our data indicate that bacterial RNA and viral RNA utilize the protein kinase RNA-dependent (PKR) to induce cardiac myocyte contraction depression. Using in vitro cellular and molecular biology strategies, our research will delineate the bacterial RNA and viral RNA induced signal transduction pathways that lead to cellular dysfunction.

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# **Chronic condition care in Primary Health Care (PHC) renewal: A framework for understanding care seeking and access for disadvantaged groups**

## **Principal Presenter**

Dr Carmel M Martin, Associate Professor, Clinical Sciences, Northern Ontario School of Medicine

## **Abstract**

**Aims:** To conduct a scoping literature review to inform policy, clinical and research decision making on best practices with regard to access to chronic condition care – care seeking and care provision – for disadvantaged groups in rural and remote primary health care (PHC) populations.

**Background:** Access to PHC requires a system responsive to care seeking, with disadvantaged groups often requiring different health care arrangements.

**Objectives:** To develop a generic evidence-based framework to address the needs of disadvantaged rural and remote peoples in seeking chronic condition care - across the spectrum from prevention to illness and dying.

**Methods:** Participatory evidence-based literature synthesis. Through consultation with the intended users and stakeholders, the study will summarize the overall key narratives of different types of evidence, map synergistic and opposing influences in care systems and distil policy and research recommendations.

**Findings:** A working framework for scoping 'Access – care seeking and care provision' identified that key themes relate to the “symmetry between the system and user needs. Care provision, which is the focus of most of the accessibility activities and literature, must accommodate care seeking through mutuality, responsiveness, respect and in some cases going beyond provider, manager and policy maker scopes of knowledge.

**Discussion:** Theoretical and methodological challenges exist in documenting and understanding care seeking, as an essential component of PHC accessibility. This area is inherently complex and non-linear requiring multiple types of evidence. It has received little attention in research and policy activities.

**Conclusion:** This paper makes sense of the complexity of chronic care provision by assembling key components of a care seeking and service availability framework for disadvantaged groups. The framework provides a basis for the ongoing literature synthesis to inform policy and practice.

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# Beating Heart Coronary Bypass: Rural Northern Ontario Experience

## Principal Presenter

Avdesh N Mathur M.S. (Surg.), FRCS (C), Assistant Professor, NOSM and Sudbury Regional Hospital

## Abstract

**Objective:** To examine factors relating to outcomes with beating heart off-pump coronary bypass (OPCAB) and to assess methods to improve the effectiveness of this approach.

**Setting:** A small rural northern Ontario community hospital where surgical assistance, nursing familiarity with OPCAB and even anesthesiologist comfort varied.

**Design:** Prospective collection of data with incremental audit of results and retrospective analysis of events.

**Methods:** One hundred twenty-four consecutive patients, operated on by the same surgeon between April 1996 and June 2002, were selected on the basis of coronary anatomy. Progressively more complex multi-vessel revascularization, including that to the posterior wall, was undertaken over the course of the study period. Every attempt was made not to compromise use of arterial conduits, quality of anastomoses or completeness of revascularization. This represents the ‘learning curve’ of this study. Follow up for up to 10 yrs. (Feb. 06) was 99%.

**Main Results:** Approximately 6% of patients developed a haemodynamic crisis requiring acute on-pump conversion. This tended to occur in patients undergoing complex multi-vessel OPCAB surgery and was associated with subsequent increased blood transfusion rate, operative time and mortality (2.8%), and poorer angiographic graft patency. This has led to a more cautious strategy including making the decision to proceed with OPCAB only after intraoperative assessment.

**Conclusion:** ‘Simple’ OPCAB on easily accessible coronary arteries resulted in excellent early outcomes. Complex multi-vessel OPCAB for triple vessel disease involving difficult to access arteries was more demanding with higher peri-operative complications and less effectiveness. Early enthusiasm for complex multi-vessel surgery has been gradually replaced with a more conservative use of OPCAB with improved intraoperative procedures, both of which have led to more favorable outcomes.

**Key Words:** Coronary heart disease; Off-cardiopulmonary bypass; Surgery. Beating heart.

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# The Use of Rating Scales by Canadian Psychiatrists: Qualitative and Quantitative Evidence

## Principal Presenter

Dr. Oloruntoba Oluboka, Director, CREU, North East Mental Health Centre

## Other Presenters

Dr. Sandra Stewart, Psychologist, North East Mental Health Centre

Dr. Susan Adams, Psychiatrist-in-Chief, North East Mental Health Centre

Dr. David Haslam, The University of Western Ontario

## Abstract

The purpose of this study was to provide qualitative and quantitative evidence regarding the use of rating scales in general psychiatry practice. As the field moves increasingly to evidence based practice and the specific quantified measurement of patient outcomes, we felt that it was important to gain a current understanding of how clinician's incorporate this requirement into their day-to-day practice. Twenty-five percent of practicing Canadian psychiatrists were randomly selected to participate in the survey. Several questions pertaining to the use of rating scales, such as the amount of prior formal training on rating scale use, context regarding utilization of rating scales and the relevance of rating scales to general psychiatric practice issues were included. Results suggest that the majority of respondents do not use rating scales during the course of patient treatment. Over half of all respondents indicated that they had received no formal training on the use of rating scales. However, considerable interest exists with respect to practitioners incorporating these tools into a comprehensive clinical management strategy. The results of this study suggest that most respondents are willing to incorporate rating scales into their general practice, suggesting that patient outcomes are not currently being systematically measured using rating scales.

## Learning Objectives:

1. Apply the use of rating scales in the clinical management of psychiatric patients.
2. Identify the relevance of rating scale(s) as an outcome measure.

## References:

1. Gilbody, S., House, A. and Sheldon, T. (2002) Psychiatrists in the UK do not use outcome measures. *British Journal of Psychiatry*, 180, 101-103.
2. Slade, M., Thornicroft, G. and Glover, G.S.O. (1999) The feasibility of routine outcome measures in mental health. *Social Psychiatry and Psychiatric Epidemiology*, 34, 243-249.

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# Findings from the 2005 First Nations Student Drug Use Survey

## Principal Presenter

Michelle Ott, Project Consultant Centre for Addiction and Mental Health

## Other Presenter

Dr. Val Mann, Director of Planning and Evaluation, Northwestern health Unit

## Abstract

Objective:

The Centre for Addiction and Mental Health's (CAMH) Ontario Student Drug Use Survey (OSDUS) is the longest ongoing bi-annual school survey in Canada; however, it has never surveyed students in schools on First Nation communities.

Organizations in Kenora identified the lack of health and substance abuse information to be barriers in the delivery of mental health and addiction services to youth on First Nation communities.

With funding secured through CAMH's Community Research Capacity Enhancement Program (CRCEO), community partners conducted the First Nations Student Drug Use Survey.

Methods:

This pilot project involved a shorter, culturally appropriate version of the OSDUS. Students (117) from grades 7 through 12 were questioned on substance use, gambling behaviour, emotional health, demographics, and other social determinants of health. Results were compared to the 2005 OSDUS northern sub-analysis (Adlaf & Paglia-Boak, 2005) with differences considered significant if the percentage lay outside the 95% confidence interval of the OSDUS estimate.

Some of the challenges the team faced were:

- Requiring permission to be on Reserves
- Requiring permission from Band Councils, school principals and Aboriginal Child and Family Services to conduct survey
- Language barriers - obtaining consent by going door to door in each community with the interpreter and describing the project to each parent/guardian.
- Distance to each community resulted in a multiple hour drive on poor roads

Results:

Past year use of alcohol among First Nations students is lower compared to northern Ontario students (52.6% vs. 69.0%). Cigarette smoking (50.9%) and cannabis use (58.3%) rates are significantly higher among First Nations students when compared to northern Ontario students (19.9% and 33.0%, respectively).

Conclusions:

Findings from these schools will be of great interest to other researchers, teachers and health care providers who have an interest in the unique challenges faced by Anishinaabe youth.

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# **COMMUNITY: Improving Quality of Life and Creating a Community Culture of Excellence**

## **Principal Presenter**

Jody Rebek, Executive Director, Communities Quality Improvement (CQI)

## **Other Presenter**

Susan Boston, Algoma Health Unit

## **Abstract**

CQI evolved from the Building an Extraordinary Community (BEC) project which began in 1998. This initiative developed a vision for the community . A pilot project with the National Quality Institute (NQI) was initiated to determine how a "Community of Excellence" could be achieved. CQI was established in April 2003 as a non-profit organization.

Mandate: CQI is a catalyst to support organizational and community pursuits towards quality and to measure community performance to work towards establishing an improved quality of life;

Vision: A quality community for all people; and

Values: Teamwork, Integrity, Respect, Fairness.

## commUNITY Performance

Progress towards achieving the Community of Excellence award is ongoing. CQI is currently developing a CQI/NQI proposal for a Northern Ontario partnership with CQI acting as the NQI satellite office.

The Community of Excellence award is tied in with the Community Performance report. CQI is working in partnership with the Determinants of Health committee, Canada Research Chair: Sustainable Communities and Algoma University College Community Economic and Social Development Community Resilience Project of Sault Ste. Marie to collaborate efforts relating to community indicator development. Community Performance Indicators have been established with a a Participatory Action Research process for community improvement.

CQI is on the verge of exciting changes for 2006 – all thanks to the ongoing support of our Municipal, Provincial and Federal partners and Quality Circle members. These include the NQI partnership, EMC partnership, Community Plan to create a Knowledge Network and Community Portal and the Community Improvement Symposiums.

*Conflict: Funding resources for CQI include Quality Circle members (private and public sector) as well as FedNor. Algoma University College is a Quality Circle member of CQI*

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# Getting a Grip on Arthritis: a Community-based Educational Intervention for the Diagnosis/Management of Arthritis

## Principal Presenter

Sheila Renton, Occupational Therapist, Ontario Coordinator, Getting a Grip on Arthritis, The Arthritis Society

## Other Presenters

Sydney Lineker, The Arthritis Society

Jennifer Boyle, Arthritis Community Research and Evaluation Unit

Mary Bell, Sunnybrook and Women's College Health Sciences Centre

Elizabeth Badley, Arthritis Community Research and Evaluation Unit

Funded by Health Canada's Primary Health Care Transition Fund

## Abstract

**PURPOSE:** The Getting a Grip on Arthritis (Grip) educational intervention was developed to build the capacity of primary health care providers to manage arthritis through the dissemination and local implementation of practice guidelines. **RELEVANCE:** Based on Social Cognitive Theory and the Ottawa Model of Research Use, the Grip program includes methods known to influence providers' use of arthritis best practices. **DESCRIPTION:** This program was designed by a taskforce of primary health care providers, adults with arthritis, researchers, and government representatives. The content was developed around arthritis best practices, adapted from published guidelines. The intervention consisted of an accredited educational workshop for teams of primary health care providers, presented by multidisciplinary faculty. Reinforcement activities, including patient and provider 'toolkits', posters, newsletters, community resource lists, goal reminders, reflective practice exercise, and donation of books/videos to participating sites and local libraries, were provided to support the adoption of best practice behaviour. **OBSERVATION/DISCUSSION:** 221 primary health care facilities volunteered to participate in the program and 942 providers attended one of thirty workshops across Canada. In Ontario, five workshops were conducted with physicians and other health care providers from Family Health and Primary Care Networks, Community Health Centres, hospitals, community-based agencies and fee-for-service environments. Participating sites included two Northern Ontario Family Health Networks. Challenges in workshop delivery included the mixed needs of participants, scope of practice issues, the varied skill sets of the faculty, and the volume of material covered in a short time frame. Strengths included team learning, the use of local faculty, and the involvement of patients with arthritis in the workshop. **CONCLUSIONS:** Dissemination of arthritis clinical practice guidelines is a complex process. This multifaceted and theory based approach was successful in recruiting primary health care facilities and their providers. Challenges and strengths were identified at the individual, regulatory and intervention level.

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## "The Attending's New Clothes" (Or: The Emperor Hears the Heart Sounds)

### Principal Presenter

Andrew Robinson, MD, FRCPC, Hopital Regional Sudbury Regional Hospital Cancer Care

### Abstract

#### Background:

During medical training, the teaching and evaluation of clinical skills, can be difficult. One time-honoured method of teaching occurs at the bedside, often on patient rounds. Often, the attending may hear a unique physical finding, such as a 3rd or 4th heart sound. The attending then proceeds to direct the learner to listen, to see if they too can hear the sound. What is unclear is whether when students and interns report hearing heart sounds, whether they are being accurate or not.

#### Methods:

An anonymous survey of internal medicine residents who were graduates of a Canadian Medical School at an academic half-day in a tertiary care centre was undertaken. Questions were first assessed for face validity with one medical housestaff team. Residents were given ample time to complete this survey. The questions were yes/no, or for questions which required grading a 5 point Likert scale was used.

#### Results:

A total of 40 surveys were distributed, with a return of 25 (63% response rate). Of the respondents, 18/25 (72%) reported the experience where they reported hearing a heart sound that they in truth could not appreciate. The majority of these (88%, or 16 of 18) did so during clerkship, while 8/12 (66%) did so during their first year of residency. The most common reasons cited were "Fear of Wasting Time" (55%), and "Fear of looking incompetent (50%), other reasons, such as the "desire for a good evaluation" (22%) were cited less frequently.

#### Conclusions:

Verbal self-reporting of physical exam skill acquisition in the setting of group learning in medical training can be subject to errors. The proper acquisition of clinical skills needs to be done with sensitivity to students concerns regarding 'wasting others time', and 'looking incompetent'. Students need to be aware that evaluation and instruction can be separated in time.

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## **Towards Nutrition Screening in Canadian Preschoolers**

### **Principal Presenter**

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### **Other Presenters**

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### **Abstract**

NutriSTEP (Nutrition Screening Tool for Every Preschooler) is a national, multiphase, intersectoral project to develop and validate a nutrition screening index and develop "best practices" for implementing community screening. This presentation is an overview of the process undertaken by researchers from the Sudbury & District Health Unit and the University of Guelph along with numerous partners at the local, provincial and national level. It will highlight the key considerations in capacity building and community screening.

Data have been collected in English and French over a six-year period from ethnically diverse (including First Nations) parent focus groups across Ontario (n=370) and key intercept interviews with parents from four provinces (n=900) as well as other key informants (n=35). The qualitative data collected was used to determine the appropriateness of index content and feasibility issues in screening.

Based on recommendations from focus groups and key intercept interviews, a final draft of NutriSTEP underwent validation and reliability testing from May 2005 til February 2006. Validity testing consisted of 300 in-depth nutritional assessments in English and French with multi-ethnic parents and their preschoolers (n=300) from more than seven Ontario communities with test retest reliability with another 150 parents from five Ontario communities. Currently, this data is being analysed with a goal of a valid and reliable screening tool in September 2006.

Key informants have identified the need for accessible turn-key solutions to NutriSTEP with infrastructure support and capacity for ethical follow-up. Once validated, NutriSTEP will be appropriate for all Canadian preschool children. It will be a fast and simple way to assess eating habits, identify nutrition problems, and appropriately direct to the community nutrition resources. These data can be used to plan effective public health programs and propose areas for further research and practice including nutrition education and effectiveness interventions.

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# Knowledge Translation Needs of Primary Health Care Researchers in Ontario. A Stakeholder Consultation

## Principal Presenters

Dr. Sarah Strasser and Ms Shelley Darling, Project Team, Virtual Office of Synthesis and Information, Clinical Sciences, Northern Ontario School of Medicine

## Other Presenters

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## Abstract

**Aims:** To evaluate current needs for access to knowledge synthesis and translation resources and infrastructure in relation to Primary Health Care research in Ontario.

**Background:** Primary Health Care is rapidly becoming acknowledged as the cornerstone of the Canadian Health System. The province of Ontario is in the process of identifying a strategy for future Primary Health Care (PHC) research and evaluation synthesis and information. This will be built on findings and experiences in relation to the Primary Health Care Transition Fund (PHCTF)

**Objectives:** A stakeholder consultation, of PHC evaluators and researchers in Ontario, to assess existing capacity and resources, in order to synthesize and disseminate research and evaluation.

**Methods:** A brief survey was faxed or sent electronically to all principal researchers funded by the PHCTF in Ontario. This was extended to other Ontario PHC researchers, providers and organizational representatives. Sampling continued until a broad representation of opinions of researchers from key PHC disciplines – physicians, nursing, pharmacy and allied health - and different levels of experience was achieved.

**Findings:** Survey respondents numbered 73, 28% response rate (50% of those who opened their email) with broad disciplinary representation. Experience varied from 10% >20 years to 35% <5 years of PHC research. Despite broad sampling, the majority came from urban academic or university backgrounds. Target audiences for the research were reported to be mainly decision-makers from policy, front line health care and administration. The predominant methods of knowledge translation reported were through peer-review journals and discussion forums/conferences, with a lesser emphasis on targeted stakeholder briefings.

**Discussion:** A consultation with PHC researchers in Ontario identified an emphasis on traditional academic knowledge exchange despite the need to reach the intended audiences for their research.

**Conclusions:** A strategy for future Primary Health Care (PHC) research and evaluation needs to emphasize mechanisms for knowledge exchange between researchers and their intended decision-maker audiences.

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# Characterization of Gene Expression Profiles that Occur During Sepsis

## Principal Presenter

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## Abstract

**Introduction:** Complex gene expression patterns are initiated during sepsis and the expression of key genes important in the cellular pathophysiology of sepsis may remain unidentified given the previously available technology. We propose to broadly identify cardiac gene expression patterns during sepsis using DNA gene array technology.

**Methods:** Human cardiac myocytes were incubated for 12 hours with 10% human septic serum and 10% serum from the same patient in recovery phase. mRNA was harvested from both samples and radiolabeled cDNA probes were generated. Radiolabeled cDNA was used to probe genes on the Clontech 588 Atlas 1 gene array containing the sequences of 588 key human genes.

**Results:** Genes that were upregulated with human septic serum treatment include: The cytokines IL-1, IL-2, IL-8, IL-10; the cell adhesion gene ICAM; the apoptotic gene ICH-2; the stress activated kinases Map kinase and MACMARKS; the chemotaxis gene monocyte chemotactic protein 1. Genes that were down regulated include: the heat shock protein HSP 70; the proliferation associated gene PAG; the regulator of cell-cycle gene cyclin D1. The control housekeeping gene ribosomal protein S9 was not modulated with septic serum treatment.

**Conclusion:** Our data indicate that septic serum signalling is diverse and complex with upregulation of a variety of genes including cytokines, cell adhesion, apoptotic genes and down regulation of growth associated genes. Our preliminary data also implicates genes that were previously not associated with the sepsis disease process and include specific map kinases and the DNA repair enzyme excision repair protein. This complexity in gene regulation provides clues as to why single drug therapies have been ineffective in treating sepsis. By identifying the gene expression patterns that occur during sepsis, we will be able to develop more informed therapeutic strategies.

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