

2015 NORTHERN HEALTH RESEARCH CONFERENCE

JUNE 4-6, 2015
TIMMINS, ONTARIO

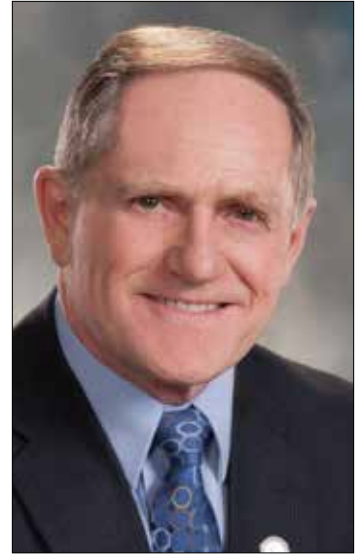


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A Message from Northern College

On behalf of Northern College, I would like to welcome all delegates and attendees of the 10th annual Northern Health Research Conference to our Timmins Campus and our vibrant Timmins community.



Fred Gibbons



Message from the MP and MPP



Charlie Angus, MP

Improving access and delivery of health care is a key priority for Northern Ontario.



Gilles Bisson, MPP

As Member of Provincial Parliament for Timmins-James Bay, one of my constituents' greatest concerns is access to better health care in the North. Too often they feel isolated by the lack of access to health-care services in our region.

A Message from the Mayor of Timmins

Congratulations to Northern Ontario School of Medicine for hosting their 10th annual Northern Health Research Conference on June 5 and 6, 2015 in Timmins.



Steve Black, Mayor

2 - 30



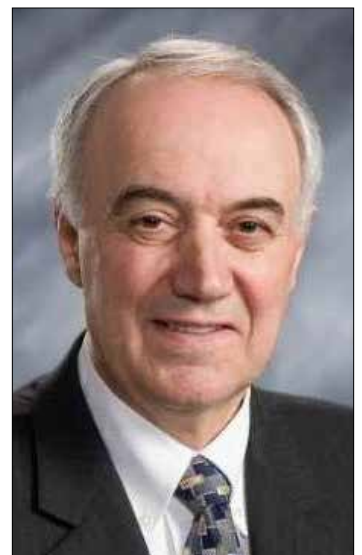
Keynote Speakers



Dr. Stefan Grzybowski



Dr. Jude Kornelson



Conference Agenda

Thursday, June 4, 2015		Northern College Cafeteria
6:00 p.m. – 8:00 p.m.		
Friday, June 5, 2015		Northern College H116
8:00 a.m. – 9:00 a.m.	/ /	
9:00 a.m. – 9:30 a.m.	Welcome and Opening Remarks from Dignitaries and Special Guests	
9:30 a.m. – 9:45 a.m.	Lee Rysdale	Session Chair:
9:45 a.m. – 10:00 a.m.	Emmanuel Abara	
10:00 a.m. – 10:15 a.m.	Jeffrey Gagnon	
10:15 a.m. – 10:45 a.m.	/ (#1)	Northern College Atrium
10:45 a.m. – 11:00 a.m.	Elizabeth Acosta-Ramirez	Session Chair:
11:00 a.m. – 11:15 a.m.	Suzanne McGuire	
11:15 a.m. – 11:30 a.m.	Grace Scott	
11:30 a.m. – 11:45 a.m.	Tim Dubé	
11:45 a.m. – 12:00 p.m.	Hai-Yen Vu 23,	
12:00 p.m. – 1:30 p.m.	/ (#1 #2)	Northern College Cafeteria
1:30 p.m. – 1:45 p.m.	Erinma Abara	Session Chair:
1:45 p.m. – 2:00 p.m.	Joseph Eibl	
2:00 p.m. – 2:15 p.m.	Christianne Patry	
2:15 p.m. – 2:30 p.m.	Dianne Cameron	
2:30 p.m. – 2:45 p.m.	Sophie Lamoureux	
2:45 p.m. – 3:15 p.m.	/ (#2)	Northern College Atrium
3:15 p.m. – 4:15 p.m.	Keynote Speakers Stefan Grzybowski and Jude Kornelsen, University of British Columbia	Session Chair:

Friday, June 5, 2015		Northern College H116
4:15 p.m. – 4:45 p.m.		
4:45 p.m. – 5:30 p.m.		
5:30 p.m.	()	
6:00 p.m. – 9:00 p.m.	10 Guest Speakers Roger Strasser and Greg Ross 10... 10... 46 ΓCΓ5PΔ3 ΔP4 6PLPCTP<3	

Saturday, June 6, 2015		Northern College H116
8:00 a.m. – 9:00 a.m.	/	
9:00 a.m. – 10:00 a.m.	Keynote Speaker Dr. Janet Smylie, University of Toronto	Session Chair:
10:00 a.m. – 10:15 a.m.	Joanne Beyers	
10:15 a.m. – 10:30 a.m.	Patrick Timony ?	
10:30 a.m. – 11:00 a.m.	/ (#2)	Northern College Atrium
11:00 a.m. – 11:15 a.m.	Bruce Weaver ?	Session Chair:
11:15 a.m. – 11:30 a.m.	Angela Cescon , 2000-2012	
11:30 a.m. – 11:45 a.m.	Laurel O’Gorman	
11:45 a.m. – 12:00 p.m.	Annette Schroeter	
12:00 p.m. – 12:15 p.m.	Jill Sherman	
12:15 p.m. – 1:45 p.m.	/ (#1 #2)	Northern College Cafeteria
1:45 p.m. – 2:45 p.m.	Keynote Speaker Roger Walker, Past President and CEO, Timmins and District Hospital	Session Chair:
2:45 p.m. – 3:15 p.m.	/ (#1)	Northern College Atrium
3:15 p.m. – 3:30 p.m.	Nancy Lightfoot	Session Chair:
3:30 p.m. – 3:45 p.m.	Kathleen Bailey and Sumeet Dama ?	
3:45 p.m. – 4:00 p.m.	Lorraine Carter and Mary Hanna	
4:00 p.m. – 4:15 p.m.		

Oral Presentation Interactivity:

45 / 15
10 / 5

Poster Agenda

Group #1		Northern College Atrium
Station #	Presenter / Poster Title	
1	Emmanuel Abara	
3	Emmanuel Abara	
5	Katie Anderson	
7	Heidi Forsyth	
9	Emily Donato	
11	John Tuinema	
13	John Dabous	
15	Sergio Fabris	
17	Megan Gray and Lori Matthews	
19	Wesley Killen	
21	Dylan Thompson	
23	Laural O'Gorman	
25	Lee Rysdale	
27	Lee Rysdale	
29	Ian Arra	



Group #2		Northern College Atrium	
Station #	Presenter / Poster Title		
2	Gail Adams-Carpino		
4	Areej Al-Hamad		
6	Curtis Addison		
8	Sarah Hunt		
10	Priya Aronnilakkara		
12	Priya Aronnilakkara		
14	Priya Aronnilakkara		
16	John MacDonald		
18	Eva Newfeld		
20	Alexandrea Peel		
22	Justin Roy		
24	Sidney Shapiro		
26	Lynn Smith		
28	Debbie Szymanski		
30	Kaitlin Vanderbeck		



A Decade of NOSM Research

September

NOSM officially opened, welcoming a class of 56 students at Laurentian University in Sudbury and Lakehead University in Thunder Bay.

November 15

The report *Creating a Sustainable Health Research Industry in Northern Ontario* is released. The key theme of the research initiatives will be tackling the questions of importance to improving the health of the people of Northern Ontario.



February

With \$330,000 in funding from Northern Ontario Heritage Fund Corporation and FedNor, NOSM hires 12 research interns to engage in a spectrum of biomedical and clinical research activities supporting faculty from NOSM's three divisions: clinical, human, and medical.



June 1

Algoma University in Sault Ste. Marie hosts NOSM's second annual Northern Health Research Conference.

April 1

The Northern Ontario Academic Medical Association (NOAMA) is established to develop and enhance the academic culture in Northern Ontario. Physician clinical faculty who are interested in undertaking scholarly activity in relation to patient care are able to submit proposals to NOAMA to be considered for funding.

May 29

NOSM at Lakehead University in Thunder Bay hosts the fourth annual Northern Health Research Conference.

2004

2005

2006

2007

2008

2009

April

The Northern Ontario School of Medicine (NOSM) introduced its Associate Dean of Research, Dr. Greg Ross.



March 8

The Heart and Stroke Foundation of Ontario (HSFO) provides NOSM with the first research placement program worth \$240,000 over five years. NOSM medical students will conduct research on health issues of relevance to Northern Ontario while working with an established researcher.



March 31

The Honourable Tony Clement, Minister of Health and Minister for FedNor, officially opens NOSM's state-of-the-art research laboratories with a \$6 million investment. Research will focus on Northern health issues and the unique health concerns facing Northerners.



April 21

Eight NOSM students receive the first Founding Dean's Summer Medical Student Research Awards. An annual award going forward, the summer research projects will span a broad range of areas, from biomedical studies to social research.

June 2

The first annual Northern Health Research Conference is held at Algoma University in Sault Ste. Marie.

May 31

The third annual Northern Health Research Conference is held at Nipissing University in North Bay.



June 9 - 14

NOSM hosts the inaugural International Conference on Community Engaged Medical Education in the North (ICEMEN). The five-day conference focuses on the practicalities of Community Engaged Medical Education program delivery, including topics of curriculum, program management, faculty development, research, and evaluation.



November 3

NOSM hosts a three-day Partnership Opportunities in Research Gathering in Thunder Bay. Over 100 participants from Aboriginal communities, NOSM, and health research organizations attend this unique event. The first forum of its kind in Canada, the Gathering includes lively debate on a range of topics regarding research involving Aboriginal peoples and their communities.



June 10

The sixth annual Northern Health Research Conference is held at the Active Living Centre in Huntsville.



June 4

Dr. Joe Eibl, NOSM researcher and staff member, received the Governor General's Gold Medal Award during the spring convocation ceremonies at Laurentian University in Sudbury. Dr. Eibl is one of many graduate students from Laurentian University and Lakehead University working in collaboration with NOSM faculty members in the School's research laboratories.



June 7

NOSM and the North Bay Regional Health Centre (NBRHC) combined their conferences (Northern Health Research Conference and the NBRHC Research Conference) into a single event. The event is held at Canadore College in North Bay.



September 9

NOSM, the Heart and Stroke Foundation, and the Ministry of Training, Colleges and Universities introduces Dr. Sheldon Tobe as the new HSF/NOSM Chair in Aboriginal and Rural Health.



June 5

The tenth annual Northern Health Research Conference is held at Northern College in Timmins.

August 26

The School and the people and communities of Northern Ontario are creating a Strategic Plan for the School for the years 2015-2020. NOSM's Strategic Plan 2015-2020: Reaching Beyond Extraordinary Together will launch officially in September 2015 to coincide with NOSM's new academic year. The fall will also mark 10 years since NOSM opened its doors.

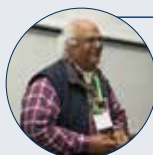
2010 | 2011 | 2012 | 2013 | 2014 | 2015

June 4

The fifth annual Northern Health Research Conference is held at Laurentian University in Sudbury.

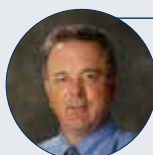
June 22

NOSM launches a new strategic plan intended to guide the School's progress through the years 2010 to 2015. The plan states that NOSM will focus on further developing its research agenda in line with its distributed education model, and continue to broaden the academic experience of its learners, faculty, and staff. These research activities will respect the unique cultural attributes of NOSM's Aboriginal, Francophone, and other culturally distinct partners.



May 10

The seventh annual Northern Health Research Conference is held at Lakehead University in Thunder Bay in conjunction with the 7th Meeting of the Canadian Oxidative Stress Consortium (COSC). The joint conference attracted over 150 delegates from across the country and around the world.



September 1

Dr. Douglas Boreham is appointed NOSM's new Division Head of Medical Sciences. Dr. Boreham brings with him his role as the Bruce Power Research Chair in Radiation and Health.



October 9 - 14

NOSM hosts Rendez-Vous 2012, five world conferences in one, and welcomes more than 850 delegates from nearly 50 countries and six continents. Rendez-Vous 2012 participants engage in thought-provoking discussions related to a shared commitment to the conference's theme of *Community Participation in Education, Research, and Service*.

June 6

The ninth annual Northern Health Research Conference is held at the Sioux Lookout Meno Ya Win Health Centre (SLMHC) in Sioux Lookout. Hosted in the Josias Fiddler Conference Room, NHRC participants were welcomed by SLMHC, the Sioux Lookout First Nations Health Authority, and Lac Seul First Nation.

July 2

NOSM is pleased to announce the appointment of Dr. Penny Moody-Corbett as Associate Dean of Research and Senior Associate Dean of NOSM at Lakehead University in Thunder Bay.



Accreditation



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Acknowledged with Thanks

Northern Ontario
School of Medicine

Northern College



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Timmins and
District Hospital

Scientific Review Committee



Timmins and District Hospital
L'Hôpital de Timmins et du district

tadh.com



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School of Medicine
École de médecine
du Nord de l'Ontario
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DATE

NORTHERN HEALTH RESEARCH CONFERENCE

JUNE 2016 | SAULT STE. MARIE



Northern Ontario
School of Medicine
École de médecine
du Nord de l'Ontario
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*Innovative Education
and Research for a
Healthier North.*

7

nosm.ca/rsg



À VOS CALENDRIERS!

5^e Symposium francophone

Du 24 au 26 septembre 2015

Hôtel Holiday Inn, rue Regent
Sudbury (Ontario)

SAVE THE DATE!

5th Francophone Symposium

September 24 - 26, 2015

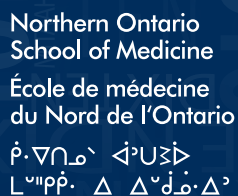
Holiday Inn, Regent Street
Sudbury, Ontario



L'EMNO CÉLÈBRE SES DIX ANS
AVEC *gratitude*
Merci | Thank You | Miigwetch



École de médecine
du Nord de l'Ontario
Northern Ontario
School of Medicine
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WITH

Thanks



INNOVATIVE EDUCATION AND RESEARCH FOR A HEALTHIER NORTH | **NOSM.CA**

Oral Abstracts

Expanding Aboriginal Cultural Competency and Curriculum: The NODIP Experience

PRESENTING AUTHOR:

Lee Rysdale

AUTHOR(S):

Rysdale, L and Raftis, D.

AFFILIATIONS:

Northern Ontario Dietetic Internship, Northern Ontario School of Medicine, Sudbury, ON

ABSTRACT:

With almost half (40%) of the province's Aboriginal population living in Northern Ontario, all NOSM faculty and learners are encouraged to develop knowledge and understanding of the history, tradition, and culture, as well as health concerns and needs of this cultural group. The Northern Ontario Dietetic Internship Program (NODIP) trains 12 dietetic interns annually using a wide range of challenging learning experiences in a variety of practice settings including Aboriginal communities. Best practices are needed to improve the integration of Aboriginal cultural competency in NODIP.

Methods: Numerous knowledge development and exchanges as well as evaluation activities were conducted with key informants (NOSM staff, faculty and learners), as well as other stakeholders and community partners. The process was guided by an assessment framework of cultural competency indicators in health care related to education content and commitment and preceptor and learner performance.

Results: Minimum and advanced competencies have been validated; learner and preceptor tools and resources have been developed, piloted and refined; and preceptor training was assessed and implemented using distance education strategies. NODIP has implemented and evaluated the inclusion of these competencies for the past two years through Aboriginal focused placements.

Conclusions: While cultural competency training may increase awareness, knowledge and skills, cultural self-efficacy refers to how capable one feels functioning in culturally diverse situations. Those with more experience may have higher cultural self-efficacy and be more likely to pursue opportunities to work with Aboriginal Peoples. NODIP has seen that curriculum efforts may be supporting the recruitment of graduates to work in Aboriginal communities in Northern Ontario. Next steps include evaluating graduate self-

Cancer Patients and Relatives Benefit from Inter-professional Collaborative Urotelehealth Program in Rural Northeastern Ontario-A Work in Progress

PRESENTING AUTHOR:

Emmanuel Abara (1)

AUTHOR(S):

Abara,E(1,2), ReidC(3), Abara,N(2), Lacroix,M(4), Noiushi,N(2), Chiang,S(5), Wu,B(5), Denton,R(6)

AFFILIATIONS:

(1) Clinical Sciences Division, Northern Ontario School of Medicine, Sudbury, ON

(2) Richmond Hill Urology Practice and Prostate Institute, Richmond Hill, ON

(3) Hornepayne Community Hospital, Hornepayne, ON

(4) Le Centre De Sante Communautaire, Temiskaming, ON

(5) Anson General Hospital, Iroquois Falls, ON

(6) Kirkland and District Hospital, Kirkland Lake, ON

ABSTRACT:

Introduction and Objective: Cancer diagnosis usually carries with it a burden, especially for individuals who live in remote communities. Found in several locations across Northern Ontario, Ontario Telemedicine Network (OTN) offers instant videoconferencing platform for clinical care. Since 2006, the uptake of this technology has been on the rise. We have encouraged inter-professional collaborative care where the patient, the relatives, the primary health care provider or support worker and the specialist (urologist) all meet at the point of care by Telemedicine. By July 2014, we attempted to determine, through a questionnaire survey, how the patients and their relatives perceived this pattern of care.

Materials and Methods: This study was approved by the Ethics and Review Boards of the Kapuskasing and the Kirkland Lake hospitals. Data were collected by paper and pen questionnaire. Informed consent was obtained from participants. Diagnosis, Treatment, Number of Telemedicine encounters and outcome s were recorded. Qualitative information regarding computer and internet use among the patients' relatives was also obtained. Quantitative and qualitative data were analysed using the Statistical Analysis Software (SAS) and conceptual matrix respectively.

Results: So far 44 patients have completed the survey- 32 men and 12 women aged between 31 and 92 (average 64) years. Cancer diagnoses were Prostate 19; Bladder 17; kidney 5; Penis 2; and testis 1 Spouses comprised 90% of all accompanying relatives. There were 8 primary health care providers. Patients and relatives were satisfied with the care provided with timely access nearer home; cost saving and minimal travel time especially during the winter.

Conclusion: This preliminary data suggest that the patients and their relatives value Telemedicine assessments because it helps to minimize travel, reduces cost, time off work and provides appropriate care by the "Care" team. Further experience with this pattern of care and its ramifications is required.

Tumour Necrosis Factor Alpha Impairs Glucagon-Like Peptide 1 Secretion

PRESENTING AUTHOR:

Jeffrey Gagnon¹

AUTHOR(S):

Sauvé M², Zhao W², Stacey H, Bolz S²³, and Brubaker PL²⁴

AFFILIATIONS:

Department of Biology, Laurentian University, Sudbury, ON Canada¹

Departments of Physiology² and Medicine⁴, University of Toronto, Toronto, ON

Canada Centre for Microvascular Medicine, University of Toronto, and Li Ka Shing Knowledge Institute at St Michael's Hospital, Toronto, ON Canada³.

ABSTRACT:

Increased circulating concentrations of pro-inflammatory cytokines including tumour necrosis factor alpha (TNFa) are observed in obesity. This inflammation causes widespread dysregulation in glucose metabolism. In humans, obesity is also associated with reduced nutrient-stimulated secretion of the glucose regulating, glucagon-like peptide 1 (GLP-1). We hypothesised that TNFa plays a direct role in the impairment of GLP-1 secretion from the enteroendocrine L- cell, and that blocking TNFa during obesity can restore both GLP-1 secretion and glucose homeostasis. Firstly, L-cells were shown to express the TNFa receptor subtype-1, in both the human NCI-H716 L-cell model and mouse ileal sections. Treating NCI-H716 cells with TNFa for 24 hours led to a reduction in proglucagon mRNA expression ($p < 0.05$) and GLP-1 cellular content ($p < 0.05$), but did not affect cell viability. Furthermore, NCI-H716 cells pre-treated with TNFa for 24 hours no longer responded to the GLP-1 secretagogues, an effect that was reversed by co-incubation with the NFkB inhibitor, 5-aminosalicylic acid, known to lie downstream of the TNFa receptor. Mice given a high fat diet (HFD) for 8 weeks had impaired glucose tolerance as well as increased TNFa mRNA expression in both fat and ileal tissue. The impairment in glucose tolerance was reversed in mice treated with the anti-TNFa biological, Etanercept, 6 times over 2 weeks. In primary intestinal cultures from these animals, HFD-control mice had impaired GLP-1 secretion and this was not observed in the HFD-Etanercept cultures ($p < 0.05$). In conclusion, TNFa directly impairs GLP-1 secretion at the level of the intestinal L-cell. This effect is reversed by anti-TNFa therapy which may be an option in treatment of type 2 diabetes mellitus.

Serum anti-VacA IgG and IgA antibodies as markers of infection and disease progression

PRESENTING AUTHOR:

Elizabeth Acosta-Ramirez (1)

AUTHOR(S):

Acosta-Ramirez, E (1), Eng, N (1), Ybazeta, G (1), Chapman, K (1) and Diaz-Mitoma, F (1, 2, 3)

AFFILIATIONS:

(1) Advanced Medical Research Institute of Canada (AMRIC), Sudbury, ON,

(2) Northern Ontario School of Medicine, Sudbury, ON, (3) Laurentian University, Sudbury, ON

ABSTRACT:

Helicobacter pylori (*H. pylori*) causes the most common infection worldwide. The establishment of immunological markers associated with disease progression is challenging due to the high variability of antigens expressed by the different strains of *H. pylori*. All *H. pylori* strains that have been isolated from humans express the vacuolating cytotoxin A (VacA). We studied the humoral immune response anti-VacA in patients naturally infected with *H. pylori* and established a correlation between systemic anti-VacA IgG and IgA responses and the different stages of *H. pylori* infection which was confirmed after histological and microbiological analysis of gastric biopsies. We found that VacA serology has 100% accuracy since we did not find any patient with confirmed *H. pylori* infection to be seronegative. Also, anti-VacA serology allowed us to determine a larger number of *H. pylori* positive patients that were missed because the limitations of the analysis of gastric biopsies. Whether our observations are valid for all patients infected with *H. pylori* regardless of the strain with which they are infected is not clear. Further analysis of genomic sequence data and characterization of the genotype of the different *H. pylori* strains allows phylogenetic classification of the isolated strains in this study. Future studies addressing this question will be relevant to determine immunological markers that can aid *H. pylori* diagnosis and provide early treatment to vulnerable populations. Also, the identification of general immunological markers correlating with protection will contribute to the rational design of an efficacious vaccine against *H. pylori*.

Examining the use of electronic patient portals in an integrated healthcare institution

PRESENTING AUTHOR:

Suzanne McGuire

AUTHOR(S):

Shaw, N.T. (a), McGuire, S.K. (b), Hirvi, E. (c)

AFFILIATIONS:

(a) Associate Professor, Department of Sociology, Algoma University

(b) Research Intern, Health Informatics Institute, Algoma University

(c) Attending Physician, Group Health Centre

ABSTRACT:

Introduction: There is a continual push from patients, healthcare providers, administrators, researchers, and political organizations in the developed world to increase patient access to health data through the implementation of electronic patient portals (EPPs). EPPs give patients access to information from their electronic health record (EHR) and allow them to contact their health providers online to ask questions, refill prescriptions, setup appointments, and view test results. While their use is increasing, there is still much we don't know about the technology, who uses it, and why. The purpose of this study is to measure the use of electronic patient portals and determine why or why not patients choose to engage in their use.

Methodology: Mixed-method, cross-sectional examination of electronic, demographic, interview, and survey data to gain an understanding of (1) the types of people that do and do not enroll in the portal, (2) why they choose to enroll or not, and (3) usage rates. Data was collected through the Group Health Centre which is an integrated healthcare institution in the Sault Ste. Marie, Algoma District housing multiple types of healthcare professionals and already containing a Centre-specific EHR. Primary care physicians invited their patients to participate in the portal. Patients were also contacted to take part in the study regardless of their desire in the portal. After obtaining informed consent, data was collected through the EHR and analyzed to describe who is using EPPs. The next step in the research will be to explore methods of increasing patient registration and engagement in the portal.

Discussion: Data from this study will help to inform researchers and healthcare organizations about who exactly is using EPPs and make conclusions on how their usage rates may be increased and improved.

An Exploration of the Relationship Between Marginalization Index and Smoking Cessation in Individuals Diagnosed with Head and Neck Cancer

PRESENTING AUTHOR:

Grace Scott

AUTHOR(S):

Scott, GM (1), Amoodi, H (2), Micomonaco, DC (2)

AFFILIATIONS:

(1) Health and Rehabilitation Sciences, Western University, London, ON, (2) Northern Ontario School of Medicine, Sudbury, ON

ABSTRACT:

INTRODUCTION

Considerable evidence now indicates that individuals living in deprived neighbourhoods have higher rates of mortality and morbidity independent of individual-level characteristics. This study sought to explore the impact of such geographical marginalization on smoking cessation in a population of individuals with a diagnosis of head and neck cancer.

OBJECTIVES

The aims of this study were twofold: (1) assess the prevalence of smoking and readiness to quit in those with a previous diagnosis of head and neck cancer, (2) evaluate alongside level of marginalization of individuals.

METHODS

This was a retrospective cohort study. We administered a self-report nicotine dependence package to interested participants between the ages of 20-80 with a previous head and neck cancer diagnosis and who self-identified as being smokers. This package contained (1) a survey of demographic information, (2) the Centre for Addiction and Mental Health “Why You Smoke” questionnaire and (3) the Fagerström Test for Nicotine Dependence. The order of these questionnaires was randomly assigned. Using the Canadian Marginalization (CAN-Marg) Index tool based on 2006 Canada Census data we compared the degree of marginalization to the individual results of nicotine dependence and readiness to quit. Time since diagnosis was also analyzed against these two variables.

RESULTS

A summative score of marginalization was compared to readiness to quit and level of nicotine dependence. This revealed a lower score on the importance, confidence and readiness to change in individuals residing in more marginalized areas.

CONCLUSIONS

The results from this study indicate that the summative level of marginalization developed from the combined factors of residential instability, material deprivation, ethnic concentration and dependency may be a critical factor in smoking cessation. This analysis of determinants of smoking alongside area-based measures of socioeconomic status may implicate the need for targeted population-based smoking cessation interventions.

The transition through clinical clerkship – the parts in the sum of the whole

PRESENTING AUTHOR:

Tim Dubé

AUTHOR(S):

(1) Dubé, T., (2) Schinke, R., (1) Strasser, R., (3) Couper, I., and (4) Lightfoot, N.

AFFILIATIONS:

(1) Northern Ontario School of Medicine, Sudbury and Thunder Bay, ON,

(2) School of Human Kinetics, Laurentian University, Sudbury, ON

(3) Centre for Rural Health, University of the Witwatersrand, Johannesburg, South Africa

(4) School of Rural and Northern Health, Laurentian University, Sudbury, ON

ABSTRACT:

This presentation will describe the process of transition to become medical professionals that third-year students experienced during their longitudinal integrated clerkship.

I will share the perspectives of 12 Northern Ontario School of Medicine third-year medical students regarding the transition process. Three conversational interviews with each of these students comprised the longitudinal dataset, occurring before, during, and after the clerkship. I employed a guided walk method to explore students' everyday lives and elicit insights about the transition process prompted by the locations and clinical settings where the phenomena were taking place.

The participants identified three interconnected stages in the transition process: (a) shifting from classroom to clinical learning, (b) dealing with the disorientation process, and (c) seeing oneself as a physician, with evidence supporting the adaptive strategies the participants developed in response to these.

Based on the findings, the transition process during the clerkship can be characterized as entering the unfamiliar with few forewarnings about the changes, experiencing moments of confusion and burnout, and eventually leading to increased confidence and competence in relation to assuming the clinical roles of a physician.

Recommendations are made regarding future research opportunities to further the discourse surrounding this conceptualization of the stages in the transition process. There is tremendous value added for researchers to extend this work, as well as for medical educators and faculty developing educational activities designed to orient and prepare the students better for each of the stages in the transition they are about to embark on.

VR23, a new anticancer drug developed in northern Ontario

PRESENTING AUTHOR:

Hai-Yen Vu

AUTHORS:

Lee, H (1, 2, 3), Pundir, S (1, 3), Vu, H (1), Solomon, VR (1)

AFFILIATIONS:

(1) AMRIC/Health Sciences North, Sudbury, ON, (2) Medical Sciences, Northern Ontario School of Medicine, Sudbury, ON, (3) Departments of Medicine and B.M.I., University of Ottawa Medical School, Ottawa, ON.

ABSTRACT:

Following many years of efforts, we have finally developed a very promising anticancer compound called VR23 (US patent filing #61772032; World-wide PCT/CA2014/000121). We found that VR23 is a proteasome inhibitor, especially a strong inhibitor of the trypsin-like proteasome activity (IC_{50} , 1 nM). Data from a substrate competition assay shows that its primary

is distinct from any known proteasome inhibitors. VR23 preferentially kills cancer over non-cancer cells by apoptosis, mainly through the abnormal centrosome amplification caused by the accumulation of ubiquitinated cyclin E in cancer but not in normal cells. VR23 effectively kills many different types of tumor cells including breast cancer, blood cancer, and cervical cancer cells. Our laboratory study shows that VR23 can kill glioblastoma multiforme brain cancer cells

drug for the treatment of brain cancers. VR23 shows effective antitumor activity in mice, alone or in combination with other drugs. In particular, VR23 enhances the efficacy of paclitaxel (Taxol®) while reducing its undesirable side effects. This is indeed a very desirable property as an anticancer agent. A number of additional anticancer and antibacterial drug candidates are being examined in our laboratory.

This work was supported, in part, funds from Northern Cancer Foundation (Sudbury), Northern Ontario Heritage Fund Corporation, and the City of Greater Sudbury (Development Corporation), through the Northeastern Ontario Cancer Therapeutics Research Initiative (CTRI) project.

Telemedicine, Regulatory bodies, and the Practitioner

PRESENTING AUTHOR:

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ABSTRACT:

Introduction: Telemedicine is the use of modern information technology such as videoconferencing in patient care. This care can include patient consultation, follow-up, management of various care plans, health education, academic, and medical administration. There could be issues of quality of care, patient privacy and confidentiality, and practitioner professionalism. We reviewed the existing guidelines and policies of the various regulatory bodies and the Canadian Medical Physicians Association (CMPA). We hoped to understand these policies and highlight them to current and prospective telemedicine practitioners.

Methods: A literature search was conducted using the search engines: Pubmed, GoogleScholar, Cochrane Medical Library. Key search terms included: "Telemedicine, medicolegal, and regulatory bodies". In addition, a review of Canadian case law involving Telemedicine was done through Canadian Legal Information Institute (CANLII). Telephone conversations with some of the licensing bodies were undertaken.

Results: Out of 10 provinces and three territories, 9 had telemedicine guidelines. At the time of review, telemedicine guidelines were under review in two of the provinces. In various jurisdictions, there were different positions on the location of care. All the colleges' guidelines stressed the importance of professionalism, patient confidentiality, protection of privacy, and good patient record-keeping. There are licensure issues in various colleges that deserve attention of all telemedicine practitioners.

Conclusion: Telemedicine is here, the adoption rate is increasing. Guidelines and policies from various Canadian licensing bodies exist but vary in some measures. Minimal expectations from these colleges include professionalism and strict management of patient's privacy and confidentiality. Physicians and telemedicine practitioners are best advised to review their practice with respect to patient needs, their location and their various provincial regulatory guidelines and policies.

The Opioid Addiction Treatment Database: Using ICES linked-clinical data to conduct socially accountable research in the North

PRESENTING AUTHOR:

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ABSTRACT:

Opioid addiction has been identified provincially and regionally (North) as a major health concern. From 2004-2013, the number of Ontario patients in opioid addiction treatment increased from 6,000 to over 38,000; due largely to the increased availability of the opioid agonist oxycodone. Opioid agonist therapy (e.g., methadone / suboxone) is recognized to be the standard of care for patients with opioid addiction. However, due to the extreme nature of the addiction epidemic, broader system integration was unable to keep up with patients' need to access healthcare. In Canada, the majority of opioid addiction treatment occurs in specialized clinics. Despite the fact that patients attend a clinic/pharmacy on a daily basis for directly observed therapy, there is little coordination with other healthcare services. Our research program is working to develop and test coordinated healthcare for opioid-dependent patients across Ontario with a hope for improving care. This presentation will highlight how linked-clinical database at the Institute for Clinical Evaluative Sciences can be employed to improve province wide addiction therapy. There is a recognized gap in care for these patients. We expect collaborative care will improve co-administration of co-prescribed medications and pathways to primary/specialist care. Working with patients and providers, we hope to ensure all Ontarians have the most integrated healthcare possible.

Caregiver feeding practices, nutrition knowledge and early dental caries risk in young Aboriginal children: A review of the literature

PRESENTING AUTHOR:

Christianne Patry(1)

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(2) Dietitians of Canada, Toronto, ON

ABSTRACT:

Early dental caries (EDC) are preventable yet the prevalence is over 85% in Canadian Aboriginal and Inuit preschoolers, aged 3 to 5. Oral health education should include culturally appropriate parent feeding and nutrition advice yet there is limited knowledge. A review of the international literature on key nutrition determinants and EDC risk in young Indigenous children (0-6 years) will inform evidence-based nutrition practice guidelines.

Methods: In December 2014, a search for English publications from 2009-2014 was conducted in Cochrane, CINAHL, Medline, PMC and Pubmed. Key search terms included dental caries, cavities, oral health, caregiver, Aboriginal, Indigenous, First Nations, Indians, Inuit, infant and preschool child. Using Practice-based Evidence in Nutrition (PEN®) processes and tools, articles were screened, appraised, graded and summarized into practice recommendations.

Results: Of the 395 articles retrieved; 67 were relevant based on titles with 25 abstracts meeting the inclusion criteria. From the 25 articles, five were selected and an additional three were included from a hand search of the references. Eight Canadian articles were appraised with an overall C grade of evidence. Protective factors include prenatal vitamin D supplementation (600 IU/day) and children's milk intake while nocturnal and naptime bottle feeding and sugar sweetened beverage consumption are risk factors.

Conclusions: There is limited, low grade evidence and more research is needed internationally. PEN® practice guidelines will be developed with an expert review committee of Canadian and Australian nutrition, medical and dental practitioners working with paediatric and Indigenous populations. Addressing EDC requires a holistic and multifactorial approach including nutrition screening and education programs to complement and enhance current EDC screening and intervention practices. Culturally-acceptable approaches and tailored nutrition messages can increase oral health knowledge and support parents to improve their children's nutrition. Healthy eating habits along with good oral hygiene practices can prevent EDC and reduce healthcare costs.

A Model for Interprofessional Education Through Case Study Roles

PRESENTING AUTHOR:

M. Dianne Cameron

AUTHOR(S):

M. Dianne Cameron

AFFILIATIONS:

Collaborative Health Initiatives, Laurentian University

ABSTRACT:

The publication of “Interprofessional Care: A Blueprint for Action in Ontario” initiated development incentives leading toward the full realization of this essential concept in contemporary health care. Though it is widely accepted that interprofessional education (IPE) leads to interprofessional care (IPC), incorporation of IPE into undergraduate curricula has been slow, and faces numerous challenges. Most professional development programs necessarily focus on discipline specific education, with little room in busy timetables for IP courses training practitioners and caregivers to work together to enhance patient care.

This presentation outlines a model for IPE based on case studies which bring together students playing individual health care roles into patient-centred health care teams. Unique case studies are assigned to each student in a course, together with the health care role the student must research and play. After an initial period of independent work, students discover that classmates assigned to other roles and cases share the same patient or patients. Students then coalesce into health care teams centred on the common patient for their group, and work as a team for the remainder of the study.

This case-based model has been used in two courses commonly required in various discipline-specific educational programs: interprofessional pathophysiology, and clinical research methods. Over the last 5 years, each course has been evaluated using entry/exit quizzes to assess changes in student attitudes and perception of interprofessional health care and the role of interprofessional education in achieving this goal. Results demonstrate the efficacy of this model and suggest that it could be readily incorporated into a variety of courses required in different disciplines to help achieve the goal of IPE without jeopardizing discipline-specific programming.

A Comparison of Stereotactic Body Radiotherapy with Hypofractionated Radiotherapy for Early Stage Non-small Cell Lung Cancer: Control Rates from a Regional Cancer Centre

PRESENTING AUTHOR:

Sophie Lamoureux¹

AUTHOR(S):

Donlon M

Keynote Speakers

**Jude Kornelsen, Ph.D.,
Associate Professor, Department of Family Practice UBC, Co-Director
Centre for Rural Health Research, Director, Applied Policy Research Unit,
University of British Columbia**

**Stefan Grzybowski MD, CCFP, FCFP, MCISc,
Co Director of the Center for Rural Health Research, Professor, Department
of Family Practice, University of British Columbia**

**Friday, June 5, 2015
3:15 p.m. – 4:15 p.m.**

Re-Building Health Services: Dangerous Ideas from the Hinterland

Key attributes of rural health services – low volume, low resources and geographic and professional isolation – are often posited as contributing to the lack of sustainability of these services. What if, however, we turned usual assumptions around and recognized instead the resilient capacity of rural health teams in responding to these attributes? What if, instead of lack of sustainability, the output was innovation?

In this talk we will take a less common approach to health planning and suggest four key learnings we have gleaned from rural health services over the past decade, learnings that could contribute to a re-think of all health services. These innovative 'dangerous ideas' include re-thinking the way we capture and analyze data, moving from a utilization model to a population catchment model, which places responsibility for the health of a population on the facility within

Keynote Speaker

Dr. Janet Smylie, MD, MPH, FCFP

Director, Well Living House Action Research Centre for Indigenous Infant, Child and Family Health and Wellbeing; Research Scientist, Centre for Research on Inner City Health; Staff Physician, Department of Family and Community Medicine, St. Michael's Hospital; Associate Professor, Dalla Lana School of Public Health, University of Toronto; and, CIHR Applied Public Health Research Chair in Indigenous Health Knowledge and Information

Saturday, June 6, 2015

9:00 a.m. – 10:00 a.m.

Optimizing Health Care for Indigenous Peoples in Canada: Emerging evidence

Indigenous peoples in Canada experience striking and cross-cutting inequities in health status compared to non-Indigenous Canadians. These health inequities have been linked to disparities in the social determinants of health, which in turn are rooted in historical and ongoing colonial policies and social exclusion. Contemporary health system responses to Indigenous health inequities have included an exponential growth in primary and tertiary medical service use Indigenous peoples, including prescription medications and a series of initiatives aimed at improving the “cultural competencies” of health professionals. Despite these responses, health status inequities persist and in some cases are getting worse.

In this keynote presentation, Dr. Smylie will introduce emerging evidence from 2 recent studies that aimed to better understand and address barriers to optimal health care for Indigenous peoples at a foundational level. The first study aimed to address systemic barriers for Indigenous peoples in accessing and acquiring non-Indigenous health literacy skills within the context of prescription medications. In this international trial, we tested the effectiveness of a customized, structured educational program addressing CVD medications for Indigenous people with CVD or at high risk CVD and their families. The second study was a systematic review examining the role of racism in the health and well-being of Indigenous peoples in Canada. The presentation of results from this study will focus on evidence regarding the role of implicit health care professional bias in contributing to Indigenous/non-Indigenous health inequities and promising practices regarding the interruption of implicit race bias.

Beyond BMI: Investigating the Feasibility of using NutriSTEP® and Electronic Medical Records as a Surveillance System for Healthy Weights including Risk and Protective Factors in Children

PRESENTING AUTHOR:

Joanne Beyers (6)

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ABSTRACT:

Ontario needs provincial data on young children's nutritional health. NutriSTEP® is a valid and reliable screen that takes parents less than 5 minutes to complete to determine risk of poor nutrition. At present Ontario has hundreds of NutriSTEP® users and no centralized data base in place to use such rich data for population health assessment and surveillance purposes.

The objectives of this research were to:

1. To understand the process of acquiring Electronic Medical Records (EMR) data.
2. To examine the quality of EMR data for 18-month Well Baby Visit (WBV) in terms of capture, coverage, completeness, and validity.
3. To identify barriers and facilitators to using NutriSTEP® among primary care providers.

Methods:

De-identified EMR data for 18-month WBV were extracted by BORN Ontario; one-way and two-way frequencies are reported. A list of NutriSTEP® users in various primary care settings across Ontario formed the target sample, from which 10 users completed qualitative interviews. Interview contents were analyzed and themes were compared.

Findings:

A total of 2,126 records for 18-month WBVs were extracted of which 779 records belonged to infants aged 17 to 22 months. Item response rates were: 81% for weight, 82% for height, 82% to 95% for nutrition variables. Fourteen percent were at risk of being overweight; almost 8% were either overweight or obese.

Practices using NutriSTEP® have found the screening easy to incorporate (often as part of the Well-Baby Visit). Providing feedback to parents 'starts the conversation' about nutritional status; High scores lead to follow-up from a health professional.

Conclusions:

There is high receptivity by primary care practices to have NutriSTEP® data gathered electronically and have it linked to EMR data to be used for local and provincial childhood healthy weight surveillance purposes.

Does a Northern Education Produce Northern Physicians? Exploring Practice Locations of Recently Graduated Family Physicians in Ontario

PRESENTING AUTHOR:

Patrick Timony (1)

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(2) School of Rural and Northern Health, Laurentian University, Sudbury, On.

ABSTRACT:

Introduction: One of the key goals of NOSM was to encourage its newly educated physicians to establish themselves in Northern Ontario. This analysis answers the question “where are NOSM graduates practicing and are more of them practicing in northern and rural locations compared to graduates from other schools?”

Methods: We employed data from the 2013 College of Physicians and Surgeons of Ontario

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Bruce Weaver

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(2) Centre for Research on Safe Driving, Lakehead University, Thunder Bay, ON

ABSTRACT:

Some authors have argued that if one obtains a statistically significant result, one must have had enough power. For example, in *PDQ Statistics* (3rd Ed., p. 24), Norman and Streiner (2003) say, "Clearly, we did have enough power to detect a difference because we *did* detect it." If Norman & Streiner are correct here, then statistical power is nothing more than a transformation of the p -value, such that power is adequate if $p > .05$. But that is *not* how power is defined. Power is the probability of rejecting the null hypothesis (i.e., obtaining a statistically significant result) *given* that some particular alternative hypothesis is true. Using simulations, I shall demonstrate that even when power is very low (e.g., 20%), one can obtain, in a given sample, an extremely low p -value (e.g., $p < .001$). That low p -value does not prove that one had adequate power. It might only mean that one got lucky, despite having very low power. The only way to ensure adequate power is by computing an a priori sample size estimate. Deciding on the basis of the observed p -value does not work.

Late initiation of combination antiretroviral therapy in Canada, 2000-2012: a call for a broad national public health strategy to improve engagement in HIV care

PRESENTING AUTHOR:

Angela Cescon (1, 2)

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Cescon A^{1,2}, Patterson S^{2,3}, Davey C^{2,4}, Chan K², Raboud JM^{5,6}, Loutfy MR^{6,7}, Cooper C⁸, Burchell AN⁹, Tsoukas C¹⁰, Machouf N¹¹, Klein MB¹⁰, Rachlis A¹², Rourke SB^{6,9}, Hogg RS^{2,3}, Montaner JSG^{2,13}

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ABSTRACT:

Introduction: Despite substantial evidence supporting the benefits of early initiation of combination antiretroviral therapy (ART) in HIV infection, HIV continues to be diagnosed and subsequently treated later than contemporary guidelines recommend in many settings. We aimed to characterize the timing of ART initiation based on CD4 cell count and identify factors associated with late initiation of ART from

Driving distance to Ontario Telemedicine Network sites in Northern Ontario as a measure of access to healthcare

PRESENTING AUTHOR:

Laurel O’Gorman

AUTHOR(S):

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ABSTRACT:

Background: The Ontario Telemedicine Network (OTN) uses technology to help make physician and specialist medical services more accessible to people in rural and remote parts of Northern Ontario—areas that are often medically underserved. This multi-stage research program seeks to examine access to and use of OTN-enabled medical care services in Northern Ontario.

Methods: Using ArcGIS Network Analyst, a service area analysis was conducted using travel time as a measure of potential access. Road distance and speed limits were used to estimate travel time between Northern Ontario communities and nearest OTN site.

Results: There were a total of 2,331 OTN sites and 552 (24%) were located in Northern Ontario. All 22 Northern Ontario communities with a population of 5000 or greater were within a 30 minute drive of an OTN site. Approximately 95% of 40 communities with 1000 to 5000 people were within a 30 minute drive. The percentage within 30 minutes steadily decreased with decreasing population size to 60% for communities with under 50 people. In total, 86% (667/780) of Northern Ontario communities were within an hour’s drive of an OTN site. All of the 113 communities outside of a one hour drive had population sizes of 5000 or fewer people and all but 2 communities had 1000 or fewer people.

Conclusion: Although this study presented only potential access (as opposed to actual access or use, which will be examined in the next study), and while there is some room for increased access to OTN, this study showed that people in the vast majority of rural and remote communities of Northern Ontario were within an hour’s driving distance of an OTN site. The current distribution of OTN has the potential to increase access to medical services and reduce the need for medically related travel for residents of these communities.

Developing the Sioux Lookout Meno Ya Win Health Centre Medicine Wheel Ethics Framework

PRESENTING AUTHOR:

Annette Schroeter

AUTHOR(S):

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AFFILIATIONS:

1. Sioux Lookout Meno Ya Win Health Centre

ABSTRACT:

The community of Sioux Lookout, located in northwestern Ontario, is a centre of healthcare services for residents and those residing in the surrounding area, including the Nishnawbe Aski communities north of Sioux Lookout, the Treaty #3 community of Lac Seul First Nation, and residents of Hudson, Pickle Lake and Savant Lake. The Sioux Lookout Meno Ya Win Health Centre (SLMHC) is a fully accredited 60-bed hospital and a 20-bed extended care facility. The focus of healthcare at SLMHC is the integration of traditional and Western medicines and practices while recognizing and respecting the cultural and linguistic diversity of the people. Holistic care is based on recognizing the relationship of the physical, emotional, mental and spiritual aspects of the person (SLMHC, 2014).

The Medicine Wheel Ethics Framework (Appendix A) was originally envisioned and designed by Helen Cromarty and the Ethics Working Group at the SLMHC. The creation of this resource began with the intention of providing stakeholders involved in healthcare at SLMHC with a tool to help work through ethical dilemmas or questions. This project explored how to improve the Medicine Wheel Ethics Framework for patients, caregivers and staff to work through moral dilemmas.

Delivering an effective ethics tool to a culturally diverse population of health care workers and patients is a challenging exercise as we attempt to connect with different sets of values and practices. Most participants of this study interacted positively with the Medicine Wheel Ethics Framework and almost all had positive comments with aspects of it. There are cultural understandings and values associated with the Medicine Wheel that many non-Aboriginal people are not aware of as this study revealed. Without being given clear directions on how to approach the framework many non-Aboriginal people unfamiliar with the cultural understandings associated with the structure and symbolism may want to automatically apply their own Western, or other, teachings. Some may realize the peril of this assumption which may then cause confusion and a hesitation to engage. Future work is needed to improve accessibility of the framework.

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Developing an evaluation framework for the LEGs Initiative: Key findings

PRESENTING AUTHOR:

Jill E. Sherman

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(2) Northern Ontario School of Medicine

ABSTRACT:

Background. Alternative Funding Plans (AFPs) provide support for physician clinical faculty at Ontario's Academic Health Science Centres. At the Northern Ontario School of Medicine

Keynote Speaker

Roger Walker

Past President and CEO, Timmins and District Hospital

Saturday, June 6, 2015

1:45 p.m. – 2:45 p.m.

Generating Research in the Small, Rural and Northern Hospital

Of particular interest to active practitioners, this presentation will address the research, innovation and development opportunities and challenges in small, rural and northern

Timmins 9 Wildfire: Evacuation Experience, Preparedness, and Lessons Learned

PRESENTING AUTHOR:

Nancy Lightfoot

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ABSTRACT:

Objective: To describe the impact of the 2012 Timmins 9 wildfire evacuation experience, preparedness, and lessons learned for residents in two rural northeastern Ontario communities.

Methods: The qualitative part of this mixed methods study was based on results from a focus group (n=8) held at Shining Tree Public School. This event included participants from the Shining Tree and Westree communities, located midway between Sudbury and Timmins, where the tourism and forestry industries predominate. Thematic analysis results from the qualitative analysis were used to inform the development of an emergency preparedness resource brochure.

Results: Qualitative themes included: the stress of the evacuation, the evacuation process, and evacuation communication issues; concerns about family pet evacuation; reactions to whether or not to comply with mandatory evacuations; concern about looting of empty evacuated residences and residence loss; criticism of basic existing evacuation plans; greater reliance upon neighbours than authorities for assistance during wildfires and evacuations; mixed messages about timing of return to residences and routes of return; lack of interest in controlling vegetation near houses for future wildfire preparedness; and interest in learning about disaster preparation kits. Highlighted will be the resource brochure that included information about: potential causes of wildfires and associated potential health effects; how to prevent wildfires and prepare homes in advance of wildfires; steps to consider when a wildfire occurs; what to do if caught in a wildfire; how to prepare for, and what to consider, during evacuation; as well as, suggestions to consider when returning home to residences.

Conclusions: Unclear lines of communication and mixed messages provided to residents about wildfire evacuation, preparedness, and residence return were highlighted. The community lessons learned summary will be provided. There is a need to consider what additional interventions, beyond the resource brochure, are required to support northern communities that experience wildfires.

Waiting for Mental Health Care: Does Symptom Type Make a Difference?

PRESENTING AUTHORS:

S. Kathleen Bailey^{1,2} and Sumeet Dama³

AUTHOR(S):

S. Kathleen Bailey^{1,2}, Aislin R. Mushquash^{1,2}, John M. Haggarty^{1,2,3}, Victoria Ewen², Sumeet Dama³, & Christopher J. Mushquash^{2,3}

AFFILIATIONS:

1) St. Joseph's Care Group, 2) Lakehead University, 3) Northern Ontario School of Medicine

ABSTRACT:

Introduction: Rising demand for counselling has led to lengthy wait times in community mental health settings. Long wait times for mental health treatment can result in increased symptom burden, prolonged suffering, personal and professional consequences, increased likelihood of relapse, increased reliance on acute care services, and may even be a barrier to care. Same Day Counselling (SDC) provides clients with an opportunity to access counselling services on the day(s) they need it, as often as they need it, without prolonged waiting.

Methodology: Questionnaires were used to collect clinical, demographic, and patient satisfaction information at baseline and follow-up. Following the sessions, counsellors completed a brief checklist of session targets and interventions used. Descriptive statistics were analysed and multiple regression was used to investigate the relationships between length of time waiting for services and disability.

Results: The average number of days on the wait list for individual counseling before accessing SDC was 152 days (range: 0-489). Global disability (WHODAS 2) was very high compared with other outpatient mental health populations, $M=18.6$ ($SD=11.17$); MH community: $M=4.4$ ($SD=6.0$) but was not directly related to wait length. On average, SDC patients presented with clinically significant symptoms in the moderate to severe range in 6 diagnostic categories. Moderated multiple regression will be used to determine whether specific symptoms (e.g. clinically significant depression) moderates the relationship between disability and wait time for mental health services.

Conclusions: The relationship between treatment delay and symptom change is complex. It is important to investigate whether long wait times have a more detrimental effect for the functioning of clients with certain clinical presentations. Clients who access SDC do, on average, experience relief of their MH symptoms at follow up.

Examining the experience and impact of distance education opportunities for health professionals in rural, remote, and Northern communities and First Nations

PRESENTING AUTHORS:

Lorraine Carter and Mary Hanna

AUTHOR(S):

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AFFILIATIONS:

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ABSTRACT:

This research is funded by the Ministry of Health and Long-Term Care, under the "Improving Health Equity for Northern Ontarians: Applied Health Research with Vulnerable Populations" program.

Based on the understanding that improvements to health care infrastructure in Northern Ontario can positively impact the health of vulnerable populations, this study examines (i) how continuing health professional education can be adapted to the specific needs of health providers in Northern Ontario and (ii) how educational opportunities made possible through telemedicine and e-learning infrastructure can improve the efficiency and effectiveness of continuing education for health providers and interprofessional training.

This three-year study uses a participatory mixed methods design to examine a cross-section of educational case studies. Methods include pre- and post-surveys, web-supported discussion groups, and analysis of trends in continuing health education supported by the Ontario Telemedicine Network (OTN). Data pertaining to educational organizations, design and delivery

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Poster Abstracts

Patient-Driven Use of Smart phone camera in Office Urology Practice

PRESENTING AUTHOR:

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(2) Richmond Hill Urology Practice and Prostate Institute, Richmond Hill, ON.

ABSTRACT:

Introduction: With advances in digital and information technology, smart phones are fast overtaking the LCD cell and the wired ones. These hand-held devices are equipped to capture

Satellite Rural Ambulatory Urology Clinics in Northern Ontario -25 years later

PRESENTING AUTHOR:

Emmanuel Abara (1,2)

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ABSTRACT:

Introduction: Along the Highway 11, north of North Bay are several rural communities that are served by small hospitals located 40 to 340 kilometers away from Timmins. Until 1989, most urological services were provided at the Timmins and District Hospital. It is not uncommon to have an elderly gentleman with urosepsis and acute urinary retention transferred by air ambulance from one of these communities. In 1990, satellite urology clinics were established to improve access and quality of care and hopefully save health care costs. This is an observational study to understand what was done and where we are today.

Materials and Methods: Geographic and demographic data were gathered with a focus on Timiskaming and Cochrane Districts. Needs assessment was completed through interviews with key stakeholders. Approval for the project was given by the Underserved Area Program (UAP) of the Ministry of Health. Hospital privileges were approved. Primary health care providers and the communities were notified of start dates. The various hospitals provided clerical and support staff. Evaluation processes were established to provide feedback from all stakeholders for program enhancement.

Results: There are now 7 clinics. The scope of services offered has been consolidated and expanded with introduction of low-risk, low- resource out-patient procedures. Delegated urological procedures, community engagement and patient education initiatives have grown. Inter-professional development and collaboration have been beneficial resulting into some clinical research. With the new medical school, these rural hospitals have become hubs for clinical training.

Comments: Satellite urology clinics appear to be beneficial to the patients, the health care professionals and the rural communities. It improves timely access, quality of care and may be cost-saving. The urologist in the community can be a catalyst for inter-professional development and team-building. Opportunities for research and learners abound.

Poster Station #3

What Happens When Undergraduate Students Experience Interprofessional Education in a Northern Ontario Setting? A grounded theory study

PRESENTING AUTHOR:

Gayle Adams-Carpino

AUTHORS:

Rachel Ellaway (1) supervisor

AFFILIATIONS:

Laurentian University Interdisciplinary PhD Rural and Northern Health

ABSTRACT:

Interprofessional education (IPE) has been identified as a key learning strategy to enhance the collective ability of health and social care students and practitioners to work together. Globally, IPE is seen as a mechanism to address the serious health human resource shortage for underserved populations. In 2010 a National Interprofessional Health Competency Framework was developed identifying the knowledge, skills, attitudes and values that describe the desired collaborative practitioner. I am conducting a research study to explore undergraduate student experiences in a model of interprofessional education delivered at the Northern Ontario School of Medicine (NOSM). Fink's model of significant learning will be used as a lens for the research. The eight week interprofessional education School and Youth Health series at NOSM integrates interprofessional competencies and explores the health and social issues that impact youth living in high risk situations. The series is delivered via videoconference at both the Lakehead and Laurentian campuses of the NOSM. IPE is not yet well understood nor recognized by many academic programs; therefore many learners tend to attend on a voluntary basis. This presents recruitment and retention challenges. The research questions for my study are:

How do the interprofessional learning experiences, at the Northern Ontario School of Medicine, impact learners' sense of personal and professional identity and collaborative expectations about interprofessional practice in Northern Ontario?

How has the group dynamics of collaboration been impacted following the IPE School and Youth Health Series?

Students from a variety of health and social care programs in Northern Ontario who take part in the IPE series will be invited to be part of this study (n~30). This presentation will describe the study design and address methodological issues and solutions, as well as how to create meaningful interprofessional learning experiences for long term impact on their professional development.

Poster Station #2

The mysterious case of hypoglycaemia in a multiple myeloma patient

PRESENTING AUTHOR:

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ABSTRACT:

A 68-year-old gentleman with no prior medical history was admitted to hospital with failure to cope and confusion. Subsequent investigations revealed IgG+/Lambda light chain multiple myeloma (MM).

Six days into his admission he was commenced on 40 mg of dexamethasone daily, which was decreased to 2 mg twice daily after 3 days. While on his last day of the 40 mg of dexamethasone he experienced his first episode of hypoglycemia (3.7 mmol/L).

Two days later (on 2 mg dexamethasone BID) he began experiencing more profound episodes of hypoglycemia, associated with decreased level of consciousness. Random glucose levels were below 1.8 mmol/L (as low as 1.2 mmol/L) for approximately 17 hours (glucometer readings were below 3.1 mmol/L for approximately 55 hours) despite 1 mg IM glucagon, 30 mg dexamethasone, and 150mL of 50% dextrose.

He was commenced on a glucagon infusion at 0.06 mg/hour and dexamethasone was increased to 16 mg daily as there was concern regarding adrenal insufficiency. The hypoglycemia resolved within 24 hours with the glucagon infusion and increased doses of dexamethasone. He was commenced on bortezomib, for which he completed 4 days of therapy, but unfortunately he developed clostridium difficile diarrhea and succumb to his illness.

During episodes of hypoglycaemia, the following laboratory values were obtained:

Serum Investigations	Patient value	Reference range
Glucose, mmol/L	1.4	3.8-7.8
Insulin (pmol/L)	579	21-118
Proinsulin (pmol/L)	1.7	3-20
C-peptide (pmol/L)	53	298-2350
Insulin-like growth factor I (ug/L)	134	44-195
Insulin antibody (kU/L)	<0.4	<0.4

Based on these, an exogenous cause of hypoglycaemia is suggested, although there was no possibility of malicious or inadvertent insulin administration. Although no true cause for his hypoglycaemia was found, it brings up an interesting discussion about the causes of hypoglycaemia, particularly those associated with an insulin antibody or insulin-like peptides (IGF-2) causing hypoglycemia.

Poster Station #6

Developing Aboriginal mental health curriculum in a distributed community-based model of psychiatry residency training in Northern Ontario

PRESENTING AUTHOR:

Dr. Katie Anderson

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ABSTRACT:

Background: Northern Ontario accounts for approximately 90% of the area of Ontario but only 10% of the population; the result is a geographically distributed population comprised of unique communities, including Aboriginal communities. Psychiatric training in Northern Ontario is based on a distributed community-based model of medical education. Thus, new strategies to foster culturally competent training for learners and faculty are evolving from traditional models. Geography poses a central challenge to aligning learners and preceptors who engage each other but are spatially separated. As a result of the distributed community-engaged model of medical education developed by NOSM, unique curriculum to support psychiatry training has been developed and implemented.

Aim: Here we describe a strategy to build community-based psychiatry training including cultural competency across rural and urban geographies of Northern Ontario, including Aboriginal communities.

Methods: In collaboration with community stakeholders across Northern Ontario, NOSM has developed longitudinal community-engaged residency training curriculum. Core psychiatric learning opportunities provided at four campuses including Sudbury, Thunder Bay, Sault Ste Marie and North Bay while community-based learning experiences extend across a network of small urban and rural sites, including Aboriginal communities. Cultural competency training also occurs in the context of community-based rotations, observed structured clinical examinations (OSCEs), health research and competency-based educational opportunities in the context of Northern, rural, remote, and Aboriginal mental health.

Results: By leveraging a community-centered medical education platform, we are able to link learners, faculty, and communities across the rural and remote regions of Northern Ontario. Resident learners are immersed in culturally appropriate training in the context of Aboriginal mental health in a longitudinal environment.

Discussion: NOSM has employed this strategy to promote impactful and distributed medical education across Northern Ontario. Postgraduate learners and faculty in the Department of Psychiatry are accessing this platform to partake in meaningful community-responsive medical education.

Poster Station #5

Insulinoma Challenges of its diagnosis and management

PRESENTING AUTHOR:

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(2) Department of Endocrinology, Health Sciences North, Sudbury

ABSTRACT:

Insulinoma is a rare cause of hypoglycemia. Laboratory confirmation, radiological localization and management of hypoglycemia while awaiting diagnosis and surgery can be challenging.

We present a case report of a 53 year old male admitted to the psychiatry ward with depression and suicidal ideation. He was noted to have multiple episodes of symptomatic hypoglycemia with blood sugar readings going down to 1.5 mmol/L.

Renal, liver, thyroid and adrenal function were normal. He had no previous history of diabetes mellitus or access to diabetes medications. Patient's possessions were checked to rule out any surreptitious use of insulin or sulphonylureas. Laboratory glucose measurement confirmed hypoglycemia. Simultaneous insulin, C peptide and proinsulin levels were checked and were found to be elevated.

Sulphonyl urea levels were checked and were negative.

MRI scan abdomen was reported as showing normal pancreas with no other suspicious masses. In the meantime, the patient was managed initially with multiple boluses of 50% dextrose and glucagon injections. Later 10% dextrose infusion was started.

A trial of Diazoxide and Octreotide injections were given with hardly any response. After discussion with Radiologist, a triphasic CT scan of the pancreas was done which showed tumor blush at the head of pancreas. Subsequently, he underwent pancreatico-duodenectomy. Pathology confirmed the diagnosis of an insulinoma.

The challenges during this patient's work up were many. Length of inpatient stay while awaiting test results is always of concern. Turnaround time for insulin, C peptide and proinsulin levels are long and laboratory dependent. Sulphonyl urea levels are not done in many laboratories and again turnaround time is long. Radiological localization can be challenging. MRI or triphasic CT scan of the pancreas can be helpful. Sometimes, endoscopic ultrasound scan or coeliac angiogram may be necessary. Management of hypoglycemia while awaiting diagnosis and surgery is challenging as well.

Poster Station #12

Reactive Hypoglycemia - Challenges of its workup

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ABSTRACT:

A common cause of hypoglycemia in a non-diabetic patient is reactive hypoglycemia. The challenge is to rule out an insulinoma, surreptitious use of insulin or sulphonylureas, tumor induced hypoglycemia or hypoglycemia due to insulin like peptides. Also, an adrenal insufficiency, thyroid disorders, renal and liver dysfunction needs to be ruled out. During the work up, a dietary history, eating disorders, malabsorption syndromes, previous gastric or bowel surgeries, alcohol overuse needs to be considered.

This is illustrated with a case of a 69 year old lady with no history of diabetes or access to diabetic medications referred for hypoglycemic episodes. The episodes were mostly postprandial. Symptomatic hypoglycemic episodes occurred mostly when abroad or while travelling. During these episodes, patient was quite stressed and alcohol consumption had been a factor. There was no previous gastric or bowel surgeries. Renal, liver, thyroid and adrenal function was normal. Hyperinsulinemia was noted at the time of hypoglycemia but no C peptide levels were checked. CT imaging of pancreas was normal. Clinical diagnosis of reactive hypoglycemia was made. Stress management, avoiding alcohol and appropriate diet was advised. Patient improved initially but after a couple of years, symptoms returned. A 72 hour fast was done. Lowest blood sugar reading during the fast was 2.8 mmol but her insulin, C peptide levels were appropriately low.

Hypoglycemia that occurs with reactive hypoglycemia is usually postprandial. Hypoglycemia is attributed to a fast gastrointestinal transit of food causing increase in blood glucose levels followed by brisk insulin release and subsequent hypoglycemia. A thorough history, physical examination and relevant laboratory investigations are necessary. Diagnosis can be made clinically. Main treatment is by dietary modifications. Patients are advised smaller, frequent meals containing more protein. Refined sugars need to be avoided and complex carbohydrates and foods with low glycemic index needs to be consumed.

Poster Station #10

Challenges interpreting thyroid function tests when there is a discordance with the clinical presentation and/or varying test results at different laboratories

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ABSTRACT:

Radio immunological assays are utilized for most hormonal measurements including serum Thyrotropin (TSH), Free T4 and Free T3 assays. Challenges arise when entirely different measurements are obtained at two different laboratories or discordant thyroid function tests are obtained not in keeping with the clinical picture.

We present 2 case reports. One patient was referred for hyperthyroidism. She had some symptoms of hyperthyroidism and she had suppressed TSH levels and elevated Free T4 and Free T3 levels at the hospital laboratory. The radioiodine uptake scan showed mild increased uptake. She was started on Propylthiouracil, initially at high doses and the dose was gradually reduced. In subsequent months, patient showed clinical improvement but TSH level remained suppressed and Free T4 and Free T3 levels remained high. Thyroid function tests were checked at a private laboratory (Life Labs) on different occasions and they were completely different from the hospital laboratory results.

Another elderly patient had hypothyroidism for many years and was on Levothyroxine treatment. She was initially referred because of elevated TSH levels. Free T4 and Free T3 levels were also elevated on multiple occasions and were similar at the hospital and private laboratory. Differential diagnoses include secondary hyperthyroidism due to a TSH producing tumor, thyroid hormone resistance at the pituitary level and thyroid hormonal assay problems. MR scan pituitary was normal. Patient refused genetic testing for thyroid hormone resistance but it is unlikely in this elderly patient.

Thyroid hormone assay problem is likely in both these patients. Serum heterophile antibodies interfere with radio immunological assays. The hospital and the private laboratory use different radio immunological assays. The hospital laboratory is acquiring heterophile antibody blocking test kits to be performed in these patients.

The hospital laboratory also intends to highlight the presence heterophile antibodies if present, when reporting thyroid function tests in these patients.

Poster Station #14

A Multi Centre Pilot Study on anxiety related disorders in health care providers across Northern Ontario

PRESENTING AUTHOR:

Dr.Ian Arra

AUTHORS:

Dr.K.Shivakumar and Dr.Ian Arra

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NOSM

ABSTRACT:

Background

As a group, anxiety disorders represent the most common of all mental illnesses. Early recognition of anxiety disorders is imperative to enhancement of the quality of life and work productivity, and to prevent common secondary disorders, such as depression and substance use. The Canadian health system has been computer based and with the daily increased use of email, information has never been more freely available. A new phenomenon amongst health care providers and other professionals characterized by intense at times but generally a sense of dread when accessing ones work email. This may point towards the 'evolution of psychopathology'.

Objectives

Investigate whether the recent invention of the Internet, and Email may have unmasked a new anxiety disorder - a separate entity in psychiatry - termed in our study as "Digital Anxiety Disorder", and whether this anxiety and patterns of avoidance are experienced at work by health care providers.

Methods

A two-phase cross-sectional study, phase I: A pilot study at a Psychiatry Department in Sudbury. Survey questionnaire based the Hamilton Anxiety Rating Scale (HAM-A). Phase II: Larger study at five centres with multiple medical specialities). The primary outcome is the score of the HAM-A. Secondary outcomes are distraction, sleep interference, quality of life and avoidance behaviour. Quantitative and Qualitative analyses will be utilized to analyze the data.

Results & Discussion

The discussion will summarize key results with reference to the study objectives, consider the limitations and how potential bias is addressed.

Poster Station #29

Exploring How Northern Ontario University Nursing Programs Are Integrating Interprofessional Education in Their Undergraduate Curricula: A Research Proposal

PRESENTING AUTHOR:

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ABSTRACT:

Formal inclusion of Interprofessional Education (IPE) curricula within undergraduate nursing programs in Canada has been occurring over the last five years. This work is the result of an accreditation requirement by the Canadian Association of Schools of Nursing in relation to IPE. University nursing programs across Canada are working to achieve the IPE requirement in their programs and to demonstrate the integration of IPE throughout undergraduate curricula. Despite this work, little is known about what is occurring with IPE integration in nursing programs in Northern Ontario, especially from perspectives of faculty members and program administrators. This presentation will describe a proposed doctoral study which will explore how Northern Ontario undergraduate university nursing programs are integrating IPE within their curricula, and identify the opportunities and challenges experienced in achieving this objective. Through a multiple case study design, program experiences will be explored within and across four undergraduate nursing programs located in Sudbury, Thunder Bay, and North Bay. A multiple case study design was chosen since it will generate detailed and in-depth analyses of the individual programs and facilitate comparison across programs. Through social constructionist principles and strategies, data will be gathered that describe the IPE experiences of program directors and faculty members. Data gathering strategies include individual and focus group interviews and review of available supporting documentation and program websites. Reciprocity will be emphasized with the participants with the results of each case being shared with the corresponding program directors and faculty. Study results may be incorporated in accreditation and other reports focused on program review and evaluation of IPE within curricula as well as used to refine current practices.

Poster Station #9

The effect of Doxorubicin administration on intramuscular BCAA concentrations in the rat

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ABSTRACT:

The purpose of the present study was to examine the effect of Doxorubicin (DOX) administration on total intramuscular branch chained amino acids (BCAA) in the soleus (SOL) and white gastrocnemius (WG) of the rat following a single IP administration of 1.5 or 4.5 mg/kg DOX after 24, 48, 72, 96, 120, 144, 168 and 192 hrs. The administration of 1.5 mg/kg DOX did not cause significant changes in BCAA concentrations in the SOL or the WG. However the 4.5 mg/kg dose resulted in a decrease ($P < 0.05$) of BCAA in the SOL 24, 168 and 192 hours (105 ± 8 , 120 ± 10 and 155 ± 15 $\mu\text{mol/kg dw}$, respectively) post injection compared to control (304 ± 34 $\mu\text{mol/kg dw}$). Similarly, BCAA significantly decreased in the WG 24, 144, 168 and 192 hours (93 ± 8 , 123 ± 10 , 107 ± 11 and 154 ± 19 $\mu\text{mol/kg dw}$, respectively) after the administration of the 4.5 mg/kg dose compared to control (317 ± 44 $\mu\text{mol/kg dw}$). BCAA concentrations in the SOL were decreased ($P < 0.05$) following the 4.5 mg/kg dose, when compared to 1.5 mg/kg, after 24 (224 ± 3 %), 72 (138 ± 3 %), 144 (154 ± 2 %), 168 (183 ± 5 %) and 192 hours (149 ± 6 %). Likewise, BCAA concentrations in the WG were decreased ($P < 0.05$) following the administration of 4.5 mg/kg DOX after 24 (288 ± 8 %), 144 (224 ± 1 %), 168 (239 ± 8 %) and 192 hours (151 ± 11 %) when compared to the 1.5 mg/kg dose. There were no consistent differences when comparing between muscle types. These data represent, for the first time, alterations in BCAA in the skeletal muscle as a function of DOX administration. This presents a significant clinical implication as a single administration of DOX effectively reduces BCAA which promotes muscle wasting and a poor clinical outcome. Supported by NSERC.

Poster Station #15

USING GENETIC SCREENING TO IDENTIFY INDIVIDUALS IN NORTHERN ONTARIO WITH HIGH SUSCEPTIBILITY FOR PSEUDOEXFOLIATION GLAUCOMA

PRESENTING AUTHOR:

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ABSTRACT:

Pseudoexfoliation glaucoma (PEXG) is an autosomal dominant form of glaucoma that is characterized by high IOP and rapid damage to the optic nerve. PEXG is unique in that most patients do not present with clinical signs of the condition until the age of 65. If left untreated, PEXG can lead to severe vision loss or even blindness 5 to 10 years after onset. One of the main obstacles in the management of glaucoma is early detection. Current screening programs are based on IOP measurement and visual field testing which have low specificity and sensitivity. Recently, the lysyl oxidase like-1 (LOXL1) gene has been identified as a candidate gene for PEXG. Two single nucleotide polymorphisms (SNPs) that lead to mutations in the LOXL1 gene have been identified in populations across the world to give 50:1 or 15:1 odds of having the disease. In the current study, we genetically screened people in Northwestern Ontario to identify PEXG mutations in patients with PEXG as well as their adult children as a group with high susceptibility for PEXG. We extracted DNA from saliva samples and amplified the LOXL1 gene to screen for the SNPs using restriction enzyme digests. Our results have shown that all of the patients with PEXG (n=13) as well as their adult children (n=9) have the R141L SNP. Of those children, 67 % were found to be homozygous (two copies of the mutated gene), meaning that these adult children will pass a copy of the mutated gene on to their offspring. Our results allow the at-risk adult children of patients with PEXG to become aware of their disease burden, and to consider non-invasive pre-emptive treatment.

Poster Station #7

Engaging Students in Nursing Research

PRESENTING AUTHORS:

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ABSTRACT:

This article describes a nursing student's experience in an introductory nursing research class. This presentation outlines various teaching-learning strategies a professor used to engage students in an otherwise challenging content area. Various strategies included gaming, video clips, clickers and altering facilitator roles. These innovative strategies are discussed in reference to millennial learners, who represent majority of the undergraduate nursing students today.

Poster Station #17

Characterization of RBM5 and RBM10 in Lung Squamous Cell Carcinoma

PRESENTING AUTHOR:

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ABSTRACT:

Lung cancer is the leading cause of cancer-related deaths in Canada for both men and women, resulting in more deaths than breast, colorectal and prostate cancer combined. Squamous cell carcinoma (SCC) is a subtype of lung cancer that manifests in bronchial epithelium and accounts for 25-30% of lung cancer cases. This subtype of lung cancer is strongly associated with tobacco smoke exposure: over 90% of SCC patients are current or former smokers. RBM5/LUCA-15 (LUng CAncer-15) is a tumour suppressor gene and a modulator of apoptosis that functions by regulating alternative splicing. In various subtypes of lung cancer, RBM5 is often downregulated and is sometimes deleted. RBM10 is a gene that is structurally related to RBM5, encoding a protein that also functions as a modulator of apoptosis and a regulator of alternative splicing. Expression of RBM10 has never been examined in SCC, although mutations in the gene have been observed in other subtypes of lung cancers. We hypothesize that RBM5 and RBM10 are important to the development of SCC. Our objectives are (1) to confirm that RBM5 is downregulated in SCC and (2) to determine if expression of RBM10 changes in the development of SCC. To accomplish this, we have collected (a) tumour and non-tumour lung tissue, and (b) a detailed smoke exposure history, from patients undergoing lung surgery at Health Sciences North in Sudbury. Experimentally, DNA, RNA and protein is simultaneously extracted from the lung tissue specimens. RNA and protein is examined for changes in RBM5 and RBM10 expression levels. End-point PCR is t3.1()-h SBte

Using an iPod App to Monitor and Manage the Risk of Musculoskeletal Disorders from Whole Body Vibration Exposure

PRESENTING AUTHOR:

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ABSTRACT:

Introduction: The improvement of the health and safety of workers within the mining, forestry, construction and agriculture industries is crucial for the vitality of Northern Ontario. Occupational exposure to whole-body vibration (WBV) while operating mobile equipment has been associated with musculoskeletal disorders, particularly lower-back pain. Monitoring systems for WBV typically use expensive equipment leading to infrequent measurement [1]. The objectives were to test the accuracy of a low-cost measurement system (WBVpod) against a gold-standard method in 1) a laboratory using simulated exposure profiles and 2) during the field operation of urban passenger buses.

Methods: Both measurement devices – series 2, 10g tri-axial accelerometer (NexGen, Ergonomics, Montreal, QC) with a P3X8-2C DataLogII data-logger (Biometrics, Gwent, United Kingdom), and the WBVpod which uses iPod accelerometers (WBV v2.0, ByteWorks) – were set-up under the buttock/thigh of the participant to measure vibration simultaneously. In the laboratory, seven unique WBV profiles were generated with a Rotopod 3000 (Mikrolar Inc., Hampton, NH, USA) [2]. In the field, measurements were taken under typical operating conditions of urban passenger buses in a Northern Ontario city. The frequency-weighted r.m.s. acceleration (awx, awy, awz) for each device was calculated.

Results: Pearson correlation coefficients between the WBVpod and the series 2 accelerometer in the laboratory were 0.986, 0.984, and 0.992 (all p-values<0.01) with absolute errors of 11%, 8%, and 6 % for the x, y, and z-axes respectively. In the field, the resulting correlations were 0.96, 0.895, and 0.836 (p<0.001) with absolute errors of 7%, 7%, and 5% for the x, y, and z-axes respectively.

Conclusions: The results are consistent with previous studies comparing the accuracy of the WBVpod against a gold standard device [1] [3]. The inexpensive and ‘user-friendliness’ of the WBVpod may enable workers and employers to consistently monitor and reduce exposure to harmful levels of WBV within the workplace [1].

Poster Station #19

Using Three Sources of Data to Explore the Delivery of Person-Centered Care Approaches for Seniors with Neurocognitive Disorders in Some Northeastern Ontario Long-Term Care Facilities

PRESENTING AUTHOR:

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ABSTRACT:

Traditional models of care used within many long-term care homes (LTCHs) foster an environment that can diminish personhood from those with neurocognitive impairment (NCD) due to factors such as routinization of daily activities and objectification. Person-centered care (PCC) models are based upon the value-driven theory and approach to holistic reciprocal patient care. This presentation will discuss the design of a novel mixed methods exploration of the experiences of frontline caregivers' ability to implement PCC strategies in both 'traditional' LTCHs and facilities receiving 'enhanced' support through Behavioral Supports Ontario (BSO). The study will use an embedded design, placing weight on the qualitative component of the study, gathering three distinct yet interconnected sources of data. In-depth interviews will be conducted with frontline caregivers (n=26-40) of those with NCD from eight LTCHs, including two urban (Sudbury, Sault Ste. Marie) and two rural (Mattawa, Kapuskasing) enhanced sites, and two urban (Sudbury, Timmins) and two rural (Thessalon, Kirkland Lake) traditional sites. Secondly, an embedded pilot quantitative study will use secondary data of NCD patients obtained from the InterRAI Clinical Assessment Protocols (CAPs) mandated for all LTCH residents in Canada, specifically: (1) physically abusive behaviors; (2) verbally abusive behaviors; (3) persistent anger with self or others; (4) repetitive anxious complaints; (5) withdrawal from activities of interest; and (6) expressions of sadness or depression. This data will be analyzed to examine if seniors with NCD residing in some enhanced LTCHs report fewer behavioral incidents compared to those residing in some traditional settings. Thirdly, data will be qualitatively gathered through structured interviews with senior government officials and LTCH management (n= determined emergently) combined with textual analysis of pertinent legislation and policies to contribute to the iterative critical analysis necessary to inform and create inferences between the experiences of frontline caregivers and their workplaces.

Poster Station #16

A Longitudinal Examination of Rural Status and Suicide Risk based on the RAI Home Care (RAI-HC)

PRESENTING AUTHOR:

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ABSTRACT:

There is limited research on suicide risk in Canadian home care. Older adults have the highest rates of death by suicide worldwide. This research examined characteristics of rural and urban home care recipients (N=219,723) with a hospital or emergency department (ED) visit for suicide attempts in Ontario, Canada. Survival analysis was used to observe time between home care assessments and hospital or ED visits for suicide attempts. Cox's regression modelling identified factors that increased and decreased risk for emergent care. The rate of hospitalizations for suicide attempts among older home care clients in rural settings was equivalent to rates in urban settings. This research builds on a growing need for health leadership to ensure that home care providers have appropriate training and resources to assess and respond to potential risk of suicide among frail elders in both rural and urban settings.

Poster Station #18

The Impact of Childhood Obesity Discourses on Mothering Work for Single Mothers who live in Poverty in Northeastern Ontario

PRESENTING AUTHOR:

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ABSTRACT:

The term “healthy children” has been used in academic research, public health, and the mainstream media to describe children whose weights are within a socially acceptable range. This usage conflates overall health with thinness, often completely overlooking other aspects of health and employing body-stigmatizing language about children’s bodies.

In my doctoral research, I am using institutional ethnographic methodologies to explore the impact of discourses surrounding childhood obesity and rurality on domestic and reproductive labour done by low income single mothers residing in rural Northeastern Ontario. Specifically, I am using interviews and guided walks with twenty participants to investigate parent’s conceptions of children’s health. I will also explore the implications of rurality and poverty on families’ access to the means necessary to do the work they believe is required to raise healthy children.

This presentation will describe the importance of considering rurality in research on childhood obesity. I will discuss obesity rates and representations in rural areas within the literature and the strengths and barriers faced by rural families attempting to follow guidelines set out by public health. I will then describe some of the ways that this research can contribute to changing how children’s bodies are researched and discussed.

Poster Station #23

Orphan Elders: Disparities in In-Hospital and Discharge Outcomes for Older Adults with No Primary Care Provider

PRESENTING AUTHOR:

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ABSTRACT:

An unknown proportion of the older adults served by Thunder Bay Regional Hospital have no Family Physician. We believe that older adults with no family physician are at higher risk of adverse events including longer length of hospital stay, increased rate of hospital readmission, unsafe medication prescription, and increased number of emergency room visits. We also believe older adults with no family physician utilize more inpatient tests and procedures and increase health care costs because there are no family doctors to order tests, make referrals, and follow up results in the community. In this retrospective chart review we will compare the above outcomes for 100 patients with and 100 patients without family physician. Our results will be available in April 2015. We believe that it is necessary to study this population in order to understand their care needs, and devise strategies to provide supports to these patients as the search for primary care providers continues.

Poster Station #20

Analysis of RBM5 function in small cell lung cancer

PRESENTING AUTHOR:

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ABSTRACT:

In 2013 lung cancer became the leading cause of cancer-related deaths in Canada for both men and women. Small cell lung cancer (SCLC) is one subtype of lung cancer. In Canada, SCLC is not commonly operated on because it has generally metastasized prior to diagnosis. SCLC is an aggressive cancer and commonly develops resistance to drugs used to treat it, including platinum-based agents such as cisplatin. RBM5 is a lung cancer tumour suppressor gene that is generally downregulated in lung cancer. In some SCLC cell lines it is deleted. RBM5 is an RNA-binding protein that modulates apoptosis and is involved in regulating the cell cycle. We hypothesize that an increase in RBM5 expression results in decreased SCLC cell proliferation and increased apoptotic-like cell death in the presence of cisplatin.

A SCLC cell line, GLC20, is being used for *in vitro* mechanistic studies. RBM5 is homozygously deleted in GLC20 cells. We have previously established two GLC20 sublines that express RBM5, each at a different level. Our research to date shows a decrease in GLC20 cell proliferation in the high but not the low RBM5 expressing subline compared to either the parental cells or vector control subline, using an MTT and cell counting assay. In addition, an increase in cell death in the presence of cisplatin occurred in both RBM5 expressing sublines compared to either the parental cells or vector control subline, as evidenced by cell counting assays and PARP cleavage. The increase in PARP cleavage suggests that the cell death is apoptotic-like. Fluorescence microscopy will be used to confirm this observation.

Our results suggest that the loss of RBM5 expression leads to increased proliferation and survival of SCLC cells. We hope to demonstrate RBM5's potential role as a SCLC biomarker and future therapeutic tool. Current results will be presented.

Poster Station #22

Strengthening the Rural Dietetics Workforce: Examining the Impact of the Northern Ontario Dietetic Internship Program on Recruitment and Retention

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L Rysdale

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ABSTRACT:

Background: The Northern Ontario Dietetic Internship Program (NODIP), integrated within the Northern Ontario School of Medicine (NOSM), provides 46 weeks of practice experiences in urban, rural, and under-served areas of Northern Ontario. This study evaluates the early practice experiences of the first five cohorts (2008-12) of NODIP graduates. The primary goal was to understand how NODIP contributes to recruitment and retention of the dietetics workforce particularly in rural and northern communities.

Methods: NODIP graduates of the first five cohorts (n=62) were invited to complete a 27- item questionnaire two years after graduation to track work experiences, employment decisions, preparation for practice, and future career plans. Data were analysed descriptively using SPSSx.

Findings: Two-thirds of graduates were practising in rural and underserved areas. Factors affecting employment choices included: prior awareness of employers, prospects for full-time employment, flexible working conditions, interprofessional practice and continuing education, along with personal and community factors. Three-quarters chose rural or northern locations for their first employment position. Graduates saw themselves as very well prepared for entry level dietetics practice and are confident that they can function well in the interprofessional environments found in rural and underserved communities. Intentions to remain in current settings were shaped by employment conditions, including workloads, salary and benefits, opportunities for professional development and specialization, as well as by personal commitments.

Conclusions: A key measure of long term success of the NODIP is the ability to attract and retain dietitians in Northern Ontario. This study provides early evidence that the NODIP community-engaged learning model has had positive impacts on recruitment and retention of dietitians to rural and Northern practices. Results are being used to inform curriculum design, practicum experience planning, and strategies to recruit and retain dietitians to underserved areas of Ontario.

Poster Station #25

PaNDa: NOSM learner placement data provides accountability and quality improvement measures

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ABSTRACT:

NOSM has a range of educational programs including undergraduate (UME), postgraduate (PGE) physician training as well as postgraduate training of allied health professionals (HSc). Over 100 communities host these learners with all academic, clinical placement and housing data captured in one electronic database (PaNDa). Tracking and reporting the patterns and trends of learner placements is a commitment to being a socially accountable educational institution.

Methods: Using PaNDa, all 2012-13 and 2013-14 learners (medical, non-medical and visiting) were inputted and collated using Excel® (2007) by program community, learner discipline and rotation period. Learners not captured (e.g. third year clerkship) were entered separately. All data was validated by respective programs for accuracy. Quantitative analysis using frequencies and pivot tables was conducted including proportion of learners and placements by Locale: Sudbury, Thunder Bay, CCC (Community Clerkship Community), ICE (Integrated Clinical Education), Ontario and Out of Province/International.

Results: There was an increase in the total number of unique learners, placements and training days in 2013-14; 1364 to 1626 learners, 3120 to 3301 placements and 86553.5 to 88751 Training Days. The largest learner increases were UME and PGE (including electives) while HSc remained consistent. Across the whole school, Sudbury saw the greatest increase followed by Sault Ste. Marie, North Bay and Thunder Bay. The top ICE community was Red Lake (12 additional learners in 2013-14). Sudbury and Thunder Bay each contribute 24% of overall Training Days and 28% of placements. CCC's provide 33% of overall Training Days and 25% of placements while ICE and other Ontario communities each provide 9% of overall Training Days and 10% of placements.

Conclusions: PaNDa is proving to be a valuable quality improvement and social accountability measure for tracking placement and learner data, and demonstrating the continuity and diversity of distributed community-engaged teaching and learning in Northern and rural settings.

Poster Station #27

Telemedicine and Addiction: An Indicator of Things to Come

PRESENTING AUTHOR:

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ABSTRACT:

Introduction

The majority of telemedicine consults in Ontario are currently related to the area of mental health and addiction. Patients who access healthcare resources via telemedicine are familiar with this modality of care, and have unique insight. The aim of this presentation is to highlight the research design for a study designed to evaluate experience and satisfaction with telemedicine, and to consider new models of implementation.

Methods

In this qualitative inductive study, addiction patients, currently utilizing telemedicine healthcare services (n=30), in Sudbury, Ontario, Canada and key stakeholders (n=25) (such as physicians, healthcare administrators, and policy makers in Ontario) will be interviewed to discuss their experiences using telemedicine. Participants will be interviewed using semi-structured interviews and responses analyzed to identify emergent themes. It is hoped that these themes will inform a new theoretical model to help devise new methods of virtual healthcare delivery.

Research Findings

Due to the geographic and demographic challenges of many communities in Ontario, and in Canada, as well as the need to contain health care costs, new modalities of healthcare service delivery are needed. Interviews will address: safety, security, access to care, adaptability of telemedicine, and familiarity with technology. Suggested elements for improvement may include: new ways of training clinic staff, better communication protocols with remote healthcare providers and better scheduling and opening hours, all of which may represent barriers to utilizing telemedicine services.

Conclusion

Telemedicine represents a cost saving and novel method for healthcare delivery. It shows promise in many areas where resources, both human and capital, are scarce. Ensuring that telemedicine will be adopted by patients, however, requires an understanding of how current utilization is experienced, and how the interaction with a remote healthcare provider impacts wider social determinants of health.

Poster Station #24

Use of high fidelity simulation to introduce Interprofessional collaboration to college health sciences and community services students in Northern Ontario: A domestic violence scenario

PRESENTING AUTHOR:

Lynn Smith

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ABSTRACT:

Background/Rationale:

While health and social service professionals are expected to work as part of a larger team, they are not formally prepared for this role due to the typical silo culture of the college environment. The National Inter-professional Competency Framework was used to inform this mixed methods study which evaluated the experiences of health science and human services students as they interact during a simulated domestic violence scenario.

Methods:

Forty seven senior students from nursing, paramedic, police and social service work programs were involved in the project. Students completed pre and post scenario surveys including the Readiness for Interprofessional Learning Scale (RIPLS) and the Interdisciplinary Education Perception Scale (IEPS). They then completed a simulated domestic violence scenario involving a head injured client who had been abused by her partner. Students provided care to the client from the time of the initial call to 911 to her admission to the hospital Emergency Department. After the exercise they were debriefed and completed post tests.

Findings:

Students scored very high on the RIPLS and IEPS before and after the scenario. There was a significant time effect for both instruments. There were no significant correlations between demographic variables and scale scores. Qualitative themes which emerged from debrief analysis were unfamiliarity, a sense of valuing the experience, praxis and the importance of communication.

Summary:

IPC is being adopted into the college learning environment in order to enhance students' abilities to work in teams. This research involved participants from paramedic, police foundations, nursing (practical and baccalaureate) and social work programs, and examined their experiences as they worked through an IPC focused high fidelity domestic violence simulation scenario. It is anticipated that study findings will inform curriculum development and future IPC education.

Poster Station #26

Transition of Older Adults from Hospital to Home: What are the leaders experiencing in Northeastern Ontario?

PRESENTING AUTHOR:

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ABSTRACT:

Aim: To summarize the background literature for an interpretive descriptive study pertaining to the transition of patients from hospital to home. The literature review will provide a foundation for a study of the NE LHINs leadership perspectives of the challenges and opportunities experienced in providing services to older adults as they transition from hospital to home in Northeastern Ontario. The research review will focus on two categories:

- 1) Integrated care or transitional care program studies
- 2) Leadership and transition studies

Background: The Canadian health care system functions not as a system at present, but rather consists of organizations that work in silos that may lead to the occurrence of adverse events when patients are transitioned from hospital to home. These adverse events may result in patients returning to hospital emergency departments and their potential readmissions. This can result in inefficient utilization of hospital resources and potentially poor patient outcomes.

With a rapid growth in our elderly population, the number of seniors aged 65 and over is projected to more than double in Ontario from 14.6 % to 24.0 % of the population, by 2036. In addition, Northeastern Ontario will experience the biggest increase in seniors, whereas the actual growth rate of the population aged 15 to 64 is simultaneously projected to fall 1%, which could result in substantially less provincial health care dollars. As well, provincially hospital funding is projected to drastically decrease in the next two years while patient demands on the system increase.

To accommodate for the required changes, the health care leadership approach clearly needs to respond and adapt and prior to doing this, it is helpful to study experiences in other health care regions. The studies reviewed will be from North America, Australia and United Kingdom.

Poster Station #28

Use of an electronic personal health record in a small rural community

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Dylan Thompson

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ABSTRACT:

Electronic personal health records (EPHRs) are rising in prevalence in the United States and Canada. Our original research explores patient attitudes and perspectives in a small rural community towards EPHRs. This population may have lower uptake of an EPHR due to access issues especially outside of the city's main centre. While high rates of EPHR utilization have been obtained in urban primary practice settings (Krist et al., 2014), utilization in rural communities may be lower due to the continuity of care offered to patients in rural communities where their family physicians are involved in their inpatient care and emergency department work. Finally, the content of EPHR communication between physician and patient is examined and reported on. Vendors of EPHRs state that very little of the electronic messages' content is medical advice -- we explore these claims.

Krist AH, Woolf SH, Bello GA, Sabo RT, Longo DR, Kashiri P, Etz RS, Loomis J, Rothemich SF, Peele JE, Cohn J. Engaging Primary Care Patients to Use a Patient-Centered Personal Health Record. *Annals of Family Medicine*. 2014; 12(5): 418-26

Poster Station #21

Ambulance Call Volume and Social Determinants of Health

PRESENTING AUTHOR:

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NOSM – UME Medical Student (1,2,3)

ABSTRACT:

Ambulance calls are unique in that they are one of the few health care services that goes directly to the patient on immediate demand, often directly to their home. This allows for a unique means of correlating health care usage to social data without having to link it directly to individuals. This allows for a novel macro approach to examining the social determinants of health.

This research examines relationships between the number of ambulance calls within census subdivisions and social determinants of health including income, education, employment and rurality.

Ambulance call volumes per census subdivision have been obtained from Cochrane District Emergency Medical Services and social determinants of health data is provided by Statistics Canada. Ethical approval has been granted by the NOSM Undergraduate Research Ethics Board (NUREB).

Results are forthcoming. Estimated date of completion is March 26th.

Poster Station #11

Investigating Melanoma Knowledge and Health Behaviours for Skin Cancer Prevention in the Algoma District

PRESENTING AUTHOR:

Kaitlin Vanderbeck

AUTHOR(S):

Kaitlin Vanderbeck

AFFILIATIONS:

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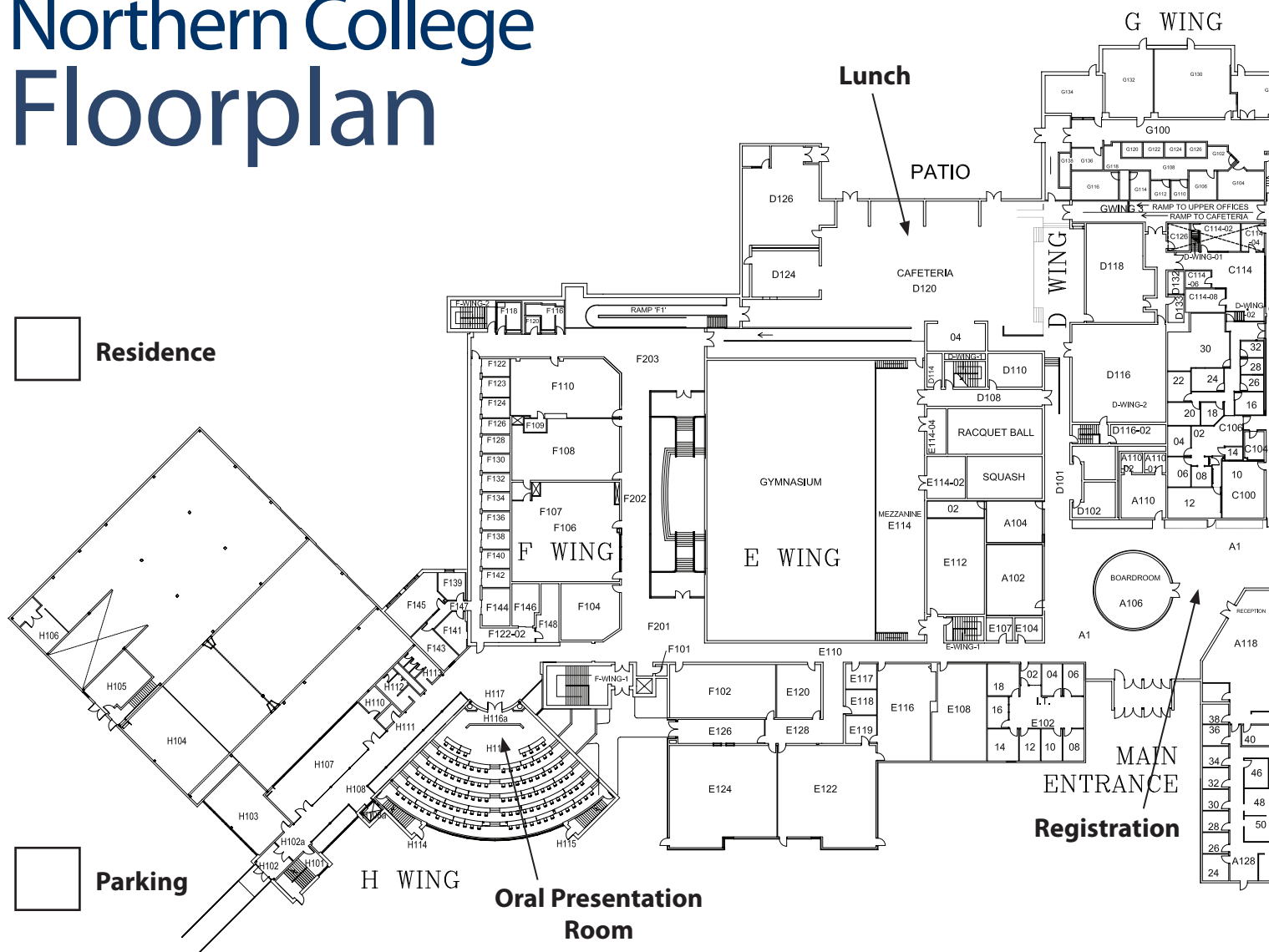
ABSTRACT:

In recent years, the incidence of malignant melanoma has been increasing worldwide. Rates have increased throughout Canada including the province of Ontario. The last study analyzing and reporting the incidence and prevalence of malignant melanoma in the Algoma District was published in 1994. Further, the majority of people who call the Algoma District home harbor intrinsic risk factors for the development of malignant melanoma. The intent of this project is to evaluate and assess how people in the Algoma District (using Sault Ste. Marie as a sample) understand melanoma skin cancer and what they can do to avoid it. Based on data obtained from Cancer Care Ontario, the incidence of malignant melanoma has increased in the Algoma District in recent years.

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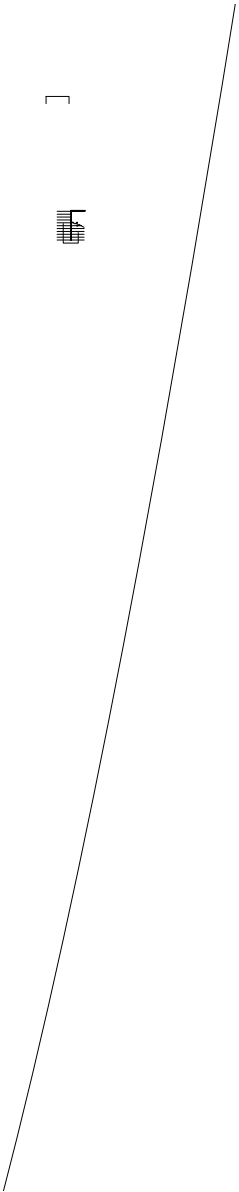
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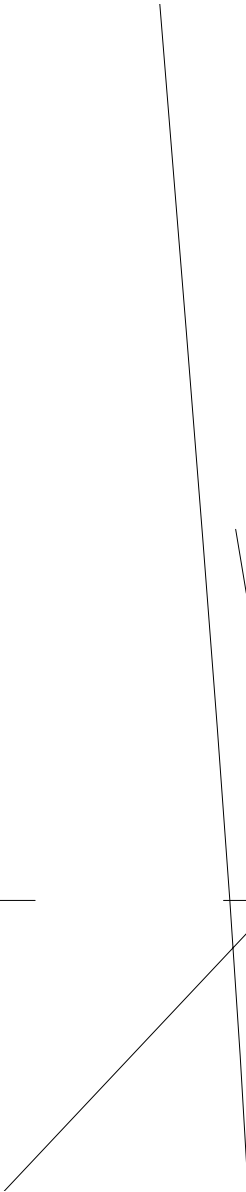
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