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Poster Abstract Program
Programme des résumés d'affiches

1. Community members guiding maternal health research in rural Nepal – Sunisha Neupane

Background: Although the maternal mortality ratio has dropped in Nepal, it is important to note that this decline has not been uniform across the country, especially in certain ethnic groups.

Objectives: To gain an understanding of maternal health care needs in rural Nepal from the perspective of the community members and examine if those needs are being met.

Methods: This is a community based participatory study. Focus group discussions and semi-structured interviews were held with women, men, mother in laws and the health care workers. Data was analysed manually to produce preliminary results, which were presented at participatory workshops. Community members participated in further analysing the preliminary results and identified the root causes of maternal health problems.

Results: Although women in Nepal are provided with monetary incentives and encouraged to give birth at a health center, home births with limited or no assistance is still practiced. Difficult terrain, limited opening hours of the health centre, and delays in seeking health care are the main reasons for home births. Furthermore, women feel the need to be able to have an option of trained personnel assisted home births when necessary. FCHVs are not able to provide much support because they are not trained for such services.

Conclusions: Despite progress observed in maternal health, there are still critical maternal health needs not met, especially in rural Nepal. This research unravels these gaps. Understanding and responding to the needs of the women in rural areas is critical in effectively and equitably improving maternal health.

What are the implications of your research to inform future policy or practice initiatives? This study demonstrates that it is crucial to include community members' views for effective health policy and a people-centred health system responsive to the needs of its population. This research captures people's voice, can guide future policies aiming to improve maternal health of these people.

2. H.E.R. Pregnancy Program: A harm reduction success story: 10 lessons learned – Nadine Santin

Co-author: Kelti Gore

Background: H.E.R. (Healthy, Empowered, Resilient) Pregnancy Program aims to assist street involved pregnant women access health care and social resources. The team is comprised of two registered nurses, a social worker, and four pregnancy support workers. This program operates under a Harm Reduction philosophy and strives to decrease barriers to health care & engage women in their pregnancy.

The program targets those women who are most marginalized, multi-challenged, often homeless, and are not connecting to any other community supports. The team works with women throughout their pregnancy and up to six months postnatal. As per our last evaluation, at the 2-month postpartum mark 79% of women who planned to parent were successfully parenting their children.

Objectives: Discuss how professionals can effectively provide a harm reduction based service when working with pregnant women who use substances by describing briefly how the program operates, the 10 lessons learned and the outcomes achieved.

Target Groups:

- Service providers
- Students
- Professionals

Activities: The presenters will discuss program history, what we've learned, as well as our current outcomes and successes that we have experienced. The presenters will be accompanied by a power point and leave time for discussion and questions at the end.

Deliverables: Audience will gain a deeper understanding of the role of Harm Reduction interventions when working with pregnant marginalized women.

What are the implications of your policy or practice initiative to inform future research? Traditionally, women who are pregnant, homeless and using substances are rejected as being hopeless and “bad women”. This work will open the discussion on how to provide meaningful interventions with a Harm Reduction framework, that leads to healthier women and ultimately, healthier babies.

3. Impact of postnatal exposure to household cleaning products on infant gut microbiota composition at 3-4 months – Mon Tun

Co-authors: Petya Koleva, Hein Tun, Theodore Konya, David Guttman, Radha Chari, Malcolm Sears, Padmaja Subbarao, Piushkumar Mandhane, Stuart Turvey, Allan Becker, James Scott, Jeffrey Brook, Tim Takaro, Anita Kozyrskyj

Background: In developed countries, there is accumulating evidence of an increased risk for asthma and atopic disease with exposure to household cleaning products. Infant gut microbiota dysbiosis.

Objectives: The aim of this study was to assess if the gut microbial composition of infants is affected by postnatal exposure to household cleaning agents.

Methods: The study involved 757 infants enrolled in the Canadian Healthy Infant Longitudinal Development (CHILD) birth cohort. At 3 months after delivery, mothers were asked to complete questionnaires on aspects of their health, environment, lifestyle and personal use of household cleaning products namely: disinfectant (multi-surface cleaner), detergent, other chemicals (spray air-freshener), and eco products. Fecal samples were collected at 3-4 months and fecal microbiota were characterized by Illumina high-throughput sequencing of the hyper-variable V4 region of the 16S rRNA gene. Bacterial taxon abundance, microbiota richness and diversity were compared between infants with high indoor disinfectant exposure (n=363,48%) and low indoor disinfectant exposure (n=394,52%) based on above and below median of total frequency scores, using Mann-Whitney-U-test.

Results: More than half of the CHILD cohort households used disinfectants at least once a month, mostly multi-surface cleaner. At 3-4 months of infant age, high indoor disinfectant exposure was associated with low fecal abundance of *Pasteurellaceae* (p=0.0001) at the family level and of *Haemophilus* (p=0.0001) at the genus level. A similar trend was detected in a comparison restricted to vaginally delivered, exclusively breastfed infants not treated with antibiotics (directly and indirectly). Moreover, *Lachnospiraceae* (p=0.0001) were higher in infants in the high disinfectant and eco products exposure groups.

Conclusions: Our study finds evidence of an association between household disinfectant exposure and infant gut microbial changes at 3-4 months of age. This suggest the possibility that cleaning products may affect development of the infant gut microbiome and immunity, with possible consequences for allergic disease later in life.

What are the implications of your research to inform future policy or practice initiatives? To raise awareness on potential harmful effects of commercial household cleaning products.

4. Evidence-informed decision-making in a rural public health network: Advancing a Baby Friendly Initiative (BFI) – Sionnach Lukeman

Co-authors: Barbara Davies, Charmaine McPherson, Josephine Etowa

Background: Networks are a potential vehicle for mobilizing knowledge, but there is little research to ensure their effectiveness in community settings. In rural areas, strong partnerships enhance community participation, which is important when designing interventions for complex issues. Breastfeeding is a powerful intervention for the health and development of a population; promotion starts with the dissemination and use of robust

evidence. Combined health system and community interventions, including BFI designation, can increase exclusive breastfeeding rates by 2.5 times.

Purpose: This paper presents the findings of a study that examined the use of evidence-informed decision-making (EIDM) within an interorganizational public health network, including identifying the facilitators and barriers to achieving network goals.

Methods: A mixed method case study design was used. The primary sources of data were focus group discussion and questionnaire administration. Data were analyzed using framework analysis and social network analysis (SNA). Network maps were created using UCINET 6©.

Results: The SNA findings highlighted the role that relationships have on the sharing of knowledge among network members across organizations. Network membership included representatives from a regional health authority and community-based organizations. Participants emphasized the need for leadership at multiple levels (community, network, primary organizations). The lack of financial and human resources necessary to achieve the network's goal of obtaining BFI designation was a key barrier.

Conclusions: The role of multi-level leadership is important for future network development and EIDM. Case study methodology facilitated momentum towards the networks' goals, as described in an epilogue to the study.

What are the implications of your research to inform future policy or practice initiatives?

This study highlights the potential for network maps to be used as a knowledge mobilization tool, and future studies should investigate their use in public health networks.

5. Portrait of preterm birth in Quebec, 1981 to 2012 – Safyer Mckenzie-Sampson

Co-authors: Jessica Healy-Profitos, Marianne Bilodeau-Bertrand

Background: Preterm birth before 37 weeks of gestation is the world's single largest cause of newborn death. Despite the global increase in preterm birth rates, there has been no recent monitoring in Quebec.

Objectives: Our objective is to present a portrait of preterm birth in Quebec between 1981 and 2012.

Methods: We used live birth registration data from Quebec birth certificates between 1981 and 2012, and hospital discharge records for deliveries of live births between 2006 and 2012. For hospital data, each maternal chart was matched to the infant chart(s). We computed the prevalence rates for socio-demographic characteristics, clinical exposures, and outcomes related to preterm birth.

Results: In 2012, the prevalence of preterm birth was 7.1 per 1000 live births compared with 5.6 per 1000 live births in 1981 and 8.1 per 1000 live births in 2004. Women who delivered preterm had more than 5 times the prevalence of death before discharge, admission to intensive care units, antepartum hemorrhage and placental abruption compared with women who delivered full term. Moreover, the prevalence of preterm delivery was highest for women with low education and, women less than 20 and more than 45 years old.

Conclusions: In Quebec, the prevalence of preterm birth increased steadily from 1981-2004, but has since declined. The prevalence of clinical complications was higher for preterm pregnancies, suggesting that improvements are needed in pre and postnatal care to reduce severity and frequency of these outcomes.

What are the implications of your research to inform future policy or practice initiatives? The findings of this portrait are of high public health importance as those born preterm have an appreciable risk of long-term neurological impairment and developmental delays. Therein, our findings can help Quebec policymakers identify areas within the current healthcare system in need of additional funding and reform.

6. Enjeux éthiques reliés à la mise en place d'une mesure populationnelle du développement des enfants québécois de 2 ans : répercussions sur le choix d'outils – Genevieve Tardif

Co-authors: Annie Bérubé, Claudine Jacques, Sylvain Coutu, Diane Dubeau, Marilou Cournoyer, Lise Lemay

Le Québec bénéficie depuis 2012 de l'instrument de mesure du développement de la petite enfance (IMDPE) pour tracer un portrait développemental des enfants à leur entrée à la maternelle. L'utilité reconnue de cet outil incite à disposer d'un outil similaire spécifiquement conçu pour les plus jeunes enfants (± 2 ans) afin de mettre en place des mesures de stimulation du développement adaptées à leurs besoins. Afin de soutenir le Fonds Avenir d'enfants dans l'identification d'outils potentiels permettant la mesure populationnelle du développement des jeunes enfants, une synthèse des connaissances sur les instruments de mesure pouvant être utilisés sur une base populationnelle afin de documenter l'état de développement des enfants québécois de ± 2 ans a été réalisée.

Les résultats de la recension indiquent a) que plusieurs outils validés et normés pourraient permettre la mesure du développement des jeunes enfants, mais qu'aucun outil n'a été conçu pour répondre à un mandat spécifique de mesure populationnelle du développement pour ce segment de la population ; b) qu'il ne serait pas souhaitable d'utiliser un outil de dépistage ou tout autre outil validé et normé à moins d'assortir cette mesure d'une obligation de services envers les enfants ainsi dépistés; c) que la forte variabilité quant au rythme de développement chez l'enfant de moins de 4 ans a pour effet d'augmenter le risque de faux-positifs et ainsi « fausser » la représentativité des besoins et d) que des éléments contextuels (par ex., la nutrition, le sommeil, les soins reçus, le contexte socioéconomique) prédisent mieux les résultats à l'IMDPE 5 ans que les items reliés au développement.

Ces résultats mettent en lumière différents enjeux sociaux et financiers liés à l'importance de bien différencier la mesure populationnelle de la surveillance et du dépistage systématique dans la sélection d'outils de mesure populationnelle du développement ainsi qu'à la pertinence de n'évaluer que le développement chez les jeunes enfants.

7. Understanding how children with special health care needs are supported within Early Years Centres in Nova Scotia – Janet Green

Co-author: Sara Kirk

Background: To address the growing need to support children in the years before they enter school, the Department of Education and Early Childhood Development of Nova Scotia has created eight Early Years Centres (EYCs) across Nova Scotia. The goal of EYCs is to provide support for young children and their families in three main ways: 1) through a play-based learning program for children in the year preceding school, 2) through family supports and resources, and 3) through regulated child care. Because EYCs are designed to be accessible to all families, it is important to understand how children with special health care needs are supported within them.

Objectives: To explore the system-level barriers and enablers to support children with special health care needs attending EYCs in Nova Scotia.

Methods: Through a case study approach, key stakeholders (early childhood educators, health care professionals, parents) will participate in a semi-structured interview. Interview data will be analyzed using qualitative description to identify systems-level barriers and enablers to delivering EYC programming to children with special health care needs.

To complement the stakeholder interviews, site visits will be conducted to observe how health and education systems interact to provide support for children with special health care needs.

Results & Conclusions: This project is underway; it is anticipated that this research will elucidate some of the systemic barriers and enablers involved in providing support to children with special health care needs within the EYC environment.

What are the implications of your research to inform future policy or practice initiatives? It is our hope that by developing a better understanding of how systems interact to support children with special health care needs, we will identify ways to ensure equitable access to EYCs for children with special health care needs.

8. Unmet dental needs and barriers to seeking dental care among children despite universal public insurance

– Shauna Hachey

Background:

- The disadvantaged suffer the most oral disease and experience the most barriers to care
- Universal insurance can improve access to oral health services for disadvantaged children, however inequities in oral health persist
- The COHP covers basic dental care for children until the age of 15

Objectives:

1. Determine the barriers to care
2. Determine the profile of those seeking dental care at the IWK
3. Determine the perception of NS's oral healthcare

Methods:

- A cross-sectional descriptive study
- Caregivers attending the IWK hospital for their child's dental appointment were invited to complete a 52-item questionnaire on a computer tablet

Results:

Profile

- 10% of children were Aboriginal
- 41.2% of caregivers had ≤ high-school education
- 50.4% of families lived in areas of < 30,000
- 53.8% of families were living below the LICO threshold

Utilization of Services

- Perceived recommended age of first visit was 2.29 +/- 1.36
- Mean age of first visit was 2.69 +/- 1.29
- 44.1% of children had cavities at their first visit

Barriers to Care

45.8% experienced barriers to care:

- Cost (17.7%)
- Uncooperative child (16.1%)
- Inability to miss work (9.7%)

Perception of Oral Health Care in NS

50.9% of caregivers chose an alternate care setting for their children:

- Community-based clinic (28.1%)
- Children's school-based clinic (7%)
- Primary health-care based clinic (15.8%)

Conclusions: Despite the availability of publicly funded oral health care in Nova Scotia, socio-economically disadvantaged children continue to have unmet dental needs

What are the implications of your research to inform future policy or practice initiatives? To impact oral health strategies to be equitable and to benefit all those eligible. Research is needed to determine the provincial current oral health status of children and to determine the most effective evidence-based public health dental strategies for children in Nova Scotia.

9. On track: Examination of demographics of Ontario kindergarten children with adequate development –

Magdalena Janus

Co-author: Ashley Gaskin, Eric Duku

Background: Over the last decade much attention has been paid to patterns of vulnerability in child development, using the population-level data collected with the Early Development Instrument (EDI, Janus & Offord, 2007). Vulnerability is associated with many risk factors, both at individual and neighbourhood level. However, more recently there has been increased interest in further interpretation of the EDI data to better understand patterns of positive development in order to facilitate preventive approaches.

Objective: In this study we undertake a descriptive analysis of children whose scores indicate that they are “developmentally on track”, that is have scores above the 25th percentile.

Methods: Classification is based on comparing a child’s score to a baseline 10th and 25th percent cut-off on any of the 5 developmental domains assessed by the EDI: Physical Health and Well-Being, Social Competence, Emotional Maturity, Language/Cognitive Development, and Communication Skills and General Knowledge. Scores below the 10th percentile indicate vulnerability, between 10th and 25th being “at risk”, and above 25th being “on track”. Demographics of children “on track” in all domains were examined for 125858 senior kindergarten children in Ontario’s 2015 Cycle 4 data collection.

Results: While almost all kindergartners in Ontario (95.4%) are “developmentally on track” on at least one EDI domain, only 49.6% (62447) children score above 25th percentile on all five. Boys and younger children tend to be underrepresented among children “on track” (52-55%), but the disparity is not as large as in vulnerability.

Conclusions and Implications: Only about half of the cohort is on track in all domains of development. The pattern of “on track” appears to be more equitable across the demographic categories than vulnerability. Understanding how the “on track” classification is associated with neighbourhood factors may provide complementary evidence for early education improvement and poverty reduction strategies.

10. Are today’s youth becoming increasingly sleep deprived? Findings from the COMPASS study – Karen Patte

Co-author: Wei Qian, Scott Leatherdale

Background: The importance of sleep is increasingly recognized, yet, to date, no population-based studies have examined sleep duration over time among Canadian youth. Further exploration and surveillance is necessary to determine whether progressive declines in sleep have continued over recent years, and to identify risk factors in the Canadian context.

Objectives: This study aimed to examine secular trends in sleep duration among adolescents, common patterns over secondary school, and identify high-risk subgroups for sleep deprivation and problematic trajectories.

Methods: To explore secular trends, sleep duration was compared across three waves of the COMPASS study (Y₂:2013/2014, Y₃:2014/2015, Y₄:2015/2016), and in the most recent wave, differences were tested by student-level (race/ethnicity, grade, gender) and school-level (urbanicity, socio-economic status[SES]) predictors. For the longitudinal analyses, group-based trajectory modelling was conducted using 3-year linked data, adding the student- and school-level variables as risk factors.

Results: Average sleep durations were significantly lower with each successive study wave, resulting in less than half of youth meeting guidelines. Over 90% of participants were classified into two trajectory groups, with about 30% following a particularly concerning path of sleep durations from 6.84 down to 6.07 hours per night over the study period. Adequate sleep and more favourable trajectory group membership were more likely among students who identified as male, white, and in earlier grades, and those attending schools located in high SES and rural/small urban areas.

Conclusions: Results support the necessity of continued surveillance and interventions to monitor and counteract what appears to be an ongoing trend of diminishing sleep, and a growing number of sleep deprived adolescents.

What are the implications of your research to inform future policy or practice initiatives? Findings provide insight on high-risk groups that may warrant targeted efforts (e.g., lower SES schools), as sleep disparities may contribute to later health inequities.

11. Taking bullying by the horns: Examining the prospective relationship between childhood bullying behaviours and subsequent physician-diagnosed internalizing disorders – Julia Kontak

Co-authors: Sara Kirk, Lynne Robinson, Arto Ohinmaa, Paul Veugelers

Background: With the high prevalence of mental health problems in Canada, it is vital to examine early social factors that influence mental health development, such as bullying behaviours. There is strong support for the association between bullying behaviours and common forms of internalizing disorders such as depression and anxiety, yet there is a dearth of longitudinal studies examining the topic.

Objectives: To examine the temporal relationship between childhood bullying behaviours (being a victim, being a bully, or being a bully-victim) and number of physician-diagnosed internalizing disorders a child has over a seven-year timespan.

Methods: This study used data from the 2003 Children's Lifestyle and School Performance Study (CLASS), a population-based health survey of 4694 grade 5 students in Nova Scotia. Prospectively linking CLASS data to administrative health care records enabled exploration of the relationship between bullying behaviours and physician-diagnosed internalizing disorders. Negative binomial regression analyses were conducted to examine the relationship.

Results: Of the 4694 participants, 24.12% children were diagnosed with a physician-diagnosed internalizing disorder over a seven-year timespan. Children who were victims of bullying had a higher risk of having a subsequent physician-diagnosed internalizing disorder (IRR = 1.38, 95% CI = 1.11, 1.70). Children who reported being a bully had a decreased risk of having an internalizing disorder (IRR = 0.67, 95% CI = 0.46, 0.99), while there was no association between being a bully-victim and having an internalizing disorder.

Conclusions: Bullying behaviours need to be considered a serious public health concern due to their detrimental effects on long-term mental health.

What are the implications of your research to inform future policy or practice initiatives? Provides evidence for additional surveillance of children involved in bullying behaviours, as well as highlights the importance of early prevention strategies to address bullying behaviours and reduce the prevalence of mental health problems in Canada.

12. Towards reducing the burden of youth violence and bullying: identifying common risk factors in victims and perpetrators in Ontario – Heather Manson

Co-authors: Thomas Piggott, Daniel Harrington

Background: Bullying and violence are common experiences for Ontario youth. These experiences pose a significant burden of mental and physical disease through the life course and represent important public health issues. Empirical research has also identified that in many instances victims become perpetrators or perpetrators become victims, though there is debate in the literature as to the mechanisms underlying this overlap.

Objectives: The objective of this study is to assess the associations between risk factors for violence and bullying for Ontario youth who are victims, perpetrators, both victims and perpetrators and neither victims nor perpetrators.

Methods: This study analysed Ontario public school students in grades 7-12 who participated in the 2015 Ontario Student Drug Use and Health Survey (OSDUHS). Multivariable multinomial logistic regression modelling was used to estimate the likelihood that students with various risk profiles were both victims and perpetrators in relation to: (1) only victims, (2) only perpetrators, or (3) neither victims nor perpetrators.

Results: Risk factors significantly associated with an increased likelihood of being both a victim and perpetrator compared to neither included: harmful alcohol use (RR: 0.360; 95%CI: 0.259-0.500), potential problem drug use (RR: 0.422; 95%CI: 0.297-0.600), traumatic brain injury (RR: 0.616; 95%CI: 0.459-0.828), tobacco use (RR: 0.685; 95%CI: 0.493-0.952), symptoms of ADHD (RR: 0.781; 95%CI: 0.580-1.050), PVP (RR: 0.420; 95%CI: 0.294-0.599), and moderate (RR: 0.428; 95%CI: 0.316-0.578) and high (RR: 0.324; 95%CI: 0.212-0.494) psychological distress.

Conclusions: This study has demonstrated associations between many risk factors of interest to public health for Ontario students reporting both victimization and perpetration of violence and bullying.

What are the implications of your research to inform future policy or practice initiatives?

Upstream public health interventions on modifiable risk behaviours has the potential to reduce the burden of youth violence and bullying.

13. Childcare access and affordability issues for young parents in two British Columbian communities –

Jean Shoveller

Co-authors: Cathy Chabot, Caroline Mnizak, Putu Duff, Kate Shannon, Anna Carson, Devon Greyson

Background: Access to high-quality, affordable childcare is a critical issue for many parents in Canada. However, there is little research evidence regarding the childcare needs of parents ages 15-24 years.

Objectives: This paper explores the experiences of young parents (aged 15-24 years at baseline) with accessing childcare.

Methods: Data were collected from an ongoing longitudinal ethnographic study of the experiences of young parents living in the Greater Vancouver and Prince George regions of British Columbia. Qualitative interviews were conducted with 114 young parent participants (n= 62 in Greater Vancouver; n = 52 in Prince George).

Results: Study participants pursuing their secondary school education through Young Parent Programs valued the licensed childcare services provided on-site. However, the availability of childcare was a significant issue when parents required it outside of school or business hours. Family and friends who provide trustworthy and flexible childcare were frequently relied upon. Provincial and federal childcare subsidies help many young parents to cover most of the cost of licensed or at-home daycare. However, parents unable to access these subsidies frequently could not afford childcare and, in many cases, were unable to work. Many young parents attending school, work, or both found it difficult to coordinate childcare with their school obligations (e.g., homework) and/or work schedules.

Conclusions: Young parents rely on childcare in order to access much needed services, complete their education, and maintain their employment. Finding age-appropriate, reliable, safe, and affordable childcare is a challenge for many of the parents in our study.

What are the implications of your research to inform future policy or practice initiatives? The development of universal, subsidized childcare (at either the provincial or federal level) would greatly assist young parents with completing their education and pursuing and maintaining gainful employment.

14. Young parents' housing experiences in two B.C. communities: a qualitative analysis – Jean Shoveller

Co-authors: Cathy Chabot, Kate Shannon, Anna Carson, Michelle Pang, Putu Duff, Devon Greyson

Background: Access to safe, healthy, and affordable housing is a key determinant of health; however, there is a dearth of literature regarding the housing-related experiences of early-age parents.

Objectives: This paper reports on the housing-related experiences of parents (15-24 years at baseline), including their current living situations and housing aspirations.

Methods: Data were collected from an ongoing longitudinal study of young parents living in two metropolitan regions in British Columbia: Greater Vancouver (GV) and Prince George (PG). Qualitative interviews were conducted with 114 young parent participants (n= 62 in GV; n = 52 in PG).

Results: Young parents in both communities face social and economic barriers to finding and maintaining safe, healthy, and affordable housing. Challenges include the low supply of affordable housing units, discrimination from potential landlords, and financial insecurity. Many parents described poor living conditions. Health/safety concerns and interpersonal conflict (e.g., with housemates, neighbours, landlords) were significant issues and were described as impacting their ability to stay in school (or stay employed), and, in some cases, maintain custody of their children.

Conclusions: Shortages of housing that is safe, affordable, and accessible to young parents warrant urgent action.

What are the implications of your research to inform future policy or practice initiatives? The study findings have important implications for municipal, provincial, and federal housing policies, in addition to providing evidence to inform the planning and implementation of health and social services that support the needs of young parents and their children.

15. Populations at risk: Aging-out of the child welfare system and incarceration among a prospective cohort of people who use drugs – Jean Shoveller

Co-authors: Brittany Barker, Ekaterina Novosa, Thomas Kerr, Kora DeBeck

Background: Exposure to the child welfare system (CWS) is associated with an array of harms throughout life, including, elevated rates of substance use, homelessness and incarceration. However, less is known about the unique trajectories of those who age-out of the CWS, defined as experiencing an abrupt termination in financial and emotional support upon turning the legal age of majority.

Objectives: This study sought to longitudinally examine the relationship between aging-out of the CWS and subsequent incarceration among people who use illicit drugs (PWUD).

Methods: Between December 2005 and May 2015, data were derived from two prospective cohorts of PWUD in Vancouver, Canada. Over the study period, 411 PWUD with a history of being in the CWS were seen and completed a study visit; of whom, 255 (62.0%) were female and the median age was 36.7 (IQR: 27.6–49.5). Multivariable linear regression analysis was employed to examine the relationship between aging-out of the CWS and increasing number of incarceration events, adjusting for confounders.

Results: Among PWUD with a history of being in the CWS, 160 (39%) reported aging-out of the CWS and 38 (9.25%) reported being recently incarcerated at some point over the study period with a median number of 2 incarcerations (IQR: 1-4). Despite adjusting for numerous confounders, including drug use patterns, drug dealing, and year of study recruitment, aging-out of the CWS was independently associated with increasing number of incarceration events (adjusted odds ratio=1.20; 95% confidence interval: 1.04-1.38).

Conclusions: Aging-out of the CWS was highly prevalent among our sample of PWUD and suggest that aging-out is an important risk factor for subsequent incarceration.

What are the implications of your research to inform future policy or practice initiatives? Our findings support the need to evaluate innovative measures, such as extending care past the age of emancipation, to reduce harms associated with aging-out of the CWS and subsequent involvement with the criminal justice system.

16. *“Us helping us – That’s what it should be”*: Expanding peer involvement in harm reduction service delivery at Ottawa Public Health (OPH) – Aideen Reynolds

Co-authors: Jenna Bennett, Kira Mandryk, Rebecca Potter, Sue Latreille, Henry Maxwell

Background: Results from an Ottawa Harm Reduction Needs Assessment indicated the need for greater involvement of peers (persons with lived experience) in design, delivery and evaluation of front-line services. This project was designed to pilot-test involving Peer Educators to co-facilitate group training in Naloxone and overdose prevention.

Objectives: Objectives were:

- 1) Recruit and train four Peer Educators;
- 2) Document perceptions of all involved – Peer Educators, people who participated in peer-led group training, and program staff; and,
- 3) Increase OPH capacity to effectively involve peers in front-line service delivery.

Methods: Semi-structured interviews were conducted with: Peer Educators; participants of peer-led group training; and program staff. With participant consent, interviews were audio-recorded for later transcription and thematic coding. Approval was sought and received from OPH’s Research Ethics Board.

Results: Peer Educators emphasized: the need for ongoing support; the value of peer involvement for them personally and for participants; and, interest in an expanded role in front-line service delivery. Participants of peer-led group training articulated: the value of peer involvement in terms of credibility of information but expressed frustration with group training format. Program staff highlighted: human resource considerations including recruitment, compensation, and adequate ongoing support for Peer Educators; resource considerations and risk management.

Conclusions: Results demonstrate the value of peer involvement from various perspectives as well as considerations to ensure effective and supportive peer involvement. OPH has since expanded the role of Peer Educators to other front-line harm reduction service delivery at OPH.

What are the implications of your research to inform future policy or practice initiatives? While literature touts the importance of peer involvement, less is known about how to do this and what ‘good peer involvement’ looks like. This research identifies concrete recommendations for effective peer involvement in front line harm reduction service delivery.

17. Using participatory methods to enhance knowledge translation in harm reduction research – Sonya Ishiguro

Co-authors: Jane Buxton, Heather Burgess, Cheri Newman, Katie Lacroix, Brian Leblanc, Charlene Burmeister, Hugh Lampkin, Erin Gibson, Alissa Greer, Keren Mitchell, Katrina Pellatt, Elise Durante

Background: Most research projects culminate in publications with little dissemination to participants. Community based participatory researchers have a duty to share findings with participants and key stakeholders.

Objectives: We describe two harm reduction projects in BC which engaged people with lived experience to develop knowledge translation materials.

Methods: Project 1: Thirteen focus groups were facilitated by people with lived experience around the province of BC. Stigma from service providers was identified as a barrier to accessing harm reduction services. Informed by personal experience and focus group results the participatory team collaboratively developed modules to improve inclusion and compassion in harm reduction services.

Project 2: Through focus groups the Naloxone Inner City Youth team in Vancouver explored why hard to engage youth connected with the take home naloxone program. Youth artists were invited to submit artwork to illustrate quotes in which youth reported feeling empowered and cared for.

Results: Project 1: Twelve scenario based interactive learning modules were developed. Modules included focus group quotes and opportunities for participants (service providers and people with lived experience) to engage in interactive role play and provided 'Dos and Don'ts' recommendations.

Project 2: A youth appropriate booklet and postcards were designed to share positive experiences and educational messages of overdose recognition and response and incorporated into a youth specific naloxone video.

Conclusions: The modules will facilitate collaborative efforts between people who use drugs, health care practitioners, and public health leadership to reduce stigma and facilitate access to services. Both projects engaged people with lived experience to produce relevant knowledge translation materials to enhance dissemination of findings to key stakeholders with positive and actionable messages.

What are the implications of your research to inform future policy or practice initiatives? Using participatory methods to develop knowledge translation materials will improve the relevance and acceptability of messages to the stakeholders and empowers participants.

18. Creating the BC facility overdose response box program: Giving non-healthcare service providers access to naloxone in response to a provincial overdose emergency – Sonya Ishiguro

Co-authors: Jane Buxton, Emily Ogborne-Hill

Background: In BC, overdose response training and free naloxone kits have been available to people at risk of overdose since 2012; however, free naloxone was not available to non-healthcare service providers. From January to July 2016, a pilot project showed it was feasible and acceptable to give overdose response training and naloxone to service providers; however, concerns about trauma in staff repeatedly responding to overdoses were raised. In response to BC's overdose-related public health emergency and regulatory changes improving naloxone availability, the pilot was scaled up into the Facility Overdose Response Box (FORB) Program.

Objectives: The FORB Program aims to prevent fatal overdoses at community organizations by providing naloxone, and to assist participating sites in providing adequate support to staff volunteering to respond to opioid overdoses.

Target Groups: Program participants are community non-profit agencies that work with people who use substances, including drop-ins, Friendship Centres, and shelters.

Activities: Pilot site evaluation and harm reduction provider input informed overdose response box contents. We developed comprehensive guidelines on how to (1) plan for on-site overdoses, (2) create site-specific overdose response policies and protocols, (3) deliver overdose prevention, recognition and response training to staff and, (4) provide post-event debriefing opportunities. Over 800 sites province-wide were identified as eligible for the program.

Deliverables: Use of the provided naloxone is documented with a standardized form, including information about the overdose and response, and the experience of giving the naloxone. Both 6-month and 1-year evaluations will be conducted.

What are the implications of your policy or practice initiative to inform future research? Lessons learned through development and evaluation of the FORB Program may inform other jurisdictions considering implementing similar programs and will provide best practices for supporting non-medical staff to respond to overdoses in the course of their work.

19. Participant perceptions of study findings in the SALOME clinical trial testing the non-inferiority of hydromorphone to diacetylmorphine for severe opioid-use disorder – Heather Palis

Co-authors: Kirsten Marchand, Daphne Guh, Suzanne Brissette, Kurt Lock, Scott MacDonald, Scott Harrison, David Marsh, Martin Schechter, Eugenia Oviedo-Joekes

Background: Over the past decade, the interest in and focus on knowledge translation as an integral part of the research process has developed greatly. Participant perspectives have been highlighted as essential to achieving clinically important changes in practice by healthcare professionals and to improving patient decision-making. As the provision of SALOME (Study to Assess Longer Term Opioid Medication Effectiveness) treatments continue post-trial, the context is appropriate for collecting participant perceptions of trial findings.

Objectives: To explore participant perceptions of SALOME trial findings in the context of the expansion of injectable opioid assisted treatment to other settings.

Methods: SALOME was a double blind clinical trial testing the non-inferiority of hydromorphone to diacetylmorphine for severe opioid use disorder. At the end of the trial participants were invited to a meeting to discuss study findings in small groups (n=3-6). Focus groups were audio recorded and transcribed.

Results: Of 202 participants, 75 (35%) attended the meeting and discussed findings in groups (n=16). A total of 587 references were coded among 75 participants. The effect of the medication was the most commonly referenced theme (n=171; 29.1%), followed by feedback for policy makers (n=134; 22.8%), comparisons of the medications (n=101; 17.2%), positive lifestyle changes (n= 98; 16.7%), and the model of care (n=83; 14.1%)

Conclusions: Participants hold direct knowledge of their own values, needs, and concerns and understandings of the way in which policies and programs affect their health. Participant perceptions of trial findings enrich the understanding and interpretation of clinical trial outcomes.

What are the implications of your research to inform future policy or practice initiatives? The themes emerging from participant discussions will provide a perspective from which to integrate the SALOME trial results in the present context, and could provide a framework for expansion of this treatment to other settings.

20. A quasi-experimental evaluation of school-based marijuana use prevention programming changes on student's current marijuana use within the COMPASS study – Sarah Aleyan

Co-authors: Scott Leatherdale, Wei Qian

Background: Schools act as an appropriate setting for the delivery of marijuana prevention programming. However, a lack of consistent evidence is available to guide school administrators when making decisions relating to marijuana programming. Examining what new marijuana programs schools are implementing and assessing their effectiveness may provide evidence to support future prevention efforts.

Objectives: To examine how changes in school-based marijuana prevention programming impact current marijuana use among a sample of grade 9 to 12 students over time.

Methods: Using longitudinal data from Year 1 (2012-13) and Year 2 (2013-14) of the COMPASS study, quasi-experimental methods were used to examine the impact that changes to marijuana prevention programming had on a student's relative risk of being a current marijuana user over time.

Results: Marijuana use within the longitudinal sample increased significantly between Year 1 (10.5 %) and Year 2 (16.0 %). 8 out of 43 schools reported implementing a new marijuana intervention between Year 1 and Year 2. Of these 8 interventions, most did not significantly reduce the risk of marijuana use one year later. One intervention significantly reduced the relative risk of a student being a current marijuana user one year later.

Conclusions: While marijuana use appears to be a growing problem among students in COMPASS schools, most schools did not offer students new forms of marijuana prevention programming. Our results outline one intervention (promoting drug use prevention via posters/assemblies led by student leaders/public health unit)

that may represent practice-based evidence and another intervention (providing mental health/addictions counselling for students) that shows promise but requires further investigation.

What are the implications of your research to inform future policy or practice initiatives? This study provides practice-based evidence suggesting that schools should consider making marijuana prevention programming a larger priority.

21. Regulation of a legal recreational cannabis industry: Causes for concern – Mike DeVillaer

Background: The Canadian government has indicated an intention to introduce legislation for the legalization of cannabis in the spring of 2017. However, early indications are that this target is unlikely to be achieved. Whenever achieved, it would be only for first reading with a potentially long legislative process to follow. Thus pending legislation will have additional time to evolve with input based upon public health best advice.

Objectives: Increase awareness of:

- a. Potential harm on public health from the creation of a cannabis industry and the implications for reform
- b. Regulatory failures in the emerging cannabis industry and in established legal drug industries (alcohol and tobacco)
- c. A not-for-profit approach operated by a public health authority

Target Groups: Public health and legal policy makers, researchers, educators, advocates, and students

Activities:

1. Review peer-reviewed research on:
 - a. Proportional prevalence of harm from products of legal drug industries
 - b. Performance of legal drug industries on public health indicators
 - c. Performance of government in regulating legal drug industries
2. Discuss the viability of a not-for-profit approach operated by a public health authority

Deliverables: Content to:

1. Guide development of cannabis policy
2. Stimulate evaluation protocols and research questions for cannabis law reform
3. Increase the capacity of educators and students to engage in advocacy based upon health and justice priorities

What are the implications of your policy or practice initiative to inform future research?

The presentation will stimulate research questions on the relationship between policy models and the public's health (i.e., SDOH) for both cannabis law reform and other public health issues.

22. Patterns and factors of problematic marijuana use in the Canadian population: evidence from three cross-sectional surveys – WI Andrew Bonner

Co-authors: Mustafa Andkhoie, Charlene Thompson, Stephanie McClean, Michael Szafron

Objectives: The objective of this study is to describe Canadian marijuana use through the identification and comparison of the factors associated with problematic marijuana use.

Methods: Data from the 2010 through 2012 circulations of the Canadian Alcohol and Drug Use Monitoring Survey (CADUMS) was used to explore the frequency and factors that contribute to increased marijuana use within the Canadian population. Three logistic regression models were developed to determine factors associated with marijuana use and problematic marijuana use.

Results: Younger Canadians (ages 15-24 years) are 15 times ($p < 0.001$) more likely to engage in frequent marijuana use, with odds of exhibiting problematic marijuana use 10 times ($p < 0.001$) greater than older Canadians (aged 65 or older). The odds of exhibiting problematic marijuana use are 2.46 times greater for males

relative to females ($p < 0.001$). The odds of exhibiting problematic marijuana use are respectively 41.0% ($p = 0.031$) and 53.0% ($p = 0.008$) greater for marijuana users with mid (\$40,000-\$80,000) and the lowest levels household incomes. An earlier initiation age of first marijuana use leads to more problematic use but not necessarily more frequent use.

Conclusions:

The majority of our findings are consistent with the literature in which Canadians who are: male, adolescent or young adult, smokers, heavy drinkers, other illicit drug users, and who have poorer mental health status are more likely to engage in any marijuana use, particularly higher levels of marijuana use.

What are the implications of your research to inform future policy or practice initiatives?

These findings can be used to inform the development of policy for curtailing problematic use within the Canadian population.

23. Understanding community readiness for cannabis legalization: Supporting a public health approach –

Polly Leonard

Background: The Government of Canada has announced that it would introduce legislation to legalize and regulate cannabis. With a change from prohibition and criminalization to legalization, there is a need to ensure that health and social service providers in Canada are prepared to respond to the needs of people who use cannabis and other substances. CPHA has initiated a project to engage providers to identify their knowledge and information needs regarding cannabis consumption.

Objectives: Our objectives are to develop the knowledge and capacity of health and social service providers to:

- Collect local data and measure cannabis use as well as where and how to access and share evidence in their communities
- Make evidence-informed decisions related to the provision of prevention and harm reduction services for cannabis use in their communities.
- Engage target populations in prevention and health promotion messaging for cannabis (and other substances) use.

Target Groups: Our target audience is front line health and social service providers including physicians, nurses, allied health professionals, public health practitioners, social workers, and support staff.

Activities: We plan to partner with local organizations by holding community consultations across Canada to understand relevant knowledge and information needs and gaps.

Deliverables: Based on the identified needs/gaps, we will be developing knowledge translation and capacity building resources to be pilot tested in select communities. These may include literature reviews, learning tools and capacity building resources, webinars, and turnkey facilitation materials.

What are the implications of your policy or practice initiative to inform future research? With the legalization of cannabis there are a number of unknown health and public health outcomes. Our work will provide a framework and resources for providers to engage clients in conversations regarding the use of cannabis and other substances to reduce harms and maximize benefits.

24. Reducing barriers to commercial tobacco cessation among First Nations, Inuit, and Métis populations through a participatory approach: An application of the Interactive Systems Framework – Megan Barker

Co-authors: Andra Ragusila, Richard Steiner, Renee Linklater, Alison Benedict, Laurie Zawertailo, Nadia Minian, Rosa Dragonetti, Peter Selby

Objectives: To address inequitably high smoking rates among First Nations, Inuit, and Métis (FNIM) peoples living in Ontario, TEACH and STOP at the Centre for Addiction and Mental Health (CAMH) have worked to increase health equity for FNIM peoples through cross-sectoral collaboration. Building on the Interactive

Systems Framework, TEACH and STOP have aimed to: (1) cultivate prevention synthesis and knowledge translation (KT) systems by developing culturally relevant resources; (2) foster prevention support systems through provision of training to healthcare providers (HCPs); and (3) facilitate prevention delivery systems through access to cost-free cessation medication.

Target Groups: Cessation interventions for FNIM peoples are often developed without consultation, thus distorting cultural healing practices. TEACH and STOP work closely with FNIM frontline workers, HCPs, and Elders (Engagement Circle) to ensure interventions are developed through a participatory approach, considering systemic issues impacting FNIM peoples.

Activities: TEACH and the Engagement Circle co-created a toolkit providing culturally relevant commercial tobacco cessation tools and co-developed an online course in commercial tobacco cessation, using Indigenous instructional design to ensure curriculum was culturally appropriate. STOP partnered with Aboriginal Health Access Centres (AHACs) to provide support and cost-free cessation medication to clients.

Deliverables: The toolkit has been disseminated to 246 individuals. 108 HCPs completed the April 2015 online course. HCP ratings of confidence in knowledge and skills increased significantly from pre- ($M=5.65$, $SD=0.45$) and post-training ($M=8.37$, $SD=0.20$, $p<.001$) and 67% set clinical practice goals. Since 2016, 50% ($n=5$) of Ontario's AHACs have partnered with STOP, enrolling 395 FNIM clients.

What are the implications of your policy or practice initiative to inform future research? Collaborative engagement with FNIM stakeholders can lead to the implementation of culturally relevant and safe programming. Researchers should consider use of community-based participatory methods and knowledge translation frameworks in research design to ensure meaningful work with FNIM communities.

25. Evaluating the strength of school tobacco policies in Ontario and Alberta: Evidence from the COMPASS study – Adam Geoffrey Cole

Co-authors: Sarah Aleyan, Scott Leatherdale

Background: While many tobacco control programs and policies have been applied to the school environment to reduce youth smoking rates, there remains a lack of guidance for schools to implement comprehensive tobacco control policies. The use of a simple, comprehensive rating form might assist school administrators by guiding them towards more effective tobacco programming.

Objectives: To examine the strength of school tobacco policies in Ontario and Alberta according to a validated tobacco policy rating scale.

Methods: A previously validated tobacco rating scale assessed school policies based on four domains: Tobacco-Free Environment (14 points); Enforcement (12 points); Prevention and Treatment Services (6 points); and Policy Organization (8 points). School tobacco policies were obtained from school websites. Schools with higher scores have stronger and more comprehensive policies.

Results: Tobacco policies for 58.4% of schools were identified (52/89). Overall policy rating scores ranged from 3 to 21 (maximum score: 40). Most policies were targeted to students and did not explicitly include staff or visitors. Additionally, most policies targeted cigarettes and did not explicitly include other tobacco products or e-cigarettes. Few policies identified available prevention or cessation resources.

Conclusions: Many schools did not have tobacco policies that were easy to find online. The tobacco rating scale was simply applied to school tobacco policies in Ontario and Alberta and quickly identified areas of improvement. The vast majority of policies were missing important components to be considered comprehensive.

What are the implications of your research to inform future policy or practice initiatives? Most of the policies reviewed were rated poorly based on this scale. Using this simple tool might assist school administrators to

quickly and easily identify areas for improvement of school tobacco policies and guide future school tobacco policy development.

26. Perceptions toward a smoking cessation app for LGBTQ+ youth and young adults: A qualitative framework analysis of focus groups – N. Bruce Baskerville

Co-authors: Daryl Dash, Katy Wong, Alanna Shuh, Aneta Abramowicz

Objectives: This study explored LGBTQ+ YYA (the potential users') perceptions of a culturally tailored mobile app for smoking cessation. Specifically, we sought to understand what LGBTQ+ YYA like and dislike about this potential cessation tool, along with how such interventions could be improved.

Methods: We conducted 24 focus groups with 204 LGBTQ+ YYA (aged 16-29 years) in Toronto and Ottawa, Canada. Participants reflected on how an app might support LGBTQ+ persons with smoking cessation. Participants indicated their feelings, likes and dislikes, concerns, and additional ideas for an app. Framework analysis was used to code transcripts and identify the overarching themes.

Results: Study findings suggested that LGBTQ+ YYA were eager about using mobile apps for smoking cessation. Accessibility, monitoring and tracking, connecting with community members, tailoring, connecting with social networks, and personalization were key reasons that were valued for a mobile app cessation program. However, concerns were raised about individual privacy, that not all individuals had access to a mobile phone, users might lose interest quickly, an app would need to be marketed effectively, and app users might cheat and lie about progress to themselves. Participants highlighted that the addition of distractions, rewards, notifications, and Web-based and print versions of the app would be extremely useful to mitigate some of their concerns.

Conclusions: This study provided insight into the perspectives of LGBTQ+ YYA on a smoking cessation intervention delivered through a mobile app. The findings suggested a number of components of a mobile app that were valued and those that were concerning, as well as suggestions on how to make a mobile app cessation program successful. App development for this subpopulation should take into consideration the opinions of the intended users and involve them in the development and evaluation of mobile-based smoking cessation programs.

What are the implications of your research to inform future policy or practice initiatives? LGBTQ+ YYA were very interested in an app, so further research is needed to determine whether this population can benefit from a mobile-based smoking cessation intervention with social media connections. It would be useful to study actual app use and whether the findings that emerged from this study occur in a real-life situation.

27. Building support for smoke-free outdoor festivals and event: A documentation of practice study – Irene Lambraki

Co-authors: Nathan Honsberger, Alison Kernoghan, John Garcia

Objectives: The aim of this study was to understand the practices PHUs use to increase support for smoke-free festivals and events, and what it is about these practices that work for whom and in what contexts.

Methods: We used a multiple case study design and a realist-inspired approach to document strategies used by four Public Health Units. Key informant interviews and supplementary documents served as data sources. Cross-case analyses identified what worked, how and why in terms of building support for smoke-free festivals and events. Propositions were derived from tobacco policy literature and change theories to inform the interview guide and the analytic process.

Results: Public health units used a variety of practices, often comprehensively, to address smoking at outdoor festivals and events. Effective strategies included creating accountability structures to create smoke-free events and have people not smoke at them, injecting tobacco use risk management into venue and event planning processes, providing cues to remind people about smoking policies, having an enforcement presence to build a

culture of compliance amongst proprietors and patrons, and reinforcing a protection message at events where there is risk of children's exposure to second-hand smoke.

Conclusions: Public health units can create smoke-free events that denormalize smoking and reduce second-hand smoke exposure by working with municipalities, event organizers and event patrons and drawing on the power of policy.

What are the implications of your research to inform future policy or practice initiatives? The findings can inform intervention approaches used by public health to protect both the public and vulnerable populations from involuntary risks of tobacco smoke exposure at outdoor festivals and events.

28. Integrating managed alcohol programs into acute care settings: What does the literature say? – Hannah L Brooks

Co-authors: Shehzad Kassam, Ginetta Salvalaggio, Elaine Hyshka

Background: A managed alcohol program (MAP) is a harm reduction intervention that provides regular doses of beverage alcohol to people with refractory alcohol use disorders (AUDs). MAPs aim to prevent complications from withdrawal and provide services that reduce health risk and other harms. MAPs in the community have been shown to stabilize drinking patterns and facilitate positive social and health outcomes. MAPs may provide similar results in hospitalized patients with AUDs, but also prevent leaving against medical advice, costly readmissions, and poorer health outcomes.

Objectives: The objectives of this study are to 1) describe the academic and grey literature on MAPs in community or inpatient settings; 2) outline gaps in the literature related to these services; and 3) inform implementation of MAPs in acute care settings.

Methods: A scoping review was conducted. CINAHL, PsycINFO, MEDLINE, EMBASE and PubMed databases, Google Scholar and nine grey literature databases were searched. A total of 3,921 academic and 1,200 grey articles were identified and 35 academic and 4 grey articles were reviewed.

Results: Academic and grey literature suggest community MAPs can reduce harm and improve health outcomes. Several academic articles also demonstrate that intravenous and beverage alcohol are already utilized to prevent or treat complications from withdrawal in certain hospital settings. However, alcohol is generally administered to inpatients *ad hoc* without standardized protocols and without attempts to provide additional related health or social supports.

Conclusions: The practical and ethical aspects of establishing an inpatient beverage-alcohol MAP remain unexplored, and further research is required to understand the impacts of implementing MAPs in acute care.

What are the implications of your research to inform future policy or practice initiatives? A precedent of providing alcohol to patients with refractory AUDs currently exists. Available evidence suggests that reorienting this medical practice to establish formalized MAPs in acute care is feasible, and may improve patient outcomes.

29. The effects of alcohol trading hours and days on diverse alcohol-related harms: A systematic review. – Diana C. Sanchez Ramirez

Co-author: Don Voaklander

Background: Evidence supports the expectation that changes in time of alcohol sales associate with changes in various alcohol-related harms in both directions. However, to the best of our knowledge, no comprehensive systematic reviews had examined the effect of policies restricting time of alcohol trading on particular alcohol-related harms.

Objectives: To compile existing evidence related to the impact of policies regulating alcohol trading hours/days on specific harm outcomes such as: assault/violence, motor vehicle crashes/fatalities, injury, visits to the emergency department/hospital, murder/homicides and crime.

Methods: Systematic review of literature studying the impact of policies regulation alcohol trading times in alcohol-related harm, published between January 2000 and October 2016 in English language.

Results: 26 publications, 17 from the systematic search and 9 from other sources, meet the inclusion criteria.

Conclusions: Results support the premise that policies restricting times of alcohol consumption can contribute to reduce injuries, alcohol-related hospitalizations, homicides, crime and alcohol-related visits to the emergency department. Although the impact of alcohol trading policies in assault/violence and motor vehicle crashes/fatalities is also positive, these associations seem to be more complex and require further study.

What are the implications of your research to inform future policy or practice initiatives? Results suggested that policies which restrict alcohol trading times can help to prevent alcohol-related harm. However, policymakers should consider that unique socioeconomic conditions and baseline harm can influence the effect the alcohol-related policies. Governments which consider extending alcohol trading time should also contemplate extending the coverage of emergency personal services (i.e., police and medical personal) to control potential negative outcome of this type of policy. It is possible that the social cost generated by the extension in alcohol trading time exceeds the monetary gains from increased tax revenues

30. Alcohol: Is our favourite drug a carcinogen?

This poster presents an overview of the cancer burden related to alcohol in Ontario, the possible mechanisms of carcinogenesis, and the low awareness of alcohol as a carcinogen. It also highlights the low-risk alcohol drinking guidelines specific to cancer, the work of the Alcohol Working Group of the Toronto Cancer Prevention Coalition and the population health policies that can address the growing public health burden of alcohol.

Alcohol is a major preventable cause of morbidity and mortality. Alcohol use has a causal impact on several acute and chronic disease outcomes and is a cause of many mental health and behavioural disorders and communicable diseases. Alcohol causes several cancers including cancer of the colon and rectum, female breast, liver, and possibly pancreas.

People's risk-perception to alcohol is generally low. The general public may be aware of the cardio-protective benefits of alcohol, however, the association of alcohol to several cancers is not well-known.

31. The economic burden of five risk factors for chronic diseases in British Columbia (BC): Excess weight, tobacco smoking, alcohol use, physical inactivity and low fruit and vegetable consumption – Drona Rasali

Co-authors: Hans Krueger, Trish Hunt

Objectives: The study aims to update a previous model of three risk factors (RFs), excess weight (EWT), tobacco smoking (SMK) and physical inactivity (PHI), using newer data and adding two RFs, alcohol use (ALC) and low fruit and vegetable consumption (FVC).

Methods: BC's prevalence data for RFs from the 2013/14 CCHS and the relative risk of diseases associated with each RF were combined to calculate population-attributable fractions. A prevalence based cost-of-illness approach using BC's health care expenditures in 2015 was used in estimating the economic burden.

Results: The 2015 economic burden attributable to the five RFs in BC totalled \$7.9 billion (\$2.6 / \$5.3 billion in direct / indirect costs, respectively), with \$2.7 billion (34%) attributable to EWT, \$2.1 billion (27%) to SMK, \$1.5 billion (19%) to ALC, \$988 million (13%) to PHI and \$641 million (8%) to FVC. Sixty percent of costs (\$4.7 billion) are attributable to males and 40% (\$3.1 billion) to females. Costs attributable to SMK, ALC and FVC are substantially higher for males (\$1,370, \$1,046 and \$420 million, respectively) than for females (\$744, \$412 and

\$221 million, respectively). Total direct costs included \$1.1 billion (44%) for hospitalization, \$435 million (17%) for drugs, \$315 million (12%) for physician services and \$706 million (27%) for 'other' costs.

Conclusions: The ranking of the five RFs by their highest to lowest economic burden are in the order of EWT, SMK, ALC, PHI and FVC. The higher prevalence of SMK, ALC and FVC in males results in an economic burden for these three RFs that is more than twice as high in males (\$2.84 billion) as females (\$1.38 billion).

What are the implications of your research to inform future policy or practice initiatives? The study findings inform the evidence-based policy for reducing the burden of RFs leading to chronic disease prevention.

32. Self-reported injuries in the population (12+years of age) of British Columbia (BC) over time from 2007/2008 to 2013/2014 – Drona Rasali

Co-authors: Kate Turcotte, Diana Kao, Fahra Rajabali, Crystal Li, Megan Oakey, Ian Pike

Objectives: This study describes self-reported injury severe enough to limit activity among British Columbians ages 12 years and older over 3 time periods.

Methods: Canadian Community Health Survey (CCHS-PUMF) data for 2007/2008, 2009/2010 and 2013/2014 were analyzed for BC by sex, age groups, injury types, body part injured, place of injury and activity when injured.

Results: The overall proportion of self-reported injury among British Columbians increased significantly from 13.9% (95% CI: 13.1%, 14.7%) in 2007/2008 to 18.8% (95% CI: 17.7%, 19.9%) in 2013/2014. Significant increases in injury over time were observed among males from 15.6% to 21.7%, and females from 12.6% to 16%; and among ages 25-44 years from 13.7% to 21.6%, 45-64 from 11.5% to 16.6%, and 65-74 years from 8.4% to 13.7%.

Sprains and strains were the most common type of reported injury, and increased in proportion from 47.2% in 2007/2008 to 54.2% in 2013/2014, while other injury types' rates decreased or remained the same. The injured body part most often reported was ankle/foot, at about 20%, with no differences across time.

The most common place for injury across time was at home and surrounding area (especially among the older ages); as well as non-school sports or athletics area; and street, highway and sidewalk. Activities when injured varied by age, from sport and exercise among younger ages; to household chores; and going up and down stairs and walking among older ages.

Conclusions: Self-reported injury data can supplement mortality and hospitalization data to expand our understanding of injury. Overall, self-reported injury increased from 2007/2008 to 2013/2014 by about 5%. Youth ages 12-19 years reported the highest proportion of injury, resulting predominantly from sports or physical activity.

Implications to inform future policy or practice initiatives: These findings will assist in informing the injury prevention strategies and program prioritization in BC.

33. Enhancing chronic disease surveillance practice for better informing and supporting healthy living strategies in British Columbia (BC) – Drona Rasali

Co-authors: Kate Smolina, Kim Reimer, Trish Hunt

Objectives: The goals of enhancing chronic disease surveillance in BC are:

1. Better inform the upstream prevention strategies leading to healthy living among British Columbians;
2. Better inform health care practice; and
3. Provide timely information during public health emergencies.

The objectives of this development are to integrate multiple data sources and develop robust surveillance of chronic diseases and their comorbidities to provide the required surveillance intelligence to those who need to know at the provincial, regional and local community levels.

Target Groups: The target groups comprise British Columbian sub-populations across geographic (e.g., provincial, regional and community levels), demographic (e.g., age, sex, ethnicity) and socio-economic (e.g., income, education, immigration) dimensions. The target audiences of surveillance deliverables include policy makers, decision makers, public health professionals and community leaders.

Activities: A number of activities are concurrently underway:

- 1) Access and linkage of province-wide multiple sources of chronic diseases data;
- 2) Development of analytical algorithms for provincial and sub-provincial data;
- 3) Development of chronic disease data access tools for visualization and reporting; and
- 4) Development of community level data access tools.

Deliverables: A variety of surveillance projects underway will improve data linkage and analyses (e.g., data linkage of different single disease registries, multi-morbidity analyses, development of socio-economic deprivation index), knowledge products (e.g., reports/infographics on health equity, economic burden of risk factors) and access tools (e.g., BC Population Health Indicator Database, Chronic Disease Data Mart) for enhanced chronic disease surveillance in a multi-pronged approach towards their ultimate integration.

What are the implications of your policy or practice initiative to inform future research?

This practice enhancement in progress will lead to comprehensive surveillance of chronic diseases, supporting the capacity building of the BC Observatory for Population and Public Health, the expanded mandate of BCCDC and strategic priorities of the Ministry of Health.

34. Breast cancer awareness for young women – Lorna Larsen

Background: Team Shan Breast Cancer Awareness for Young Women (Team Shan) has facilitated breast cancer awareness campaigns on college and university campuses in Canada since 2007. The multi-faceted model incorporates personal storytelling to message the theme *breast cancer...not just a disease of older women*. The health promotion strategy developed by Team Shan has successfully helped close the gap in breast cancer awareness to reach this population at risk.

Objectives:

- Increase breast cancer awareness and breast health knowledge levels in young women;
- Encourage risk reduction and self-care behaviours;
- Increase early detection and help improve outcomes for young woman diagnosed.

Target Groups: Young women (17-29 years)

Activities:

- Systematic reviews conducted to assess need, inform messaging and plan awareness campaign activities.
- Multi-faceted media and marketing campaigns facilitated on post-secondary school sites in collaboration with campus health, education and media partners.
- Team Shan campaigns evaluated using pre- and post-campaign questionnaires with young women on campus sites.
- Focus testing with the target population and analysis of campaign evaluation results to guide campaign refinements.
- Analysis of campaign take home messages and action taken by young women.

Deliverables:

- Innovative social marketing model that has reached thousands of young women and successfully framed breast cancer messaging to this population at risk;
- Awareness activities that have been successful in informing young women about their risk of breast cancer, increased their knowledge of facts, risk factors, symptoms and self-care strategies;
- Campaign impact on young women and young women diagnosed with breast cancer.

What are the implications of your policy or practice initiative to inform future research? Team Shan has educated young women about their breast cancer risk and breast health, promoted risk reduction and self-care that will last their lifetime. The Team Shan model provides a baseline for further health promotion research to effectively reach young women.

35. 'Animated Shan' a social media breast cancer awareness strategy to reach young women – Lorna Larsen

Background: Team Shan Breast Cancer Awareness for Young Women (Team Shan) is a Canadian charity dedicated to reaching young women with their breast cancer risk and breast health information. Named after Shanna (Shan) Larsen, Team Shan has incorporated Shan's breast cancer story into an effective breast cancer awareness model. Young women have responded positively to Shan and asked for 'more' awareness, particularly social media. Reaching young adults online requires health promotion strategies that are both engaging and entertaining.

Objectives:

- Increase breast cancer awareness and breast health knowledge levels in young women;
- Encourage risk reduction and self-care behaviours;
- Increase early detection and help improve outcomes for young woman diagnosed.

Target Groups: Young women (17-29 years)

Activities:

- Systematic reviews completed to inform breast cancer messaging needs for young women.
- Multi-faceted breast cancer awareness campaign, including social media strategies, developed to reach young women, a population at risk.
- 'Animated Shan,' a toon character, created to assist with online knowledge transfer to young women.
- 'Animated Shan' piloted on Facebook and Twitter.
- 'Animated Shan' online infographics developed in English and French to reach the target population with their breast cancer risk, breast cancer facts, symptoms, risk reduction and self-care information.
- 'Animated Shan' infographics launched and preliminary analytics tracked.

Deliverables:

- Team Shan social media history, online success and challenges in reaching young women.
- Five English and French 'animated Shan' infographic files: know the facts, know your risk, know the symptoms, know your body and know your breasts.
- Launch of online infographics and preliminary social media analytics.

What are the implications of your policy or practice initiative to inform future research? Social media requires innovative approaches to share vital health information. Preliminary tracking shows promising results for the use of 'animated Shan.' Further research will assist in evaluating this online health promotion initiative.

36. A common approach to investigating suspected non-communicable disease clusters in Ontario –

Elaina Macintyre

Co-authors: Jin Hee Kim, Ray Copes

Background: Non-communicable disease (NCD) cluster investigations are an important function of public health and they provide a rare opportunity to interact with an engaged public audience. The response and investigation of suspected NCD clusters also poses several challenges for public health practitioners, including risk communication and methodological and/or statistical uncertainties.

Objectives: Describe guidance on the public health response to suspected NCD clusters for Ontario

Target Groups: Public health practitioners

Activities: Public Health Ontario, in consultation with various local and provincial organizations, developed a guidance document to support decision-making by public health practitioners during the investigation of NCD clusters. This document is intended to serve as a general resource to encourage a common and standardized approach to NCD clusters across the province. The document was informed by recent NCD cluster investigations in Ontario and through provincial meetings of public health practitioners who requested support in this specific area.

Deliverables: The final document presents a general approach for responding to and investigating NCD clusters. Although the approach is similar to those suggested by organizations outside Ontario (e.g., British Columbia, Alberta, United States, United Kingdom), there is a novel focus on assessing the reported environmental concerns (where applicable). The final document also provides unique resources such as modifiable templates and questionnaires to support standardized data collection.

What are the implications of your policy or practice initiative to inform future research? This document and presentation will inform provincial practices in responding to NCD clusters and will help promote standard public health approaches in terms of data collection, evidence-based decision making, and responsiveness to community concerns. This will enable us to better characterize the importance of NCD cluster investigations in public health practice.

37. Differences in colorectal cancer screening rates across income strata by rural and urban status: Results from the Canadian Community Health Survey (2013/2014) – Jonathan Simkin

Co-authors: Gina Ogilvie, Catherine Elliott

Background: Canadian colorectal cancer screening rates differ across income strata. In the United States, disparities across income strata worsen in rural regions. In Canada, differences in screening across income strata have not been explored by rural/urban status.

Objectives: To estimate up-to-date colorectal cancer (UTD-CRC) screening rates by income among rural and urban Canadians and highlight important differences.

Methods: Data from the Canadian Community Health Survey (2013/2014) was used to calculate the prevalence of UTD-CRC screening by income quintiles for Canadians aged 50-74 years. UTD-CRC screening was defined as fecal occult blood testing within 2 years or colonoscopy/sigmoidoscopy within 10 years before the survey. Rural/urban health regions were defined per Statistics Canada guidelines. Weighted proportions of UTD-CRC screening were calculated and logistic regression was used to assess the effect of income by rural/urban status.

Results: Preliminary findings show the prevalence of UTD-CRC screening among Canadians was 51.9%. UTD-CRC screening rates by income ranged from 50.0% (Q1-low) to 60.6% (Q5-high) among urban and 47.2% (Q1-low) to 52.3% (Q5-high) among rural Canadians. UTD-CRC screening rates were highest in Manitoba (65.7%). Provincially, females generally had higher rates of UTD-CRC screening than males. Higher income was associated with increased odds of UTD-CRC screening compared to the lowest income quintile ($OR_{Q5}=1.55$, 95% CI 1.27-1.88). The effect of income did not differ significantly between rural and urban strata. Higher education ($OR_{post-secondary}=1.29$, 95% CI 1.12-1.48) and increasing age ($OR_{70-74}=2.78$, 95% CI 2.30-3.37) were associated with increased odds of UTD-CRC screening. The effect of income differed significantly across provinces. Income disparities were largest in Manitoba ($OR_{Q5}=1.91$, 95% CI 1.13-3.25).

Conclusions: Half of Canadians report UTD-CRC screening but across rural and urban populations higher income was associated with higher UTD-CRC screening rates.

What are the implications of your research to inform future policy or practice initiatives? CRC screening participation is increasing but disparities persist. Efforts are needed to understand and address inequities, particularly among low income populations.

38. Knowledge, attitude and practices on cancer education and prevention: A cross sectional survey –

Soumita Ghose

Co-authors: Aseem Mahajan, Soumitra Shankar Datta

Background: Life style associated cancers are one of the top 5 leading causes of death in the world and India sees a million new cases yearly. Early detection is an effective way to reduce incidences and mortality for preventable cancers. There is significant delay in detection for a large proportion of cancer patients in India. Lack of awareness about cancer has been shown to be a major contributor to treatment delay in many countries. The current study looked at the cancer awareness in an urban Indian population to address the gap of information about cancer prevention.

Objectives: To quantify knowledge about cancer in an urban population and find socio-demographic associations of lack of knowledge. We also wanted to compare knowledge of people from general population with those having some knowledge due to a family member being under treatment.

Methods: Data was collected from three stratum: family members of cancer patients, internet using community from general population, non internet using community dwellers. Subject selection was randomized. A pre-validated questionnaire was used. Data was analyzed using STATA 13.

Results: Respondents (n=846) were family of cancer patients (n=146, 17.3%), community dwellers (n=175, 20.7%) and community internet users (n=525, 62.1%). No association of knowledge with age, gender, and income was found (p-values 0.84, 0.25, 0.93 respectively). Statistically significant association of cancer knowledge with education was found (p < 0.001). There is significant difference in knowledge between internet using and non internet using community (p < 0.001).

Conclusions: Education impacts cancer knowledge of the population. The population having access to internet has a higher knowledge than non users; but exposure to cancer treatment does not result in higher knowledge on cancer.

Implications: These results will inform prevention and health education policies and aid in designing awareness and screening programs for preventing cancer.

39. Effectiveness of the CANRISK tool in assessing dysglycemia risk in Canadians aged 20 to 39 years old in three high-risk ethnic groups – Heather Orpana**Co-authors:** Ying Jiang, Susan Rogers Van Katwyk, Karen Davis, Maylene Fong

Background: Type 2 diabetes is an important public health problem in Canada. It is imperative to identify people at risk of developing diabetes and encourage them to seek further screening, as well as to make healthy lifestyle changes to prevent, or at least postpone diabetes. In 2011, the Canadian Diabetes Risk Questionnaire (CANRISK) was developed for individuals aged 40 or older by the Public Health Agency of Canada (PHAC). CANRISK was adapted to better reflect Canada's multi-ethnic population from a similar questionnaire from Finland (FINDRISC).

Objectives: The objective of this study is to assess whether the CANRISK tool can be effectively used to identify dysglycemia risk in individuals aged 20-39 years in three high-risk ethnic groups.

Methods: CANRISK Questionnaires, physical measures and blood samples were collected from participants aged 20-39 years in three areas: Vancouver, Saskatoon, and Yukon between 2014 and 2015. Dysglycemia (pre-diabetes and diabetes) was assessed using fasting plasma glucose (FPG) and 2 hour oral glucose tolerance testing (OGTT). Participants' CANRISK scores were generated from questionnaire responses which also included ethnicity.

Results: Data were collected from 2240 individuals aged 20-39 years. 22.5%, 31.6%, and 27.2% of this sample was East Asian, South Asian, and First Nations or Métis. Compared to FPG or OGTT, the sensitivity and specificity of the CANRISK tool using the original cut-off score of high risk, were 23.6% and 94.3%, respectively. However,

using the original cut-off score of slightly elevated risk, the sensitivity and specificity were 63.1% and 66.2%, respectively.

Conclusions: CANRISK can be used in Canadians under 40 from three high risk ethnic groups to identify dysglycemia risk, with an adjustment of the cutpoint.

What are the implications of your research to inform future policy or practice initiatives? The CANRISK tool supports the identification of diabetes and pre-diabetes risk and promotes awareness of related risk factors.

40. **Prospective associations between individual and neighbourhood-level socioeconomic factors on risk of type 2 diabetes in older British men** – Danielle Roberts

Co-authors: Sheena Ramsay, Olia Papacosta, Goya Wannamethee

Objectives: To investigate the prospective association of individual socioeconomic position and neighbourhood-level socioeconomic deprivation with incident Type 2 Diabetes Mellitus (T2DM) in older British men, and examine possible underlying factors.

Methods: A socially-representative cohort of 3487 men, aged 60-79 years in 1998-2000, from 24 British towns, was followed-up for 14 years for incident cases of T2DM. Prevalent diabetes and undiagnosed cases were excluded. Individual socioeconomic position was derived from social class of longest-held occupation. Neighbourhood-level socioeconomic deprivation was based on national Index of Multiple Deprivation (IMD) quintiles; higher score indicating greater deprivation.

Results: During the study 289 men developed T2DM. Diabetes risk was higher in lower social classes and areas of greater socioeconomic deprivation (P for trend=0.001). Compared with men in the non-manual social class group, age-adjusted hazard ratio for men in manual social class group was 1.58 (95% CI: 1.24-2.01); which was largely attenuated (1.38; 95% CI: 1.08-1.76) after adjusting for body mass index (BMI). Further adjustment for blood pressure, smoking, alcohol, physical activity, diet, medication and family history caused slight attenuation; subsequent adjustment for triglyceride levels eliminated statistical significance. Compared with IMD quintile 1, the hazard ratio was highest in IMD quintile 4 (1.79; 95% CI: 1.24-2.54). This largely attenuated on adjustment for BMI (1.46; 95% CI: 1.02-2.10), and became non-significant after adjustment for lifestyle factors.

Conclusions: Manual social class and neighbourhood-level socioeconomic deprivation was associated with an increased risk of T2DM in older British men. For manual social class this was mostly explained by BMI and triglycerides. For neighbourhood-level socioeconomic deprivation it was largely explained by BMI and lifestyle factors.

What are the implications of your research to inform future policy or practice initiatives? Our results support the need for public health campaigns specifically targeting obesity as a fundamental means towards preventing T2DM and reducing socioeconomic inequalities.

41. **Assessing a community-based participatory research project using social movement-building indicators: The case of the Kahnawake Schools Diabetes Prevention Project** – Marie-Claude Tremblay

Co-authors: Ann C. Macaulay, Debbie H. Martin, Elder Amelia McGregor, Alex McComber

Background: Community-based participatory research (CBPR) is increasingly recognized as an approach adding relevance to health research. A longstanding challenge of CBPR has been anchoring evaluation and practice in a relevant and comprehensive theoretical framework. Social movement theories hold a high potential in providing a coherent and unifying representation of community change mechanisms, useful to guide and assess CBPR processes.

Objectives: The Kahnawake Schools Diabetes Prevention Project (KSDPP) is a longstanding CBPR initiative in the Indigenous community of Kahnawake (Mohawk territory, Canada). KSDPP aims to promote healthy eating and

regular physical activity by changing the physical environment and social norms of the community. The objective of the current study is to assess processes and intermediate outcomes of KSDPP, using a movement-building evaluation framework.

Methods: This research, rooted in a CBPR approach, builds on a case study design that uses documentary sources (KSDPP annual summaries of activity and scientific papers; $n = 51$) and participants accounts ($n = 24$) provided through talking circles. Participants involved are four groups of stakeholders of the project: intervention staff and Community Advisory Board members, research team members, community workers from public sectors and other community members.

Results: Results present an innovative perspective of KSDPP's evolution and allow to identify specific indicators associated with different movement-building components achieved by this project over time. In so doing, it highlights key elements of success and suggests avenues to maximize the impacts of KSDPP.

Conclusions: Building on a social movement-building framework to assess CBPR allow to pinpoint new conceptual elements and indicators linked to the success of CBPR initiatives, thus moving forward this field.

What are the implications of your research to inform future policy or practice initiatives? Results from our study demonstrate that social movement theories are a relevant and innovative lens to assess and guide CBPR practice.

42. The COMPASS Study as an intervention: Using knowledge exchange strategies to enhance the impact of school health research – Kristin M. Brown

Co-authors: Susan J. Elliott, Scott T. Leatherdale

Background: Although schools are considered opportune settings for youth health interventions, the mandate of schools is education; hence, school staff often have limited resources and capacity to address student health. COMPASS, a longitudinal study of Ontario and Alberta secondary student health behaviours, provided a unique opportunity to form partnerships between researchers, schools, and public health units through knowledge exchange. Schools received annual summaries of their students' health behaviours and a COMPASS researcher (i.e., knowledge broker) supported them in making changes to improve student health and connected them to local public health units.

Objectives: This research used mixed methods to investigate i) factors that influence the COMPASS knowledge exchange process and ii) how the COMPASS knowledge exchange strategies influenced school health policies/practices and student health behaviours.

Methods: Semi-structured interviews with COMPASS researchers ($n=13$), school staff ($n=13$), and public health practitioners ($n=4$) were audio recorded (with permission) and transcribed verbatim for subsequent thematic analysis using NVivo. Quantitative analyses (using data from the first 3 years of COMPASS) examined factors that influenced knowledge brokering participation, and school- and student-level outcomes of knowledge brokering. Findings from these methods were compared.

Results: Both the qualitative and quantitative findings indicated school characteristics and study-related factors influenced schools' participation in knowledge brokering. School-level changes were discussed; however, participants were unsure of student-level outcomes. Similarly, quantitative findings showed school-level changes but no student-level outcomes.

Conclusions: Knowledge brokering provided a platform for collaboration between researchers, school staff, and public health practitioners, and led to school-level changes. These findings can inform future research-practice partnerships to ultimately improve student health.

What are the implications of your research to inform future policy or practice initiatives? This research provides evidence that knowledge exchange strategies can enhance the uptake of research into practice, and build partnerships between researchers and knowledge users.

43. Cultural relevancy within health promoting schools – Rachel Malena-Chan

Co-authors: Sandi Urban-Hall, Brent Rioux, Tanya Dunn-Pierce

Background: The Truth and Reconciliation calls to action align with health equity frameworks in highlighting the need for a shift to culturally relevant health and education services. Health Promoting Schools (HPS) is a comprehensive schools community health approach. It focuses on empowering students to determine actions for school health, potentially opening up space for cultural adaptations to school health approaches.

Objectives: This knowledge development and exchange project sought to capture and learn about cultural relevancy within the HPS program. It focused on drawing out how cultural relevancy work happened, what conditions made cultural adaptations possible, and what emerged when Indigenous frameworks were applied to the HPS model.

Target groups: The target group was HP practitioners and leaders within health and education systems.

Activities: Interviews were conducted with HPS teams in the Saskatoon Health Region as well as with Island Health on Vancouver Island. Two videos were produced to feature conversations about culture, health, and education with (1) community builders at the Haahuupayak school in BC, and with (2) the HPS program coordinator and an education administrator in Saskatoon.

Deliverables: The project produced a report with a visual framework for exploring how cultural adaptations are empowered, mobilized and transformative within school community contexts. It has since been translated into French. Videos were created to enhance knowledge exchange and highlight voices of frontline community builders and program facilitators. The importance of cultural relevancy within school health approaches was a core theme throughout.

Implications: The linkages between culture and health, culture and education are strongly represented in literature and the TRC testifies to the impact of cultural dislocation on health. This project was limited in its scope but represents a step toward opening up our health frameworks to centre Indigenous ways of knowing.

44. Indicators for health promotion: A narrative approach – Rachel Malena-Chan

Co-authors: Tanya Dunn-Pierce, Julie Kryzanowski, Keisha Sharp

Background: Within the scope of quality improvement in health, health promotion (HP) is often overlooked. A lack of frameworks for the impact and effectiveness of HP work creates barriers to re-orienting systems common language is needed to articulate the value of HP to the health system, to community partners, and to health promoters themselves as they rationalize the goals and methods of HP.

Objectives: Unlike traditional logic models, a narrative approach for HP indicators considers HP strategies as a storyline. This model employs the metaphor of “scaling a mountain” to capture and assess HP action-plans. By crafting the “story” of HP work, teams can answer: how does work done with partners align with our vision? How do HP perspectives help us identify barriers to health? How do we conceptualize pathways to health equity?

Target groups: This indicators project targets HP practitioners, but could be used to visualize any logic model.

Activities: Tools were developed for assessing, planning, and measuring HP work. Barriers to health equity are represented by the “mountain” with the vision as the “forest” on the other side. Team-level tools prompt consideration of “ladders and bridges” needed to scale the mountain, skills and strategies and partnerships necessary to build them.

Deliverables: Tools are being introduced at HP planning sessions and will be built upon to determine and measure indicators. Other uses for the metaphor and model include knowledge translation about HP within the

healthcare system, e.g., responding to the Truth and Reconciliation Commission of Canada's calls to action for the health system or demonstrating alignments with primary health care teams.

Implications: Quality improvement is key to efficient and effective health services, and a lack of frameworks creates challenges for HP. Narrative is an accessible and emotionally engaging method of planning and assessing the strengths and limitations of HP work.

45. Health promotion impact stories: Saskatoon Mothers' Centre – Rachel Malena-Chan

Co-author: Johanna Bergerman

Background: The Saskatoon Mothers' Centre (SMC) is a "Third Space"; a child friendly cultural safe space where women can access resources, develop skills, build relationships, and improve the economic situation of their families. An Indigenous women's board operates the Centre and, although its prime focus is to serve Indigenous mothers, hospitality is extended to all women that walk in the door.

Objectives: SMC is part of the answer to a vital Health Promotion question: How can women be publicly supported to reach their health potential when they take on the responsibility of mothering children? SMC is supported by the Health Promotion Department in the Saskatoon Health Region, and focuses on a strength-based approach, enabling opportunities for skill development, social entrepreneurship, improving all aspects of health.

Target groups: SMC targets Indigenous women of all ages in the core neighbourhoods of Saskatoon.

Activities: Programs engage the women in developing host facilitation, breastfeeding peer-support and parenting skills. The host and participants can also engage in nutrition and cooking programs, sewing circles, and a weekly book club discussion group.

Deliverables: The SMC aims to provide women with experiences to build supportive relationships, recognizing collective strengths. Women's stories demonstrate the importance of SMC for building trusting relationships, such as positive impacts emerging from the Non-Violent Communication book club, where the women share experiences of conflict faced in their daily lives and gain negotiation skills, increasing social cohesion by decreasing risk of domestic violence.

Implications: SMC represents reconciliation in action. By creating a "Third Space" where individuals can gain experiences and practical knowledge together, women are helping each other to recognize their collective strengths and resilience. These experiences are changing the balance of inequities in the determinants of health for women and children. Impact stories are a good way to communicate complex change processes through the eyes of clients.

46. Climate change engagement: Narrative frameworks for population health promotion –

Rachel Malena-Chan

Background: Population health promotion practitioners lack frameworks for climate change engagement. Health promoters are uniquely positioned to provide leadership for climate change engagement within communities and health sectors through advocacy, community development, and knowledge translation. However, research suggests that social and emotional barriers to engagement can arise when public narratives about climate change elicit inefficiency.

Objectives: This project seeks to improve understanding about the emotional and social dimensions of climate change engagement in Saskatoon in order to inform health promotion approaches to collective-level action by analyzing the climate change stories of young community leaders who are modeling health promotion competencies. It explores the basic features of a mobilizing climate change conversation.

Methods: Interpretive phenomenology provides the methodological structure for the study, and Marshall Ganz's narrative model will be used to interpret perceptions among community organizers aged 18-32 who are

taking action on social and environmental justice issues in Saskatoon. “Story of Self” and “Story of Us and Now” are useful tools for exploring action-oriented emotional pathways and social identities.

Results: The project is in the proposal stage. The results will organize emotional and social concepts according to a narrative arch underscored by values of health equity. Participants’ personal and shared stories will illuminate common mobilizing factors for champions of equity-based community development in a challenging climate engagement context.

Conclusions: Health promoters must account for emotional and social barriers to climate change engagement, particularly in regions economically dependent on high-emissions industries. Conclusions will inform equity-based frameworks for climate change engagement that address and account for those barriers.

What are the implications of your research to inform future policy or practice initiatives? Narrative approaches could contribute to concept development by interpreting climate change perceptions holistically, capturing interdependent and intersecting themes within stories that mobilize collective-level action to improve population health.

47. Carbon monoxide monitoring and response in long-term care facilities: Implementing a health-protective management strategy in Canada – Daniel Fong

Co-authors: Tom Kosatsky, Prabjit Barn, Katherine Guindon-Kezis

Objectives: To advance the development, implementation, and evaluation of a novel health-protective indoor carbon monoxide (CO) management strategy in long term care facilities (LTCFs) across Canada.

Target Groups: Medical Health Officers (built environment, health protection), facility managers, risk managers, occupational hygienists, clinicians, or others working at LTCFs (residential care facilities, nursing homes, seniors’ residences, etc.) who would like to implement a program to reduce the risk of indoor CO exposure to residents and staff.

Activities:

- Convened an expert consultation to discuss the need and development of a CO management framework.
- Performed an evaluation of Saskatoon Health Region’s CO monitoring and reporting policy, indicating its utility in the prevention of CO exposures in LTCFs.
- Developed the *Carbon Monoxide (CO) Monitoring and Response Framework* for LTCFs. The *Framework* provides a method to assist LTCFs in ensuring indoor CO is below Health Canada’s maximum exposure limit of 10 ppm over 24 hours, which is intended to protect the entire population from the health effects associated with short-term and long-term exposures to CO.
- Developed tools to increase the capacity for health agencies to implement the *Framework* in LTCFs.

Deliverables:

1. Tool: [Guide for Implementing the Carbon Monoxide Monitoring and Response Framework in Long-term Care Facilities](#) (2016)
2. Presentation: [Evaluating a Novel Carbon Monoxide \(CO\) Monitoring Framework in Long-Term Care Facilities](#) (2016)
3. Manuscript: [Carbon monoxide detectors: A powerful, underused way to protect lives](#) (2016)
4. Manuscript: [Preventing carbon monoxide exposures in long-term care facilities](#) (2015)
5. Stakeholder consultation meeting: [Carbon Monoxide Monitoring in Long Term Care Facilities and Hospitals, Saskatoon](#) (2013)

What are the implications of your policy or practice initiative to inform future research? Our project will allow for increased:

- Capacity for health agencies to implement CO management strategies;
- Awareness of novel CO management strategies;

- Evaluation and knowledge transfer of CO management strategies;
- Collection of data on indoor CO concentrations in LTCFs

48. Indoor air quality and ice arenas – Aaron Wilson

Co-author: Michelle Deveau

Background: Annually, millions of people use more than 3000 ice arenas in Canada. Carbon monoxide (CO) and nitrogen dioxide (NO₂) poisonings periodically occur in these facilities. Air pollutants are emitted from ice resurfacers and other equipment that use combustion engines. Excessive levels can occur when machinery is malfunctioning or when there is insufficient ventilation. Standards, regulations and guidance for pollutant mitigation in ice arenas in Canada are limited; and, in most cases, are based on provincial occupational standards.

Objectives: Our objective is to develop a framework for monitoring and reducing exposures to CO and NO₂ in ice arenas.

Target Groups: This framework will be publically available for facility managers, public health specialists, municipal authorities and other interested groups.

Activities: With the assistance of the Federal-Provincial-Territorial Working Group on Indoor Air Quality, a technical document is being developed that reviews the health effects of pollutants associated with ice resurfacing equipment, incidences of CO or NO₂ poisoning in arenas in North America, and guidance in difference jurisdictions. Mitigation techniques will be reviewed and a framework document will be developed to provide guidance on monitoring and reducing levels of CO and NO₂. This framework will be piloted in two regions in 2017. After evaluating the pilot project, a final framework is planned to be released.

Deliverables: The final product will be a comprehensive framework detailing best practices for monitoring and mitigating CO and NO₂ levels in ice arenas.

What are the implications of your policy or practice initiative to inform future research?

The goal of this Federal-Provincial-Territorial collaboration is to provide a framework for monitoring and mitigating air pollution exposures in ice arenas. This work may support future research into the health effects experienced in ice arenas or the evaluation of best practices to decrease the incidences of poisoning in ice arenas.

49. Rights of tenants and housing quality: A cross-sectional study – Catherine Habel

Co-author: Marie-France Raynault

Objectives: This study aims to:

1. Describe the knowledge tenants have of their housing rights
2. Investigate if this knowledge is associated with a more habitable and affordable home

Methods: Health literacy, as described by Sorensen and al. (2012), is the conceptual framework used in this work. Data from a cross-sectional survey of 1023 tenants from the Montreal Island (2014) were analyzed. Three indicators were built from various questions on vermin, humidity and temperature to measure habitability. Affordability was measured with the ratio of rent to income. The relationships between the tenants' perception of their knowledge of their rights and duties and habitability as well as affordability were studied. The final models account for age, income, education level and perceived financial struggles.

Results: 45% of tenants do not perceive they know their housing rights and duties. Two out of three indicators of habitability are associated with the perceived knowledge of rights and duties ((IRR 0,656 IC [0,485; 0,887]) and (IRR 0,851 IC [0,703; 0,979])) in the adjusted models. Moreover, after adjustment with confounding

variables, the association between the perceived knowledge and the ratio of income is not significant ((IRR 0,720 IC [0,338; 1,531]).

Conclusions: These results are consistent with what is expected – better knowledge of rights is positively associated with a habitable house, but the association is non-significant for knowledge and affordability. These results are coherent with the legal rights of tenants in Quebec. Tenants could benefit from knowing their rights, but more research is needed.

What are the implications of your research to inform future policy or practice initiatives?

1. Health literacy can be a tool for health promotion in communities. It should be addressed and taken into consideration when working on a social determinant of health like housing.
2. The construction of indicators of habitability aims to better describe the concept expressed in the law and regulations. It could be an interesting tool to coordinate efforts and facilitate communication around health, housing and regulations.

50. Cohort profile: The Atlantic Partnership for Tomorrow's Health (Atlantic PATH) Study – Ellen Sweeney

Co-authors: Yunsong Cui, Vanessa DeClercq, Pratima Devichand, Cynthia Forbes, Scott Grandy, Jason Hicks, Melanie Keats, Louise Parker, David Thompson, Michael Volodarsky, Zhijie Michael Yu, Trevor J.B. Dummer

Background: The Atlantic Partnership for Tomorrow's Health (Atlantic PATH) study is a regional cohort of the Canadian Partnership for Tomorrow Project (CPTP) which is a multi-centered prospective cohort study. Atlantic PATH was established in 2009 and includes participants from the general population across Atlantic Canada (Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador).

Objectives: To examine the genetic, environmental and lifestyle factors that may influence the development of cancer and chronic disease.

Methods: A thorough standardized questionnaire was developed in concert with the four other regional cohorts and was implemented across the CPTP. A secondary questionnaire was developed to provide additional data with questions unique to the Atlantic Provinces. Participants provided biological samples including blood, saliva, urine, and toenails, and non-invasive physical measures (height, weight, hip and waist circumference, body composition, and blood pressure).

Results: The Atlantic PATH study includes 31,173 participants aged 35-69 (9445 men and 21 728 women). Most participants are females (70%) over age 50 (63%). Approximately two-thirds have been diagnosed with at least one chronic condition with 5% having four or more. Seventy-one percent of participants were overweight or obese. Commonly reported conditions included arthritis (26.5%), hypertension (25%), asthma (11%), irritable bowel syndrome (9%), and diabetes (7%).

Conclusions: Atlantic Canada has some of the poorest health outcomes in Canada, and the data collected by Atlantic PATH reflects this, with high levels of pre-existing chronic disease and multi-morbidity evident among a large proportion of the cohort.

Implications: The survey data and physical measures from Atlantic PATH are available to researchers for future use to gain a more in-depth understanding of the causes and consequences of the variation in health of Atlantic Canadian residents. Future research may inform policy and practice initiatives which have the potential to improve health outcomes.

51. Sleep and obesity in the Atlantic PATH cohort – Vanessa DeClercq

Co-authors: Yunsong Cui, Cynthia Forbes, Scott Grandy, Melanie Keats, Louise Parker, Ellen Sweeney, Zhijie Michael Yu, Trevor J.B. Dummer

Background: Previous studies have shown an important association between habitual sleep duration and obesity. Although BMI is the most reported measure of obesity, this measure's relation to sleep is inconsistent. Mixed findings highlight the need for additional investigation of body composition as it relates to sleep duration.

Objective: To examine the association between sleep duration and obesity using multiple measures of adiposity in the Atlantic Partnership for Tomorrow's Health (PATH) cohort.

Methods: This study examined more than 24,000 participants which provided complete data on both anthropometric measures (height, weight, waist and hip circumference) and number of hours of sleep per day. Differences in anthropometric measures across different sleep duration categories (< 5 hours, 5-7 hours, 7-9 hours, 9-11 hours and >11 hours) was determined using multivariate general linear modelling.

Results: Within each sleep category, the percent of participants with a BMI of overweight or obese was 76%, 73%, 70%, 73%, and 83% for participants that slept < 5 hours, 5-7 hours, 7-9 hours, 9-11 hours and >11 hours, respectively. Similar patterns were observed with waist-to-hip ratio and abdominal obesity. Significant differences in weight, waist circumference, hip circumference, BMI, waist-to-hip ratio, percent fat mass, fat mass index and fat-free mass index were observed among sleep categories.

Conclusions: A similar overall pattern was observed between sleep duration and different adiposity measures, with participants sleeping 7-9 hours exhibiting the smallest waists and lowest BMI values, whereas those sleeping more than 11 hours were the heaviest and had the highest BMI values.

Implications: The association between adiposity and sleep requires further research to explore potential mediators such lifestyle behaviours and other comorbidities; however, the evidence suggests the relationship between sleep and obesity may be important in guiding future health policies.

52. Fruit and vegetable intake and obesity among populations in Eastern Canada: The Atlantic Partnership for Tomorrow's Health Study – Zhijie Michael Yu

Co-authors: Vanessa DeClercq, Yunsong Cui, Cynthia Forbes, Scott Grandy, Melanie Keats, Louise Parker, Ellen Sweeney, Trevor Dummer

Background: The prevalence of obesity among populations in the Atlantic Provinces is the highest in Canada. Some studies suggest that adequate fruit and vegetable consumption may help manage body weight. However, results of two recent meta-analyses of interventional trials did not show consistent effects of increased fruit and vegetable intake on body weight reduction.

Objectives: To investigate the associations between fruit and vegetable intake with body adiposity among populations living in Atlantic Provinces.

Methods: We carried out a cross-sectional analysis among 26340 individuals (7979 men and 18361 women) aged 35-69 years who were recruited in the baseline survey of the Atlantic PATH study. Multivariable regression models were utilized to assess the associations of fruit and vegetable intake with anthropometric measurements and body composition with adjustment for sociodemographic and behavioural factors, chronic disease, and physical activity.

Results: Average total fruit and vegetable intake was 5.4 servings per day in the study participants (4.9 servings/day in men and 5.6 servings/day in women). Only 22% of men and 32% of women reported total fruit and vegetable intake \geq 7 servings/day, respectively. One standard deviation increment of total fruit and vegetable intake was associated with decreased BMI (0.12 kg/m²; 95% CI, -0.19, -0.05), waist circumference (0.40 cm; 95% CI, -0.58, -0.23), percentage fat mass (0.30 %; 95% CI, -0.44, -0.17), and fat mass index (0.14

kg/m²; 95% CI, -0.19, -0.08). Increasing fruit intake, but not vegetable intake, was consistently inversely associated with anthropometric measures, fat mass, obesity and abdominal obesity.

Conclusions: Fruit and vegetable consumption was inversely associated with body adiposity among the participant population in Atlantic Canada. This association was primarily attributable to fruit intake.

Implications: Our data may support the need for comprehensive intervention strategies to promote frequent and adequate fruit and vegetable consumption across Atlantic Canada.

53. Social correlates of leisure-time sedentary behaviours in Canadian adults – Michael Szafron

Co-author: Shelby Huffman

Objectives: This study explored the associations of social correlates with leisure-time sedentary behaviour of Canadian adults, and whether these associations differ between different types of sedentary behavior.

Methods: A sample of 12,021 Canadian adults was drawn from the 2012 Canadian Community Health Survey, and analyzed using binary logistic regression to model the relationships that marital status, the presence of children in the household, and social support have with overall time spent sitting, using a computer, playing video games, watching television, and reading during leisure time. Covariates included gender, age, education, income, employment status, perceived health, physical activity level, body mass index (BMI), and province or territory of residence.

Results: Extensive computer time was primarily negatively related to being in a common law relationship, and primarily positively related to being single/never married. Being single/never married was positively associated with extensive sitting time in men only. Having children in the household was protective against extensive video game and reading times. Increasing social support was negatively associated with extensive computer time in men and women, while among men increasing social support was positively associated with extensive sitting time.

Conclusions: Computer, video game, television, and reading time have unique correlates among Canadian adults. Marital status, the presence of children in the household, and social support should be considered in future analyses of sedentary activities in adults.

What are the implications of your research to inform future policy or practice initiatives? Our research suggests that interventions addressing sedentary behaviour should target: single/never married men and men with higher social support for sitting time; people with low social support, married, or single/never married people in most age groups for computer time; and people without children in their households for video game and reading time.

54. 'Let's Call It 'Fuck Off', Then': Preliminary Arts-Based Findings of 'Beyond the Present Fat: Risk & Body-Size Stigma in Public Health' – Debra Kriger

Background: Gaining notoriety as an area of study in public health, body-size stigma is a topic at the intersection of embodied health and risk. Entangled in complex ideas of what 'health' is and its relationship to body-size are our ideas of our pasts, presents, and futures: in short, how we make sense of our bodies and their relationship to our health risk.

Several sociological scholars critique the idea of risk and speak to how our understanding of our bodies through time relates to our embodied experience of the world.

I'm pleased to present the preliminary findings from my sculpting- and collage-based, critical, qualitative, CIHR funded doctoral research executed to better understand how people make sense of concepts like 'risk' and 'body-size stigma'.

Objectives: Broaden understanding of how we make sense of risk and body-size stigma through creative, imaginative, and absurd methods.

Methods: Sculpting, video-recording, life-lining (an innovative creative method based on previous scholars' work), and semi-structured interviews.

Results: As critical qualitative health research, the goal is **not** to produce generalizable results; the goal is to understand stories and see how people act and interact with the world around them. Participants all interacted with common discourses of health, bodies, risk, and non-communicable diseases in insightful ways via their creativity and art-elicitation.

Conclusions: Risk means different things to different people, and the role of embodiment in health changes with different experiences. Creative analysis was an important way of getting at new knowledge about embodiment and risk.

What are the implications of your research to inform future policy or practice initiatives?

1. Add to methods and methodologies research;
2. Help unravel the complexities we encounter while making sense of population probabilities to our individual health;
3. Further understand how we make sense of risk and body-size stigma in our sociocultural contexts.

55. Nutrition Environment Measures Survey in rural communities: A systematic review – Rebecca Harris

Co-authors: Leia Minaker, Catherine Mah

Background: Increased attention has been given to the role of the retail food environment on diet quality and the development of diet related diseases. However rural/remote communities are underrepresented in the literature. The Nutrition Environment Measures Survey (NEMS-S) is one of the most widely used food environment assessment tools. Many users have begun to adapt the NEMS-S by modifying the items audited, altering the scoring rubric, or tailoring the method of analysis to suit their study objectives.

Objectives: To synthesize the literature on the methods used in the analysis and evaluation of food environment data collected using the NEMS-S method in rural communities.

Methods: This study comprises a systematic review of literature evaluating the healthfulness of retail food environments in rural communities using the NEMS-S. Only literature using the NEMS to assess the retail food environment in grocery stores, supermarkets or corner stores in communities defined as rural/remote were included for review. Literature was dual coded and synthesized to describe key concepts, ideas and methodological approaches, and interpretations debriefed with the full team.

Results & Conclusions: Based on emergent coding and analysis, we found that researchers most commonly modify the survey to collect data on items relevant to a specific food group, diet or nutrient, or to make the survey more appropriate for cultural dietary behaviors or local availability. Most often, researchers are collecting or reporting data on healthy foods only, and not less healthy items. Few researchers use the original NEMS scoring system.

What are the implications of your research to inform future policy or practice initiatives? In order to support intervention development, it is necessary to better understand how assessment leads to action priorities. This project will contribute to efforts to establish methods to analyze and evaluate retail food environment research data in formats relevant to public health practitioners, improving their ability interpret and act on evidence generated.

56. A comparison of physical activity and sitting time correlates among Atlantic Canadians with and without a history of cancer – Cynthia Forbes

Co-authors: Yunsong Cui, Vanessa DeClercq, Scott Grandy, Melanie Keats, Louise Parker, Ellen Sweeney, Zhijie Michael Yu, Trevor Dummer

Background: Increasing physical activity (PA) and decreasing sitting time (ST) has been shown to improve quality of life and physical health among the general population, in addition to chronic disease populations such as cancer survivors. However, research indicates that most cancer survivors are not active enough to gain health benefits. Examining the demographic and medical correlates of these behaviours may help in the development of effective interventions.

Objectives: The objective of this study was to describe and compare demographic and medical correlates associated with PA and ST in a cohort of Atlantic Canadians.

Methods: Atlantic Partnership for Tomorrow's Health (PATH) recruited 31,173 Atlantic Canadians, aged 35-69 years. Physical measures included height, weight, and waist circumference and were collected by objective or self-report measures. Self-report questionnaires including lifestyle behaviors, health outcomes, and physical measurements were collected. Participants were asked to report their levels of domain-specific PA and ST using the International Physical Activity Questionnaire-Long Form (IPAQ).

Results: Significant differences in favour of cancer survivors emerged for both PA and ST. Chi-square analyses revealed significant differences for both cancer survivors and those with no history of cancer. Significant PA correlates among cancer survivors and the non-cancer group included age, income, and employment status; the non-cancer group had additional correlates of sex, education, and drinking status. Common significant ST correlates across groups were age, education, income, employment status, and body mass index; marital status, alcohol status, and smoking status were significant among the non-cancer group.

Conclusions: Surprisingly, cancer survivors reported significantly higher PA and lower ST than those with no cancer history. Differences in the correlates of PA and ST behaviour support the tailoring of interventions to ensure maximum effectiveness for behavior change.

Implications: These findings may inform specific interventions to promote PA and reduce ST in general population and cancer survivors.

57. Les effets sur la santé respiratoire du travail de moniteur/sauveteur en eau récréative au Québec – Gabrielle Bureau

Co-authors: Benoît Lévesque, Marjolaine Dubé, Denis Gauvin, François Lépine, Denis Laliberté

Contexte : À notre connaissance, aucune étude n'a porté sur des travailleurs ayant cessé leurs fonctions comme sauveteur et n'a examiné la relation entre les symptômes et l'exposition cumulative à l'environnement des piscines.

Objectifs : L'objectif principal de ce projet était d'établir s'il existe une relation entre le travail en piscine intérieure et la présence de symptômes et problèmes respiratoires chez des travailleurs actifs et inactifs.

Méthodes : Un questionnaire en ligne a été conduit auprès de 870 sauveteurs de la province de Québec. L'étude a permis de documenter la prévalence de symptômes respiratoires auto-rapportés et de diverses variables liées à l'asthme. Elle a par ailleurs étudié la relation entre la durée d'exposition professionnelle en piscine intérieure et ces variables à l'aide d'analyses par régressions logistiques.

Résultats : Les travailleurs les plus exposés au cours de la dernière année ont présenté statistiquement plus de toux et d'irritation de la gorge et des yeux au cours des douze derniers mois que les travailleurs non exposés ($p \leq 0,05$). Plusieurs symptômes liés au travail étaient statistiquement associés à une plus grande exposition au cours de la vie. Par ailleurs, les travailleurs asthmatiques les plus exposés au cours des douze derniers mois

présentaient un risque plus élevé d'avoir souffert de crises d'asthme au cours de cette période que les travailleurs asthmatiques non exposés.

Conclusions : Le projet a permis de documenter, pour la première fois au Québec, les prévalences d'asthme et de symptômes respiratoires chez des sauveteurs de piscine intérieure. Les résultats ont permis de mettre en évidence que cet environnement peut avoir des effets néfastes sur la santé de ces travailleurs.

Quelles sont les répercussions de votre recherche sur la pratique ou la politique? Les résultats de cette étude renforcent la nécessité de mettre en place des mesures efficaces de contrôle et de suivi des contaminants dans cet environnement afin de protéger la santé des travailleurs des piscines intérieures, de même que celle des utilisateurs.

58. Measuring active offer and access to French rehabilitation services in francophone minority communities in Northeastern Ontario – Anie Coutu

Co-authors: Roxanne Bélanger, Chantal Mayer-Crittenden, Josée Mainguy

Background: In Ontario Minority French Language Communities (MFLC), communication between health care users and their health care providers can be hindered as users are often required to speak in their second language. Studies have shown that Francophones living in MFLCs have more health-related problems than their Anglophone counterparts. This, coupled with the fact that health and rehabilitation services in French are less accessible in MFLCs, can cause a gap in the system.

Objectives: Create and validate a research tool to examine:

- The need for speech-language pathology (SLP), occupational therapy (OT) and physiotherapy (PT) services in French in Northeastern Ontario.
- The trends regarding the Active Offer of these services.
- Service users' satisfaction regarding availability and quality of these services.

Methods: Using a focus group (n = 20), two surveys, one for users and one for providers, were created and validated in order to measure the access and quality of these services for Francophones living in Northeastern Ontario. Respondent debriefing allowed the focus group to give feedback on the surveys.

Results: Content validity was determined by 3 SLP experts and construct validity was investigated using a factor analysis. Results revealed that the survey was easy to understand and completed in a timely fashion. The factor analysis revealed that the surveys effectively measured the Active Offer of French services. Analysis of results allowed for changes to be made to the surveys.

Conclusions: The validated surveys will serve as a useful tool when examining the need for SLP, OT and PT services in MFLSC. This work is currently underway.

What are the implications of your research to inform future policy or practice initiatives? Access to health care by linguistic minorities is often limited. The creation of a validated tool will allow us to better understand this phenomenon, thus helping bridge the gap between majority and minority language individuals.

59. Association between physical activity and self-rated health in Atlantic Canadians – Yunsong Cui

Co-authors: Vanessa DeClercq, Cynthia Forbes, Scott Grandy, Melanie Keats, Louise Parker, Ellen Sweeney, Zhijie Yu, Trevor Dummer

Background: The Atlantic Partnership for Tomorrow's Health (Atlantic PATH) study is a regional cohort of the Canadian Partnership for Tomorrow Project (CPTP) which is a multi-centered prospective cohort study. Atlantic PATH includes participants from across Atlantic Canada (Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador).

Objective: To investigate the association between levels of physical activity (PA) and poor self-rated health in Atlantic Canadians.

Methods: This study included 21,973 participants aged 35 to 69 years who provided complete information on the health survey of Atlantic PATH study (2009-2015). Participants indicated their PA levels using the International PA Questionnaire (IPAQ). Using the IPAQ guidelines for data processing and analyses, total energy expenditure was calculated. Participants also rated their perceived general health on a 5-point scale from 'excellent' to 'poor'. For analyses, those indicating 'fair' or 'poor' health were grouped together in to 'poor self-rated health'. Univariate and multiple logistic regression analysis was used to calculate the odds ratios of poor self-rated health for different levels of PA within strata of sex, age, and number of chronic health conditions. Chronic health conditions were categorized as 'none', 'one', or 'two or more'.

Results: Compared with inactive group, odds ratios for poor self-rated health were significantly lower for higher levels of PA after adjusting for age, marital status, education level, smoking, alcohol consumption, and number of chronic medical conditions. The association was similar among males and females, different age groups, and among chronic health conditions categories.

Conclusions: The study results suggest that inactive in PA was associated with poor self-rated health in Atlantic Canadians. The association is independent of gender, age, and most notably, number of health conditions.

Implications: The independent association between a lower level of PA and poor self-rated health supports public health programmes that encourage regular PA.

60. Effects of physical activity and exercise on physical and mental health outcomes in older females with arthritis – Barbara Piasecka

Background: Arthritis is a chronic, degenerative disease, which affects 2 million Canadians of which the majority are older females (65+ years). In 2015, health care costs were in excess of 219 billion and older adults were major users of our health care system. By 2041, it is predicted that over 9.2 million older adults will be present in Canada.

Objectives: The aim of this cross-sectional study was to evaluate the health-related benefits of PA and exercise and assess the relationship between leisure-time activity levels and pain; discomfort; physical function; range of motion (ROM); mobility, and health-related quality of life (HRQOL) in females aged 65 years and older.

Methods: 40 older females residing in the Durham Region of Ontario participated in the study of which 60% (N=24) were categorized as active (mean age=71 years \pm 6.47) and 40% (N=16) were considered inactive (mean age=82 years \pm 8.77). Self-reported questionnaires were employed including a Visual Analog Scale (VAS), Medical Outcomes Short Form-12 (SF-12), and Activity Levels Questionnaire for Older Adults (ALQOA).

Results: Active older arthritic females reported less pain ($p<0.001$); less discomfort ($p<0.001$); higher physical function ($p<0.0001$); higher ROM ($p<0.001$); higher mobility ($p<0.0001$), and higher HRQOL ($p<0.0001$), in comparison to their inactive counterparts.

Conclusions: In support of our hypotheses, older females with arthritis who were active reported significantly: (i) Less pain; (ii) less discomfort; (iii) higher HRQOL; (iv) higher mobility; (v) higher physical function, and (vi) higher ROM.

What are the implications of your research to inform future policy or practice initiatives? Canada has an aging population and chronic noncommunicable disease remains a major public health challenge in terms of its prevention and management. These preliminary findings suggest that older females with arthritis living an active lifestyle can have both physical and mental health benefits.

61. How do you like your 'hood? Perception of built environment and the influence on health and well-being across Metro Vancouver, BC – Maritia Gully

Co-authors: Salman Klar, Eleni Kefalas, Yumian Hu, James Lu, Victoria Lee, Jat Sandhu

Background: The My Health My Community (MHMC) survey was developed to better understand how lifestyle, environment and neighbourhood characteristics affect community health and well-being at a local level.

Objectives: To examine the association between perception of neighbourhood built environment characteristics and lifestyle behaviours or health status across Metro Vancouver (MV).

Methods: MHMC surveyed 28,128 MV residents aged 18+ years online and through community outreach. Respondents were asked eight questions about the natural and built environment of their neighbourhood. Responses were combined into a neighbourhood perception index (NPI) (score of 0-32). An NPI of <20 was considered low, 20-26 was medium and > 26 was high. Frequencies for lifestyle behaviour and health status among those with low NPI were compared to high NPI. Differences were considered to be statistically significant if 95% confidence intervals were non-overlapping.

Results: Compared to low NPI, respondents with high NPI were 60% more likely to report very good/excellent general health (63% vs. 39%), 30% more likely to report very good/excellent mental health (66% vs. 51%) and 20% less likely to be obese (20% vs. 25%). Respondents with high NPI were also 40% more likely to report 150+ mins of weekly physical activity (52% vs. 38%) and 50% more likely to report consumption of 5+ daily servings of fruits and vegetables (31% vs. 21%).

Conclusions: In Metro Vancouver, respondents who perceived living in safer, walkable neighbourhoods with access to amenities and green space were more likely to report positive lifestyle and better health outcomes.

What are the implications of your research to inform future policy or practice initiatives? Improved neighbourhood design can influence population health and wellbeing and these findings can inform planning decisions and policy development at a municipal level.

62. Embedding Health Equity Strategically within Healthy Built Environments – Julie Kryzanowski

Co-authors: Cora Janzen, Tanya Dunn-Pierce, Michael Schwandt

Background: Population health promotion approaches have become more focused in recent years on improving built environments (BE). Communities, health sectors and public leaders alike have recognized that factors like housing, food systems, transportation networks and neighbourhood design have a significant impact on the health of populations. Despite this attention on healthy BE, health equity (HE) has not been an explicit strategic focus.

Objectives: Recognizing the need for frameworks to prioritize, integrate, and measure HE within BE work, the Health Promotion Department of the Saskatoon Health Region has embedded health equity within a Healthy Built Environments strategy. By framing alignment between population-level approaches to healthy BE and the overarching goal of better health for all, the strategy proposes to capture and coordinate BE work and provide a strategic focus for targeting barriers to HE.

Target groups: Embedding HE strategically within BE is designed for Health Promotion practitioners and our partners. Actions include collaboration with members of the community, municipalities, leaders, academia, and other health departments.

Activities: Strategy developers conducted evidence reviews and consulted with community and organizational partners. Concurrently, BE projects were undertaken to model a HE approach. Examples include developing a HE in Healthy BE strategy for PPH, engaging in a partner campaign highlighting BE and HE issues during the recent municipal election, and producing a HE Impact Assessment report on the City of Saskatoon's *Growth Plan*.

Deliverables: Strategy developers are producing tools to facilitate implementation, including knowledge translation tools, logic model visuals and a framework for monitoring and evaluating HE outcomes.

Implications: In order to foster better health for all, health equity must be forefront within a health promotion strategy. This project contributes to research by modeling intersections between healthy built environments and multi-pronged health equity approaches.

63. Health equity self-assessment tool for health promotion practitioners – Julie Kryzanowski

Co-authors: Jennifer Kardynal, Helen Oliver, Kathie Cram

Background: Health equity (HE) is a vital component of health promotion work and a central domain of “Better Health.” Varying levels of knowledge and comfort with the concepts of health equity can be expected across a health promotion team, which can be a challenge when integrating HE into health promotion frameworks.

Objectives: In order to address varying levels of confidence to advocate for health equity and to identify gaps in understanding of HE concepts, the HE tools team asked: “What tools could help health promotion practitioners to develop health equity competencies, the essential knowledge, abilities, skills and values necessary for the practice of health equity work? Where can we identify opportunities to apply competencies across the boundaries of specific disciplines, programs, or partnerships?”

Target groups: The self-assessment tool is designed for health promotion practitioners.

Activities: The team conducted a literature review and built upon an NCCDH framework for HE, adapting to also facilitate self-assessment as well as learning plan development to prioritize competency improvement where it is most needed.

Deliverables: The tool that resulted includes 5 pillars from the NCCDH – Leadership, Using Evidence, Education, Organizational Development and Partnership Development. Pillars were used to develop a series of self-assessment questions, each with an adjoining competency scale and improvement priority scale. Based on results, employees adjust their learning plans.

Implications: It is essential that departments monitor HE competency development and provide opportunities for self-lead learning, as HE is central to population health and to reconciliation. One limitation of this tool is that it does not include an Indigenous lens. The tool is still in pilot phase, but it is moving toward departmental practice, with the intention to expand to Public Health and ultimately the region as a whole.

64. Case based learning in public health: The learner’s perspective – Purathani Shanmuganathan

Co-authors: Sharon A. Ametepheh, Larizza Dalmacio, Ian Hanney, Nitin Mohan, Roshni Sandhu, Akshay Varghese

Background: In September 2013, Western University launched a one year, case and team based interdisciplinary MPH, which is the first of its kind in the world. It has graduated three cohorts to date (~100 alumni); the fourth cohort (56 students) will graduate in Aug 2017.

Objectives: To share the student experience in this innovative program, including challenges, and the unique learning and growth opportunities.

Target Groups: Public Health Students, faculty, Universities

Activities: Case based learning is an interdisciplinary approach that mimics the collaborative team-based setting evident in public health practice. Cases used in the program attempt to accurately depict the dynamic problems and imperfect information professionals face in their day to day work. In small teams, students learn to collaborate and gain a global perspective by adopting the lenses of multiple stakeholders.

Deliverables: Case based learning presents a range of benefits and some novel challenges to public health students. Benefits include dynamic class discussions stemming from diverse perspectives and a deepening of

communication skills. Additionally, this format establishes a supportive environment built on trusting, meaningful relationships, and the development of higher level thinking through active participation. Challenges include: an increased workload and time-commitment, competing perspectives or values which can lead to conflict and limited applicability to all subject matter.

What are the implications of your policy or practice initiative to inform future research? Western University's case and team based pedagogy cultivates effective agents of change. This engaging application based approach encourages the development of professionals that are competent, worldly, lifelong learners. This interactive team based method allows students to synthesize knowledge and critically apply the public health competencies through an evidence informed approach.

65. Building evaluation capacity in Ontario public health units – Louise Simmons

Co-authors: Melanie Fournier

Background: Public Health Units (PHUs) in Ontario are required to evaluate their programs and services, yet they face many challenges conducting program evaluations. These challenges demonstrate the importance of building evaluation capacity (EC) to support effective program and service delivery in the public health setting.

Objectives: The objectives of this research project are to determine effective themes and strategies to strengthen evaluation capacity building (ECB) in Ontario PHUs and to disseminate these effective strategies to the broader public health and evaluation community.

Methods: The 34 PHUs who completed an assessment of their PHUs ability to do and use evaluation were eligible to participate in this exploratory mixed method design research project. A call for participation was sent all eligible PHUs and a total of 12 PHUs agreed to participate. Participating PHUs were required to select an ECB strategy (i.e. using a knowledge translation framework to increase the dissemination and utilization of evaluation results), complete an action research project based on this strategy, and submit an implementation plan, progress report and final report to the Project Coordinator. PHUs were also required to re-assess their PHUs ability to do and use evaluation as well as undergo key informant interviews.

Results: Ten of the 12 PHUs who agreed to participate in the project at onset actually completed the project and all of its requirements. Regardless of the strategy selected, all ten participating PHUs indicated an increase in EC.

Conclusions: This was one of the first research studies to determine effective strategies for building EC in a public health setting and provides a baseline for future studies.

What are the implications of your research to inform future practice initiatives? The findings and tools developed through this research project can be used by other public health units and organizations looking to build their evaluation capacity.

66. Snapshots: An interactive information product to improve public health practice and decision-making –

Jeremy Herring

Background: The use of data and information, coupled with the power of technology, are improving public health practice and decision-making. Snapshots is a tool that Public Health Ontario (PHO) has developed to provide analysis centrally to public health stakeholders in the province. In the four years since the launch of the tool, Snapshots has grown to over 200 indicators updated on a routine basis covering a wide range of content areas including chronic disease, health behaviours, infectious disease, injury and substance misuse, oral health and reproductive and child health.

Objectives: To create an interactive online tool to provide routine health indicator data displaying geography comparisons and trends to aid public health stakeholders in population health assessment activities.

Target Groups: Snapshots is aimed at a wide audience of public health stakeholders including public health unit staff (e.g., epidemiologists, health analysts, program evaluators/planners, and health promoters), provincial government staff, internal PHO staff and is also available to the public.

Activities: Main activities include acquiring datasets for use in Snapshots, creating new and updating existing Snapshots as new data becomes available, and communicating with public health stakeholders.

Deliverables: Snapshots is a collection of interactive map-based dashboards showing both geographic and temporal trends for key public health indicators by public health unit, peer group and Ontario overall. It provides dynamically linked tables, graphs, and maps with pre-calculated statistics. Users can also access metadata, export images and download the dataset behind each Snapshot.

What are the implications of your policy or practice initiative to inform future research? Snapshots was one of the first online interactive information products that PHO delivered through our website. We will continue to evaluate Snapshots and similar tools to inform future development with enhanced functionality following best practice and stakeholder input to enhance our digital reporting capabilities.

67. Understanding the determinants of undergraduate nursing students' choice of a career in community health nursing – Josephine Etowa

Co-authors: Bagnini Kohoun, Loyer-DaSilva, Maame Akyaa Duah, Esther Moghadam, J. Craig Phillips

Background: Increasingly patient care has shifted from the acute hospital setting to the community. Nurses are an essential component of the community health care workforce, however limited numbers of baccalaureate nursing students choose to pursue a career in community health nursing upon graduation. There have been no studies that examined nursing students' perception of a career in community or public health nursing and the issues that may influence this decision upon graduation.

Objectives: This paper will present findings from a recent study that explored undergraduate nursing students' perspectives on a career in community health nursing. The importance of undergraduate students' clinical practicum experiences is singled out and discussed.

Methods: The study design was a descriptive qualitative research approach as described by Sandelowski (2000). Individual semi-structured interviews and focus groups were conducted with 11 nursing students and a group of key stakeholders. Students' thoughts on pursuing a career in community health nursing and the factors that enabled or hindered their decision making process was obtained. Thematic analysis of the interview and focus group data generated key themes.

Results: Five major themes were revealed from the study: 1) defining community health nursing, 2) the clinical practicum experience, 3) stereotypes of community health nursing, 4) societal trends and expectations, and 5) issues influencing career choice in community health nursing.

Conclusion: There is a need to increase nursing students' knowledge of community health nursing. This will help them to understand the importance of this nursing specialty and may increase interest in the field. Educational programs have the responsibility raising awareness and motivating nursing student to pursue community health nursing as a career.

Discussion and Implications: The paper will describe current perspectives of students on a career in community health nursing and the implications of the limited knowledge of community health nursing by nursing students. Their satisfaction of their clinical placement experience is one of the top issues that determine their choice for a career in community health nursing. Underrepresentation of new graduate nurses in community health nursing calls for targeted efforts to improve this situation. Improvement in clinical learning environments may have a positive influence on students' decision to pursue a career in community health nursing.

68. Promoting oral health by supporting dental education: A mixed methods approach to understanding student perspectives and needs in communication skills learning (CSL) – Caitlyn Ayn

Co-author: Lynne Robinson

Background: Oral health can have significant impacts on general health. Oral disease affects the ability to properly chew and digest food and has been linked to increased risk of diabetes, respiratory disease, and various infections. Positive dentist-patient relationships can improve oral health outcomes such as oral hygiene habits and adherence to treatments. Dentist-patient relationships improve when dental students undergo communication skills learning (CSL) in dental school. Therefore, strengthening CSL is of benefit to oral health promotion.

Objectives: This project will promote understanding of student strengths, challenges, and needs in CSL by exploring their attitudes and perspectives. These findings will be disseminated through an integrated knowledge translation approach to inform CSL development.

Methods: A quantitative questionnaire developed in consultation with key informants and dental educators will be delivered to dental students in one Canadian institution. These instruments will be statistically analyzed to determine whether differences in attitudes exist between subgroups of dental students. Based on these findings, semi-structured interviews will take place with a nested subsample of questionnaire respondents to explore explanations and contextual factors relevant to quantitative results. These interviews will be analyzed using inductive thematic analysis and combined with quantitative findings using a mixed methods integration framework.

Results: Results will be available by January, 2017

Conclusions: Conclusions will be available by March, 2017.

What are the implications of your research to inform future policy or practice initiatives?

This study addresses a long-standing gap in the evidence regarding dental student perspectives toward communication. This has implications for informing dental education and practice and public health initiatives. Optimizing CSL shows promise as a relatively inexpensive opportunity to promote oral health. Additionally, as the importance of oral health gains recognition, public health systems and strategies under development will benefit from increased knowledge regarding how dental students perceive communicating with patients.

69. What happened to personal networks in the return to social context in public health? An empirical investigation – Valerie Haines

Background: The return to social context is an important trend in public health. Though focused on places, it has renewed interest in personal networks. But while the conceptualization and measurement of places is the subject of vigorous debate, this is not the case for personal networks.

Objectives: This study's objective was to enhance our understanding of the current status of public health research on personal networks and health by offering a constructive critique of how personal networks have actually been studied in public health.

Methods: This study took a sociology of social research approach, using sixteen state of scholarship reviews published between 1984 and 2015 as data in the sense of authoritative statements of where public health research on personal networks is (operationalized as exemplars of empirical research selected by the reviews) and ought to go (operationalized as directions for future research proposed by the reviews).

Results: Assessing exemplars' conceptualizations, data collection techniques, types of network data, network characteristics measured, and social capital appropriations revealed studies of "personal networks and health" do very different things, with most failing to capture network structures and contents theoretical work identifies as critical domains for health outcomes.

Conclusions: The pattern of later reviews repeating directions for future research proposed in earlier ones suggests that the study of personal networks has stalled in public health. The limited uptake of proposals that would bring public health into line with current ways of study personal networks in sociology revealed by cross-linking analyses of empirical exemplars and directions for future research helps explain why it has stalled. So too does the way in which public health has appropriated network social capital theorizing developed by sociologists.

What are the implications of your research to inform future policy or practice initiatives? Insufficient understanding of mechanisms is a barrier to developing network-targeted policies. Understanding what studies of personal networks actually do is key to explaining and moving beyond this barrier.

70. The use of mobile apps in the workplace: A process and outcome evaluation – Kaleigh Meisner

Background: Numerous innovations in health information technology are empowering individuals to assume a more active role in monitoring and managing their health. The use of health-promoting Mobile Applications as a tool in workplaces is growing among employees who seek support to modify their lifestyles.

Objectives: To evaluate a mobile app (Addo – developed in Nova Scotia) regarding its implementation and impact on promoting health behaviour changes in workplace settings in Nova Scotia.

Methods: Treatment (n=51) and control groups (n=51) were assessed through a longitudinal and mixed-methods design using the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) model. Data were collected through surveys (pre-, post- and 3 months post-intervention) and qualitative interviews.

Results: Results indicated that the implementation of Addo was low in the treatment group. Using validated and standardized survey tools (General Self-Efficacy and RAND-SF-36), all participants scored ‘excellent/very good’ at baseline (77%) and 3-months post intervention (79%): Addo had no impact. Interview feedback on the app was generally negative.

Conclusions: The low levels of usage and implementation combined with the self-reported healthy behaviours of participants may indicate a lack of need by these employees for Addo. The lack of impact and negative perceptions about the app may have influenced the developer to discontinue the app, which occurred near the end of the evaluation.

What are the implications of your research to inform future policy or practice initiatives? The results from this evaluation indicated little need for this app, low use, and no impact, however, in populations where need is greater or where apps are more motivating, a more positive outcome is possible. As the app market for health promotion continues to grow, it is important that evidence-based evaluation inform their development and use.

71. The impact of including cell phone interviews on the sample representativeness and results of a telephone-based public health survey – Michael King

Co-authors: Liza Mercier, David Northrup

Background: For decades, telephone surveys have been an important source of information on our population’s public health-related attitudes, perceptions, knowledge and behaviours. Recently, declining response rates – especially among young adults and males – as well as a rise in cell phone-only households, have led to challenges with sample representativeness, non-coverage, and the potential for bias.

The Rapid Risk Factor Surveillance System (RRFSS) is an ongoing telephone survey conducted collaboratively since 2001 by numerous Ontario health units and the Institute for Social Research at York University.

In 2016, RRFSS began including cell phones interviews in its sample.

Objectives: To investigate the impact of including cell phones interviews on the sample representativeness of a telephone-based public health survey.

Methods: RRFSS is a repeated cross-sectional telephone health survey using a dual-frame random digit dialing (RDD) sample. Data are collected in 3 4-month cycles per year.

Data from cell phone interviews were compared to those from landline telephone interviews from the same health region, as well as to regions' population estimates by age and sex.

Results: Four (4) health regions included a total of 1,160 cell phone interviews in their 2016 RRFSS sample, in addition to 4,040 landline telephone interviews.

Preliminary analyses show that the age-sex distribution of cell phone interview participants is much more consistent with that of the overall population, compared to landline interviews. Statistically significant differences in a number of health indicators, as well as in response rates, were observed between the samples.

Conclusions: Including cell phone interviews is an effective way to improve the sample representativeness of telephone surveys.

What are the implications of your research to inform future policy or practice initiatives? Improving sample representativeness will increase the quality of information derived from health surveys to inform public health decision-making.

72. Health PROMOTION Canada, Atlantic Chapter engagement and establishment – Amanda Hudson-Frigault

Co-author: Morgane Stocker

Background: Health Promotion Canada (HPC) (formerly the Pan-Canadian Network for Health Promoter Competencies), has a goal “to enhance health promoter competency development by providing guidance, leadership and expert advice through collaboration, consultation and research and resource development”. In the summer of 2016, HPC encouraged the Atlantic Provinces to mobilize their ongoing Health Promotion work and establish a local chapter.

Objectives: Within the Atlantic region, engage those working in the field of Health Promotion and advance the profession, while raising the profile of Health Promoters.

Aligning with the objectives of HPC:

- Enhance the capacity of health promoters by furthering the development, implementation and usage of health promoter competencies.
- Create and disseminate resources supporting the application of health promoter competencies to produce a well-equipped and effective health promotion workforce.

Target Groups:

- Those currently in a Health Promotion or allied health education program at the University Level.
- Those with extensive professional experience in several Pan-Canadian Health Promoter Core Competencies
- Organizations/Associations advancing the professional of Health Promotion and employing practicing health promoters.

Activities:

- Enhance relationships between university programs in allied health fields, and Health Promotion.
- Develop Pan Canadian Health Promoter Competencies Professional development Opportunities and local resources.
- Establish an Executive Board
- Develop meaningful engagement strategy to connect with Leaders in Health Promotion field.

Deliverables:

- Increase the number and skills of health Promotion professionals
- Effective network for those working in Health Promotion.
- Registered Bi-laws and Board.
- Innovative and foundational collaborative approach to health promotion across the Atlantic Provinces.

- Credible body for the sustainability of the HealthCare System.

What are the implications of your policy or practice initiative to inform future research? Health Promotion Atlantic will work to enhance health promoter practice in the Atlantic Provinces through: providing guidance, leadership of collaboration and support, advocating around the Pan-Canadian Health Promoter Competencies and the practice of health promotion.

73. Health Promotion Canada: (drum roll please) Introducing a consortium to empower health promoters across Canada – Thierry Gagné

Co-authors: Morgane Stocker, Rebecca Fortin, Tom Martin

Background: Starting 2006 in partnership with the Public Health Agency of Canada, Health Promotion Ontario developed the first set of health promoter competencies. From 2013-2015, Canadian health promoters validated the competencies and contributed to the development of health promoter workforce resources. In October 2016, Health Promotion Canada (HPC) was officially launched at the international gathering – Global Forum for Health Promotion – in Charlottetown, PEI. HPC aims to become a vibrant, connected and effective collaboration for workforce development and action in health promotion.

Objectives: 1) To describe Canada’s Health Promoter Competencies. 2) To illustrate health promotion workforce tools and resources that advance health promoter, organization, and education policies and practice. 3) To increase awareness of how to become involved with national and local networks to build health promoter workforce capacity and action on health promotion issues across the country.

Target Groups: Health Promoters and Public health professionals who incorporate health promotion as part of their practice in the public and private sectors; Managers who hire and manage health promotion professionals; Students and Academic professionals who are learning/teaching health promotion and produce research in post-secondary institutions.

Activities: Develop health promoter training opportunities and online tools for health promoters, their managers, and academic institutions.

Deliverables:

- Increase the number and competency of health promoters and public health professionals practicing health promotion.
- Better support collaboration between university departments who train health promoters and the organizations who hire.
- National network to advance health promoter practice within provinces/territories and across Canada.

What are the implications of your policy or practice initiative to inform future research?

- Recognizes the important role and value of health promoters as a distinct discipline within the public health sector.
- Empowers emerging/young professionals working and conducting research in the field of health promotion.

74. Medical assistance in dying and social work practice – Amanda Cramm

Co-author: Jacob Shelley

Background: In June 2016, Parliament amended the *Criminal Code of Canada* to create exemptions from the offences of culpable homicide, aiding suicide, and administering a noxious thing, in order to permit medical practitioners and nurse practitioners to provide medical assistance in dying (“MAiD”). The amendment also permits social workers to assist in the process. However, the role of the social worker in this context remains unclear and has left many professional social workers uncertain as to how their practice may be affected by the new MAiD law.

Objectives: The objectives of the research are to identify the role of social workers within the context of MAiD services and to clarify professional boundaries and professional responsibilities when practicing within MAiD. Once social workers professional boundaries and responsibilities are identified, a liability assessment will be undertaken.

Methods: A doctrinal research methodology will be used to understand the eligibility requirements and safeguards of the MAiD legislation and assess how this interacts with the professional responsibilities of registered social workers.

Results: This analysis helps identify the potential role(s) for social workers in the MAiD context and to explore how social workers who practice within the MAiD context may be exposed to liability.

Conclusions: Front line social workers will need guidance and support on developing and practicing best practices while working within the MAiD context. They will also require advice on the possible liability arising from practicing within the context of MAiD.

What are the implications of your research to inform future policy or practice initiatives? Healthcare institutions and community healthcare programs are currently developing ways to facilitate MAiD. This research will assist administrators and direct service providers in understanding the role of the social worker as well as the potential liability arising from practicing within this context.

75. Scientific literacy in the Canadian legal profession – Jacob Shelley

Co-authors: Gabriella Levkov, Michelle Noonan

Background: In *R v Mohan*, the Supreme Court of Canada ascribed a gatekeeping role for the judiciary. Judges are tasked with, among other things, determining whether novel scientific evidence is relevant and necessary to go before the court. This entails an assessment, in effect, of the reliability and acceptability of the scientific evidence. Yet, it is not clear that the judiciary is equipped to assess the science. To assist judges, the National Judicial Institute published the “Science Manual for Canadian Judges.”

Objectives: To determine the extent to which the legal profession in Canada is familiar with the “Science Manual” and its comfortability with the gatekeeping role of the judiciary.

Methods: We conducted an online survey of the legal profession inquiring into their scientific training, understanding of scientific principles, and familiarity with and use of the manual. The survey was distributed to all Canadian law schools, legal associations, and professional groups.

Results: We had 162 respondents, the vast majority of which were practicing lawyers (74%). Just over 1/3 of respondents had scientific training, although more than half felt they could adequately assess scientific evidence. Most respondents were unfamiliar with the manual, with only 13% responding that they familiar with manual. Of these respondents, only 25% read the manual. Respondents had mixed views about the role of judges as gatekeepers.

Conclusions: We conclude that it is imperative to understand the scientific literacy of the legal profession, especially judges, given the importance of judicial decision-making for public health.

What are the implications of your research to inform future policy or practice initiatives? This research demonstrates:

- Gaps and challenges with empirical research in the legal profession;
- Need for more research into scientific literacy in the legal profession; and,
- Conflicting aims and values between scientific and legal inquiry.

76. Follow-up on the Missing Women Commission of Inquiry (MWCI) – Sarah Riddell

Co-authors: Carol Bellringer, Malcom Gaston, Katie Olthuis, Amy Hart, Lisa Seigny

Background: The MWCI examined police investigations into 67 women reported missing from Vancouver's Downtown Eastside in the late 1990s and early 2000s. All 67 women shared one or more disadvantaging social/economic factors: violence, poverty, addiction, racism, mental health issues, residential school impacts, involvement in survival sex work, etc. One third were Aboriginal.

The Commission's final report, *Forsaken* (2012), set out 54 recommendations and two urgent measures for the BC Government to improve the safety of vulnerable women, police investigations, and support for victims' families.

Objectives: To report on how the BC government responded to 21 recommendations and both urgent measures. We asked:

1. Did the provincial government commit to taking action in response to the recommendation?
2. What actions did the provincial government take in response to the recommendation?
3. Can the provincial government demonstrate that its actions respond to the intent of the recommendation?
4. Does the provincial government have any future actions that respond to the recommendation?

Target Groups: Policy-makers, decision-makers, (public) health and social service providers

Activities:

- Interviewed 100+ representatives of governments (BC, local), First Nations, community and legal organizations, front-line service providers and victims' loved ones
- Reviewed hundreds of documents including meeting summaries, project charters/ plans, and financial records
- Analyzed how government's actions responded to the intent of each recommendation

Deliverables: A public report that answers the four questions listed above for each recommendation and describes challenges that impacted implementation.

What are the implications of your policy or practice initiative to inform future research?

- Stakeholders and the public have the information necessary to hold the BC government accountable for its response to the MWCI recommendations.
- Stakeholders and the public are aware of government's progress, enabling them to access new programs and build on existing work.

77. "Minority Stress" and its impact on the health and well-being of women of African ancestry living in Nova Scotia – Barb Hamilton-Hinch

Co-authors: Jacqueline Gahagan, Afua Cooper, Wanda Thomas Bernard

Background: Health equity is a well-known conceptual framework in public health, less is known about specific implications "minority stress" has on populations. This research examines ways "minority stress" among women of African ancestry can impact their health and well-being. Participants for this research included a subset of 20 women of African ancestry, who participated in a national study, "Racism Violence and Health Project" funded by CIHR's Institute of Gender and Health.

Objectives: Primary objectives: 1) explore the lived experiences of racism as a form of "minority stress", 2) examine the effects, particularly on health and well-being on women of African ancestry, 3) offer recommendations to address these at a systems-level to improve their everyday lives.

Methods: Data were analysed using a modified grounded theory approach, with Critical Race Theory (CRT) and Black Feminist Thought (BFT) as the research lens. CRT requires that racism and its resultant "minority stress", is central to any research and BFT gives voice to the lived experiences of Black Women.

Results: Racism and “minority stress” have an ongoing impact on the health and well-being of women of African ancestry as evidenced in emergent theories: survival, silence, becoming aware, and restructuring self and the community. These categories offer an important story mapping the past, present, and an anticipated future. Participants’ spoke of being treated as being invisible, being the subject of micro-aggressions, and becoming hyper-vigilant as a result of everyday racism.

Conclusions: Findings suggest that public health and other system-level (eg. education system, legal system) drivers of health outcomes must continue to confront racism in policy and practice. As demonstrated in the lived experiences of the participants, dealing with daily, painful occurrences of discrimination has significant health implications.

What are the implications of your research to inform future policy or practice initiatives?

This research presents strategies for coping with everyday racism, and makes recommendations for health promotion policies and procedures that could benefit other marginalized populations.

78. A utilization-focused toolkit for evaluating small NGOs in international development – Stephanie Lu

Co-author: Susan Elliott

Background: With the introduction of the Sustainable Development Goals, the level of sophistication required to measure the impact of international development has grown. However, NGOs have been slow to invest in development evaluation; instead of using evidence-based tools to enhance performance, such as logic models or benchmarks, NGOs engage in activities to demonstrate their good work.

Objectives: To support NGOs, particularly small ones with limited resources, strategies for cost-effective tools are needed. Our research has aimed to do away with the prioritization of individual projects with short-term impact by undertaking an organizational level evaluation of a small NGO in water-based development.

Methods: Our case study is of H2O 4 ALL—a Canadian NGO that has implemented over 40 projects in water-based development in low-income countries. Using mixed methods and Patton’s utilization-focused evaluation approach, we have created and piloted an evaluation toolkit comprising of a logic model, online stakeholder surveys, and a project implementation checklist. Using contribution analysis we have also identified specific facilitators and barriers to embedding evaluative thinking.

Results: Preliminary findings suggest that measuring impact systematically does not have to be resource-intensive, even if it involves international players. The greater barrier to evaluation includes the persisting notion that evaluative thinking is only done by the evaluator, limited opportunities for group learning, and giving critique when the organization is run by a small group of staff.

Conclusions: Even though our evaluation focused on water-based development, our toolkit is transferable to other small NGOs running programs in social change.

What are the implications of your research to inform future policy or practice initiatives? Public health professionals working with NGOs should be encouraged to embed evaluative thinking using accessible, evidence-based tools.

79. Examining the complexities of labor migration for Canadian families: New opportunities for health promotion – Christina Faye Murray

Co-authors: Doug Lionais, Josh Talebi, Mandy Nicholson, Chloe Donatelli, Maddy Hughes

Background: In this presentation multiple complexities currently experienced by Atlantic Canadian families impacted by labor migration will be examined. While vulnerabilities currently exist, there are also opportunities to address health promotion in light of the Ottawa Charter strategies for health promotion.

Objectives:

- Describe complexities currently facing Canadian families and rural communities impacted by labor migration.
- Illuminate how labor migration has threatened the functioning of families and communities.
- Critically examine new opportunities for health promotion using the Ottawa Charter as a framework.

Methods: Data collection methods used in this narrative research included; conversational interviews, key informant interviews, focus group interviews and a systematic literature review.

Results: Findings from our Tale of Two Islands study revealed how labor migration is negatively impacting the health of families living in Atlantic Canada. Also identified were inconsistencies in provincial health policies which have contributed to inadequate and ineffective health care delivery for those who are leaving for employment and those who are left behind.

Conclusions: There is a lack of understanding and awareness regarding the phenomenon of labor migration and how it is impacting Canadian families and communities. This lack of awareness has resulted health needs of migrant family members not being addressed appropriately or in a timely manner.

What are the implications of your research to inform future policy or practice initiatives? Through increasing awareness and understanding regarding the familial and community impacts of labor migration, policy makers from multiple disciplines, have an opportunity to the address the health needs of migrant families.

80. The help-seeking struggles of Portuguese-speaking women experiencing intimate partner violence in the post-migration context – Sepali Guruge

Background: Intimate partner violence (IPV) is a public health issue in Canada and elsewhere; the short and long-term health consequences of IPV are well-known. Literature is also clear that women's responses to IPV are largely influenced by the support and services available to them. However, Canadian literature is sparse on immigrant women's access to IPV-related care and services.

Objectives: This study explored access to and utilization of IPV-related services among Portuguese-speaking women in the Toronto. Portuguese is the 8th most spoken language in the Greater Toronto Area.

Methods: Building on new and existing academic and community collaborations, a qualitative study was conducted in Toronto with nine Portuguese-speaking immigrant women from Brazil and Portugal. Data collection involved individual surveys and focus group discussions conducted in Portuguese. Focus group discussions were audio-recorded, translated and transcribed into English, coded, and integrated with the individual survey data.

Results: All participants reported experiencing more than one form of IPV. Financial abuse and physical abuse were the most prevalent, followed by harassment, threatening, and controlling behaviours, and spiritual abuse. Fear of being deported, fear of children being taken away, obtaining evidence of abuse, and lack of language-specific services were the key barriers to seeking help. Language-specific community-based services, and faith and religion were noted as key supportive factors.

Conclusions: Immigrant women dealing with IPV are facing many structural and systemic barriers that delay or prevent them from seeking help.

Implications: A more coordinated cross-sector approach is key to helping women dealing with IPV in the post-migration context in Canada. More research is also needed to identify diversities and similarities within and across all Portuguese-speaking communities on their access to IPV-related care and services, to better inform policy makers.

81. A Canadian Knowledge Exchange Forum on Syphilis: Lessons learned from rural and urban perspectives – Geneviève Boily-Larouche

Background: Syphilis has re-emerged with epidemics rooted in both urban and rural settings in Canada. The persistence of syphilis in two different contexts emphasizes the need to share knowledge rapidly. To create an opportunity for researchers, policy makers, and practitioners to engage with each other and share knowledge to improve public health interventions on syphilis in Canada, the National Collaborating Centre for Infectious Diseases (NCCID) and its partners organized a knowledge exchange (KE) forum in Montreal in November 2016.

Objectives and Target Groups This presentation will summarize to a broader audience of public health specialists the key points of this forum. It will review the distribution of the burden of syphilis in Canada and the epidemic shift to Indigenous populations, comparing and contrasting the challenges from urban and rural communities.

Activities and Deliverables: The KE forum created a space for participants to share rural and urban perspectives, key challenges, gaps and opportunities and explore new avenues. Urban and rural public health specialists wished to see the work moving beyond disease specific-approaches, with approaches focusing on positive sexuality, mental wellness and social determinants of health. More efforts to revisit surveillance data, better define outcome measures, and evaluate current programs were considered as corner stones for improving practice in Canada. Rural-specific priorities included maintaining high quality services while dealing with high staff turnover, addressing gender-based violence and sustaining efforts for youth. Urban centres vouched for wiser use of new technologies in public health with a focus on re-testing.

What are the implications to inform future research? This KE forum created a space to synergize ideas to enhance prevention, control, and treatment of syphilis in Canada. The priority areas described during this event identify new research needed on appropriate responses and tailored collective efforts to address the gaps in practice and policy.

82. Reaching the HIV undiagnosed: Scaling up effective programming approaches to HIV testing and linkage to prevention and care – Laurie Edmiston

Co-authors: Christie Johnston, Timothy Rogers, Laurel Challacombe, Michael Bailey, Logan Broeckaert

Background: There is an urgent need to improve diagnosis of HIV in Canada. Of the estimated 75,500 people who live with HIV in Canada, 21% are unaware of their status. Engagement in HIV care and treatment can only begin with a diagnosis of HIV. Early diagnosis and engagement is crucial for optimal health; it is also an effective means of preventing transmission. An enhanced effort to reach the undiagnosed includes the uptake of programmatic approaches based on new knowledge in HIV testing, and the scale up of evidence-informed approaches. The uptake of this knowledge is uneven across the country. We needed an opportunity to share knowledge of effective testing and linkage practice to help improve efforts to reduce HIV transmissions and improve health.

Objectives: To reveal priority issues in HIV testing programming

- Articulate program approaches that need to be considered to drive down the epidemic
- Discuss practice/policy shifts associated with effective approaches
- Foster multi-region, cross-sector collaboration and knowledge-sharing.

Target Groups: HIV testing leadership, including public health policy makers, clinicians, and social service providers

Activities: We convened a national deliberative dialogue with a group of 50 national HIV testing/linkage experts to discuss research and practice-based knowledge about effective strategies within and across regions and populations.

Deliverables: Articulated priority issues to consider in improving HIV testing/linkage in jurisdictionally-relevant and population-specific ways.

What are the implications of your policy or practice initiative to inform future research? Priority issues that were revealed at this dialogue reflect gaps that exist in evidence on effective interventions; for example, establishing the most effective mix of testing interventions for a specific jurisdiction/context; employing the right tester for the right population/setting (i.e., physician, nurse, peer); integrating self-directed HIV testing approaches into a public health response; and establishing effective mechanisms for ensuring linkage to HIV treatment. These outcomes will inform future intervention and health system research focused on HIV testing and linkage initiatives.

83. We're here: Subjugation and resistance in older HIV-positive gay men's experiences of seeking and receiving care across health care settings – Hannah Kia

Background: Despite the prominent role of systemic discrimination in impeding equitable access to health care among older HIV-positive gay men, this population's subjective accounts of subjugation in health systems remain underrepresented in the literature on aging gay men.

Objectives: This qualitative study sought to investigate experiences of subjugation among older HIV-positive gay men in health settings, and to examine this population's accounts of resistance to such marginality.

Methods: 16 Toronto-based HIV-positive gay men over age 49 underwent semi-structured interviews in which they were asked to reflect on their cumulative experiences of seeking and receiving care in health settings. Drawing on poststructuralist traditions of grounded theory to inform data analysis, these accounts were then used as a basis from which to infer discursive processes of subjugation and resistance that may be most salient for older HIV-positive gay men in contexts of care.

Results: The accounts of participants revealed, among other findings, (1) complex intersections of gay identity, HIV history, and aging experience as potential targets of subjugation and sources of resistance across health settings, and (2) the role of informal and formal HIV care networks in both reinforcing historical conditions of subjugation and catalyzing opportunities for change.

Conclusions: Unique configurations of identity and life history, among other factors, often constitute grounds for variable experiences of subjugation in health settings among older HIV-positive gay men with diverse social locations. HIV care networks, though often entangled with the legacy of HIV stigma, potentiate resistance among those in this population.

What are the implications of your research to inform future policy or practice initiatives? The study's findings may inform the development of health care policy that more closely addresses the intersectionality of subjugation among older gay men living with HIV, along with practice initiatives that capitalize on the emancipatory potential of HIV care networks.

84. Childhood maltreatment and psychological distress: Exploring the mediating effect of self-compassion among gay and bisexual men in Toronto, Canada – Syed Noor

Co-authors: Julia Vernon, Ammaar Kidwai, Danielle Kilby-Lechman, David Brennan, Trevor Hart

Background: Childhood maltreatment is a risk factor for later-life psychological distress, including depression in gay and bisexual men (GBM). Self-compassion positively correlates with life satisfaction and with subjective happiness in GBM adults and with decreases in depression in undergraduate students.

Objectives: This study examines the association between self-compassion and depression as well as the possible mediation effects of self-compassion on the associations between maltreatments and depression

Methods: The sample was 470 HIV-negative sexually active Torontonians GBM. Maltreatment was measured using the Childhood Trauma Questionnaire; depression was measured using the Center for Epidemiologic

Studies Depression Scale and self-compassion was measured using the Self-Compassion Scale (SCS). Multiple mediation models were fit using MPlus 6.1 in order to examine direct and indirect effects of five types of childhood trauma –emotional abuse (CEA), emotional neglect (CEN), physical abuse (CPA), physical neglect (CPN) and sexual abuse (CSA) – on depressive symptoms through the SCS and the SCS subscales: self-kindness, self-judgement, common humanity, isolation, mindfulness and over identification.

Results: A majority of participants were younger (35 ± 12 yrs), White (59%), and self-identified gay (86%). Childhood traumatic experiences positively correlated with depressive symptoms ($r=.24\sim.39$, $p<.001$) and negatively correlated with SCS subscales ($r=-.10\sim-.25$, $p<.05$), and SCS subscales negatively correlated with depressive symptoms ($r=-.14\sim-.50$, $p<.01$). Mediation analyses revealed that the sum of the indirect effects of self-compassion subscales attenuated the associations between depressive symptoms and CPA ($\beta =.06$, 95%CI:0.01-0.10), CEA ($\beta =.11$, 95%CI:0.07-0.16), and CEN ($\beta =.08$, 95%CI:0.03-0.13) but not CPN or CSA.

Conclusions: Self-compassion appears to mediate the effects of emotional trauma and physical abuse on depressive symptoms. Interventions that help GBM survivors of childhood trauma cultivate self-compassion may help prevent adult depression. Future research should evaluate evidence-based psychological interventions that target self-compassion, such as the Mindful Self-Compassion program, in alleviating depression among GBM survivors of childhood maltreatment.

What are the implications of your research to inform future policy or practice initiatives? Practitioners working with GBM survivors of childhood maltreatment should examine evidence-based interventions that help cultivate self-compassion, such as Mindful Self-Compassion program (Neff & Germer, 2013) for utility in alleviating effects of childhood maltreatment and depressive symptoms among GBM.

85. Insomnia among men with HIV: Psychosocial factors associated with insomnia above and beyond HIV status among gay and bisexual men in Toronto – Syed Noor

Co-authors: Tyler Tulloch, Ammaar Kidwai, Marie Faaborg-Andersen, Trevor Hart

Background: The prevalence of insomnia is higher among people living with HIV (PWH) than the general population. Depression is more prevalent among PWH, and is one of the strongest predictors of insomnia among PWH. In addition, higher rates of anxiety, post-traumatic stress disorder, and substance use are observed among PWH.

Objectives: This study examines factors associated with insomnia among a sample of gay and bisexual men (GBM), including HIV status, developmental stressors, and mental health problems.

Methods: Sample includes 302 self-identified GBM (152 HIV-positive) from Toronto. Insomnia was measured using three items from the Hamilton Rating Scale for Depression: sleep-onset insomnia, sleep-maintenance insomnia, and early morning awakenings. Developmental stressors were three types of childhood victimization: verbal bullying, sexual and physical abuse, and four types of anti-gay victimization in adulthood: verbal and physical assault, being threatened with a weapon, and having objects thrown at oneself. Mental health problems included depression, anxiety, and alcohol and marijuana use. Three separate ordinal logistic regression models were built to examine factors associated with each type of insomnia.

Results: Kruskal-Wallis tests demonstrated HIV-positive and HIV-negative men differed significantly on sleep-onset insomnia ($p <.01$), sleep-maintenance insomnia ($p <.05$), and on depression symptom severity ($p <.01$). Multivariate analyses identified greater depression symptom severity (OR =1.04, 95% CI:1.02-1.06) and childhood sexual abuse severity (OR=1.06, 95% CI:1.02-1.10) were associated with increased odds of sleep-onset insomnia, after controlling for HIV status. Greater depression symptom severity was also associated with increased odds of sleep-maintenance insomnia (OR=1.04, 95% CI:1.02-1.06), and early morning awakenings (OR=1.03, 95% CI:1.02-1.05).

Conclusions: Results highlight that the etiology of insomnia among PWH is complex and may include a combination of cognitive, behavioural, physiological, and psychosocial factors. Evidence-based (e.g., Cognitive

Behavioral or Mindful Self-Compassion) interventions that help in alleviating depression and/or effects of childhood abuse could be useful for PWH with insomnia.

What are the implications of your research to inform future policy or practice initiatives? Practitioners working with PWH should examine evidence-based interventions, such as Cognitive Behavioural therapy for insomnia (CBT-I; Edinger & Carney, 2008), and/or Mindful Self-Compassion program (Neff & Germer, 2013) for utility in alleviating depressive symptoms and effects of developmental stressors.

86. Canadian health professionals' knowledge and clinical practices related to HIV screening and testing –

Margaret Gale-Rowe

Co-authors: Gregory Traversy, Tujuanna Austin, Jessica Yau, Karen Timmerman

Background: The Public Health Agency of Canada (PHAC) provides guidance to healthcare providers regarding who, when, and how often to screen for HIV.

Objectives: The objective of this study is to determine the level of healthcare provider knowledge related to HIV and whether their practices are consistent with PHAC's HIV guidance, in order to identify areas for capacity building and knowledge translation.

Methods: Data was collected from healthcare professionals as part of an anonymous online national survey aiming to assess the impact of PHAC guidance on professional practice. The survey was pilot tested with infectious disease experts prior to dissemination through professional associations, listservs and government agencies.

Results: In total, 1075 participants from across Canada responded to the survey, with the majority being nurses and physicians. Knowledge of certain aspects related to HIV screening and testing was good, but some knowledge gaps were evident. Approximately 53% of respondents reported offering HIV testing regularly and 65% offer HIV tests as part of routine care to at least 50% of their patients. Very few reported not having enough time for pre- and post-test counselling and the majority regularly provides important information during counselling. A number of providers are not regularly screening patients as part of routine care, nor using point-of-care testing.

Conclusions: These preliminary results point to some potential areas for capacity building and knowledge translation with respect to HIV testing. Given that undiagnosed HIV cases contribute significantly to HIV incidence, such information is valuable in order to control the transmission of HIV in Canada.

What are the implications of your research to inform future policy or practice initiatives?

This study provides a baseline for future assessments of PHAC products, and provides key input for the development of future knowledge translation activities based on existing levels of knowledge and practice.

87. Sexually transmitted and bloodborne infections (STBBIs) in Canada: Mapping the landscape, changing the discourse – Alexandra Musten

Co-authors: Jacqueline Gahagan, Carla Pindera

Background: STBBI testing is a crucial component of Canada's public health response. Given this, members of the CIHR-funded REACH 2.0 National HIV & STBBI Testing Working Group, in collaboration with community and public groups across Canada, undertook a project to map Canadian HIV POCT pilot programs to understand and address the socioecological factors impact the availability of this testing innovation.

Objectives: To map the various micro, meso and macro factors that lead to scaling up from pilot to sustainable HIV POCT program, and 2. To examine which priority populations are best served by HIV POCT.

Methods: Our research team mapped Canadian pilot projects that have occurred 2005-2015 using the INSTI HIV-1/HIV -2 rapid antibody test to understand spatial and temporal usage patterns of POCT kits. In addition, we

conducted an environmental scan of grey and peer reviewed literature and reports published between 2005 and 2015 to understand the key drivers in scaling up HIV POCT programming.

Results: Preliminary findings offer an overview of the socioecological aspects of HIV POCT in Canada, including the key determinants of sustainable HIV POCT initiatives and lessons learned for public health.

Conclusions: Greater national attention is needed to ensure current approaches to HIV testing, including HIV POCT, are maximized to benefit those at enhanced risk of infection. Testing programs introducing HIV POCT to their regions should make sustainability beyond the pilot phase an evaluation component of their project. However, addressing legislative and systemic barriers in moving toward a sustainable approach to HIV testing in Canada is needed.

What are the implications of your research to inform future policy or practice initiatives? This project will significantly impact the way we move forward with HIV POCT in Canada, and bring into sharp relief the different mechanisms that have been used to advance HIV programming. It will offer an overview of structural, legislative, and policy directives that can inform STBBI testing in the Canadian context.

88. *What difference are we making?* Evaluating the impact of client interaction with an STBBI case management public health nurse – Leslie Tilley

Co-authors: Christiane Bouchard, Marianne Gervais, Caroline Lortie-Leury, Mattieu Mercier, Aideen Reynolds, Dara Spatz-Friedman

Background: The Ontario Public Health Foundational Standard requires evidence-informed practice that is responsive to local needs and emerging issues, as well as ongoing monitoring and evaluation to improve public health programs and services. Despite this, little has been documented from the client perspective about the value of the interaction with a case management public health nurse (PHN) following the diagnosis of a sexually transmitted or blood borne infection (STBBI).

Objectives: Implement a client satisfaction/input survey to document client perception of a recent interaction with an Ottawa Public Health (OPH) PHN following an STBBI diagnosis. Measures include: acceptability and overall satisfaction with case management service; changes in client knowledge of STBBI; perceived ability to protect health in future; and, participant demographics.

Target Groups: People in Ottawa who have recently been contacted by an OPH PHN following the diagnosis of a reportable STBBI.

Activities: A working group was struck to design the survey and methods including: data collection instrument; participant recruitment protocol; data collection and analysis plan; dissemination and communication of results. After pilot-testing the instrument, the online survey was launched.

Deliverables: In this presentation, the survey design and preliminary results will be shared.

What are the implications to inform future policy or practice initiatives? Results from this survey describe outcomes and acceptability, as perceived by the client, of PHN follow up with people diagnosed with STBBIs in Ottawa. It is expected that results may highlight opportunities to improve current practices and/or identify areas for enhanced training for PHNs and/or opportunities to strengthen communication with community health practitioners. Further, this client survey design may be adapted by other health units and/or used to evaluate client interactions with public health case management of other infectious diseases.

89. Chlamydia workload assessment and practice change: A retrospective and prospective study – Leslie Tilley

Co-author: Kaitlynn Almeida

Background: Chlamydia is the most prevalent reportable Sexually Transmitted and Blood Borne Infection (STBBI) in Ottawa and is therefore the most burdensome infection for Ottawa Public Health's (OPH's) STBBI Case

Management team. The OPH STBBI Case Management team implemented a change in practice to address the workload of Chlamydia while continuing to meet public health obligations.

Objectives:

- Measure the workload burden of Chlamydia to create an equitable distribution of cases.
- Implement and evaluate a Chlamydia case management practice change to reduce workload while mediating an increase in clients lost to follow-up.

Methods: Phase 1 included a retrospective review of Chlamydia cases in a three month period (n=694) and assessment of the associated workload. New algorithms for Chlamydia follow-up were then introduced whereby Chlamydia cases were prioritized into four categories based on factors that increased a client's risk of developing complications due to their infection. The higher the priority status, the greater the number of attempts made to reach the client. Phase 2 consisted of a six-month prospective review of Chlamydia cases (n=1501) to evaluate changes in workload and percentage of clients lost to follow-up, compared with cases assessed in Phase 1.

Results: Following the practice change, workload decreased by 11.6%. Although the percent of clients lost to follow-up increased from 12.4% prior to 22.5%, the bulk of cases was in the lowest priority group.

Conclusions: These results have been used to make evidence-based practice changes to OPH's Chlamydia Case Management follow-up practices.

What are the implications of your research to inform future policy or practice initiatives? Rates of Chlamydial infection have been increasing steadily in Ottawa and Ontario. In a resource-limited environment, evidence-based methods to meet legislative public health requirements, clients' needs, and manage increasing workload is essential. This methodology may be useful for other health units facing similar challenges.

90. Impact and effectiveness of the quadrivalent human papillomavirus vaccine: A review of 10 years of real-world experience in Canada – Marc Steben

Co-authors: Mattea Thompson, Nathalie Mallette, Voica Racovitan, Fern DeAngelis, Caroline Rodier

Background: Human papillomavirus (HPV) vaccines to prevent cervical cancer, pre-cancer and other HPV related diseases have been licensed since 2006. Canada has had high vaccine coverage rates and success in the launch of its HPV vaccination public programs. Despite that, there has been limited awareness of the effectiveness of the Canadian public programs.

Objectives: The purpose of this review is to synthesize the available data and to quantify the reported impact and effectiveness of the quadrivalent vaccination on HPV prevalence, genital warts, cervical abnormalities and Juvenile onset of Recurrent Respiratory Papillomatosis (JoRRP).

Methods: Pubmed/Embase databases were searched for articles published from September 1ST 2006 to July 1ST 2016, including conference abstracts, which describe the impact of the quadrivalent HPV vaccine in Canada.

Results: A total of 9 articles were identified. Two articles reported on impact before the initiation of the public program, and were thus excluded. Publications/abstracts from 5 provinces (Quebec, Ontario, Alberta, Manitoba and British Columbia) reported substantial reduction in their respective outcomes. Most reductions were found in the vaccinated cohorts of young girls. The observed decrease ranged from 44% to 50% in relative reduction of dysplasia, and 40% to 45% in relative reduction of GW. The incidence rate ratio for CIN2+ was significantly reduced in British Columbia (0.14; 95% CI: 0.04– 0.47; p<0.01). In Quebec, vaccine strain prevalence was drastically reduced in the post-vaccination period.

Conclusions: Over the last decade, the real-world impact of the quadrivalent HPV vaccine has become evident in Canada.

What are the implications of your research to inform future policy or practice initiatives? HPV vaccination programs constitute a major public health initiative. Monitoring the impact of immunization programs is crucial to measuring success in disease reduction. Results signify an important advancement in Canadian public health.

91. Improving pathways to LGBTQ health in Nova Scotia: Implications for public health practitioners –

Jacqueline Gahagan

Co-authors: Kolten MacDonell, Ashley Harnish, Matthew Lee

Background: Although increasing attention has been paid to the unique primary health and social care needs of lesbian, gay, bisexual, transgender and queer (LGBTQ) populations, ensuring LGBTQ culturally competent approaches in public health remains a challenge. For example, recent research indicates that among LGBTQ individuals who have a primary health care provider, many are not 'out' to their health care provider for fear of transphobia or homophobia from their providers or from within the health care system more generally.

Objectives: This paper presents on the 'pathways to health' research partnership between university-based health researchers, LGBTQ community partners, and those working in primary health within public health in Nova Scotia. The objectives of this program of research are to advance our knowledge base on the unique health and social needs of LGBTQ populations in Nova Scotia, and to use this knowledge base to develop evidence-informed and inclusive public health programs and policies.

Methods: Community consultations with LGBT populations and health care providers assisted in the development of an online LGBTQ health survey and a scoping review, both of which served as the basis for understanding and addressing the ongoing barriers to primary health as experienced by LGTB populations across Nova Scotia.

Results: Our results indicate more needs to be done to address the primary health and social care needs of sexual orientation and gender identity (SOGI) minoritized populations such as LGBTQ populations to address the key social determinants of health that can serve as barriers or facilitators to the uptake of primary health and in improving health outcomes overall.

Conclusions: In conjunction with partners in primary health, and within academic training programs for health professionals, we are developing training modules to improve cultural competence among health and social care providers, including transgender health, end of life conversations among older LGBTQ populations, lesbians and breast cancer, among others.

What are the implications of your research to inform future policy or practice initiatives? Additional training opportunities are warranted in public health professional programs, including nursing and medicine, to help address the current challenges faced by LGBTQ populations in accessing culturally competent primary health care and social supports. LGBTQ cultural competences modules and online training tools are being developed for the next generation of primary health and social care providers through research evidence and will be made available to policy and practice decision-makers.

92. International Students at Dalhousie University: Their perceptions and experiences in accessing sexual health services in Halifax, NS – Stefanie Machado

Background: Access to sexual health services is important for sexual health, but relatively little is known about potential barriers and facilitators that international university students in Canada face in accessing and using such services. Given that international students at Dalhousie University (Halifax, NS) are new to Canada, it is important to understand potential barriers they might experience. Potential facilitators in using such services is also limited, and research is needed in this area to understand what helps with access.

Objectives: The key purpose was to explore perceptions and experiences of barriers and facilitators to sexual health services among Dalhousie University international students. The research was also aimed at gaining potential suggestions from participants for improving access to sexual health services.

Methods: Primary data were collected using qualitative methods. One-on-one, face-to-face interviews with four participants were audio-recorded and transcribed verbatim. Data were analyzed using thematic coding procedures, and themes were compared and contrasted through the constant comparative method.

Results: Key barriers and facilitators were found at the interpersonal (e.g. client-provider communication), community (e.g. information provided by services at Dalhousie), and societal/cultural (e.g. different language and beliefs) levels that international students perceive and experience. Some barriers were similar to those identified in previous studies.

Conclusions: Identifying barriers and facilitators that Dalhousie international students perceive and experience is important to determine access to sexual health services in Halifax, NS. Addressing barriers and strengthening facilitators may help inform and improve access to sexual health services in North America.

What are the implications of your research to inform future policy or practice initiatives? The barriers and facilitators that Dalhousie international students perceive and experience in accessing sexual health services is a call for improving access and informing such services in Canada. This study is a beginning, and future research is needed with more international students across North America to gain more in-depth knowledge about what prevents and facilitates access to sexual health services.

93. Factors associated with risky sexual behaviors among adolescents in Latin America: A cross-sectional study – Luis F. Ganoza

Objectives: To determine the prevalence of sexual risk behaviors among adolescents in Latin America who participated in the Global School-based Student Health Survey (GSHS) and evaluate the impact of substance use, depression, physical violence and bullying victimization on sexual risky behaviors in this population.

Methods: A cross-sectional study was designed using 2003-2014 data from the GSHS surveillance project. Country-specific and overall prevalences of risky sexual behaviors were calculated. Bivariate and multivariate ordinal regression models were fit to determine the association between the different behavioral factors and the age of first sexual intercourse, number of sexual partners, and the consistency in the use of condoms and other contraceptive methods.

Results: From the total of participants (n=72000), 28.06% reported having sexual intercourse at least once, being 14 years old the most common age of start (25.27%). Among this subgroup, 67.98% used condoms consistently and 56.55% used any other method regularly. Drug use, depression, the involvement in physical fights and being victim of physical aggression were significantly associated with sexual risky behaviors. The results show that these behavioral predictors have a stronger association with the age of sexual initiation and the number of sexual partners than with the use of contraceptive methods, and that there is a dose-response association between the predictors and outcomes.

Conclusions: Risky sexual behaviors are common in Latin American youth and are associated with multiple risk factors in complex patterns. Because of this, additional external factors should be evaluated to measure the impact of these behaviors in adolescent sexuality.

What are the implications of your research to inform future policy or practice initiatives? These results indicate that earlier and more comprehensive interventions are needed to provide education about contraception and healthy sexual practices.

94. "It shouldn't be this difficult to be who you are": Transgender adults' experiences with discrimination in the Nova Scotia healthcare system – Lois Jackson

Co-authors: Ella Vermeir, Emily Gard Marshall

Objectives: Research shows that healthcare services are not always utilized, or utilized in a timely fashion, by the transgender population because of perceived barriers. However, research regarding transgender adults' experiences with healthcare is sparse. These accounts are necessary to help inform healthcare providers (HCPs) and policy makers regarding strategies to create more inclusive and accepting healthcare environments and interactions.

Methods: One-on-one interviews were conducted with eight transgender adults. Framework analysis and the constant comparative method were used to analyze data and develop key themes.

Results: Some participants indicated that they experienced occurrences of social inclusion and acceptance, but most experiences with healthcare in Nova Scotia were not perceived by participants as positive. Participants perceived discrimination and exclusion from multiple "levels" – interpersonal relationships (e.g. being discriminated against by a HCP), physical environment (e.g. no gender-neutral washroom or trans-friendly resources in the environment), and socially (e.g. feeling discriminated against by institutional policies and societal discourses). Data analysis determined that discrimination is a continuum ranging from subtle/frequent occurrences to extreme/occasional. Participants also discussed feeling a sense of burden given all the responsibilities they were expected to take on in their role as client. For example, feeling burdened by having to provide trans-health education to HCPs, or feeling that one must be resilient to overcome repeated experiences of intolerance.

Conclusions: This study indicates that pursuing healthcare as a transgender adult often results in experiences of social exclusion and discrimination. These issues must be addressed at multiple levels, such as HCP education, creating inclusive physical environments, etc.

What are the implications of your research to inform future policy or practice initiatives? It is important to ensure that transgender adults feel included in public health programmes and policies. This study suggests a need to take a critical look at public health programmes and policies to ensure they are inclusive, and not burdening transgender adults with unreasonable responsibilities. Actionable recommendations for HCP/policy makers are included.

95. Planting seeds for healthy youth: Exploring parents' perceptions of a community-based program in Halifax, Nova Scotia – Lois Jackson

Co-authors: Jennifer O'Reilly

Background/Objectives: There is relatively little research focusing on how social programs influence multiple dimensions of youth's health (i.e. physical, social, mental, emotional and spiritual). This research explored one community-based program (Hope Blooms) that is aimed at inner-city youth in Halifax, Nova Scotia. The key purpose was to understand, from the parents' perspectives, how they think the Hope Blooms program (and its many components) influenced their children's health. Health was widely defined to include physical, social, mental, emotional, and spiritual dimensions of health.

Methods: This qualitative study involved face-to-face, semi-structured interviews with nine parents who, in 2015, had children ages 10 to 17 participating in the Hope Blooms program. Grounded theory techniques for data analysis have been utilized, such as memo writing and constant comparison.

Results: From the parents' perspectives, three key program components positively influenced their children's health, and these include the Hope Blooms community garden, the social enterprise (youth-led salad dressing business), and the community-based component. The parents argued that Hope Blooms provides their children with access to healthy food, a supportive social network, and positive space, as well as many opportunities (e.g., participation in physical activities, and having a voice). This in turn has created positive changes for the youth

(e.g., improved confidence, and hope for the future) and has helped improve multiple dimensions of their health.

Conclusions: Hopefully these findings can help inform future programs for youth living in low-income communities by pointing to particular program components, and key resources and opportunities that have the potential to positively impact multiple dimensions of youth's health.

Implications for policy/practice: Findings suggest that policymakers should invest in community-based programs that are impacting multiple dimensions of youth's health *broadly* (by providing many resources and opportunities to youth) and *positively* (by enabling youth to be change agents in their own health, and in their community).

96. Exploring Healthy Kids Community Challenge program implementation: Results of in-depth interviews with key program stakeholders across Ontario – Michelle M. Vine

Co-authors: Eunice Chong, Heather Manson

Objectives: As a way of complementing survey findings, and to provide increased richness to results, this study aims to explore stakeholder perceptions of Healthy Kids Community Challenge (HKCC) program implementation, and long-term program sustainability. The HKCC is a community-based health promotion intervention to promote healthy weights by improving child health behaviours.

Methods: Drawing on the RE-AIM framework, and an adapted social ecological framework for implementation, data were collected through in-depth interviews with local stakeholders (n=~15) situated across 39 HKCC communities in Ontario. Interviews captured perceptions of facilitators and barriers to program implementation in communities (e.g., public/private partnerships, social marketing, local steering committee functioning, partnership effectiveness, and political support), long-term sustainability, including suggestions for better meeting community needs. Interviews were transcribed verbatim. A theme-code set underwent inter-rater reliability, followed by discussion about meaning and interpretation of codes. Data were uploaded to NVivo 10 (QSR) software for coding and analysis, whereby themes were deductively generated from research objectives, and inductively as they emerged from transcripts.

Results: Findings help to highlight several factors contributing to implementation operating at three levels: 1) the innovation (provider) level (e.g., program adaptability, complexity, stakeholder involvement); 2) the provider-level (e.g., behavioural intention, knowledge, professional confidence); and, the 3) organizational-level (e.g., community structures, partnerships, culture).

Conclusions: Program implementation across communities, including factors shaping implementation, is highly variable. A range of approaches are needed to support successful program uptake. Data from interviews will be triangulated with other data (e.g., baseline and follow-up data tracking program activities, and annual surveys) to provide a comprehensive perspective on HKCC program implementation in these communities.

What are the implications of your research to inform future policy or practice initiatives? Results will inform provincial- and local-level policy and public health interventions related to healthy eating and physical activity interventions for children in Ontario, with a particular focus on the physical, cultural and economic environments in which children live, work and play.

97. Evaluating implementation of the Healthy Kids Community Challenge: Findings from a survey with community stakeholders across Ontario – Michelle M. Vine

Co-authors: Eunice Chong, Jocelyn Jarvis, Heather Manson

Objectives: Drawing on the RE-AIM framework, and an adapted social ecological framework for implementation, this study sought to understand factors contributing to Healthy Kids Community Challenge (HKCC) program

implementation at the program, provider and community levels. The HKCC is a community-based health promotion intervention to promote healthy weights by improving child health behaviours.

Methods: Survey data were collected online using Survey Monkey from (n=387) local steering committee (LSC) members (e.g., political champion, private/public sector partners) from 39 HKCC communities in Ontario. Surveys captured knowledge of program implementation, community characteristics, structures and partnerships, and committee functioning. Descriptive statistics were calculated using SAS EG 7.1. Qualitative data from open-ended questions were thematically analyzed using NVivo 10 (QSR) software.

Results: Preliminary results from open-ended survey data identified barriers and facilitators contributing to program implementation at the local level. Barriers included: language, large geographical area, transportation, income disparity and constraints connected to the high cost of healthy eating, and families who are more focused on meeting their basic needs. Supportive factors included: involving hard-to-reach populations in program planning and decision-making, strengthening partnerships with local agencies, educating parents about the program, use of social media, working with child-care providers and schools, improving accessibility through transportation, and holding in-person training sessions at the theme start. Quantitative survey data will also be presented.

Conclusions: Careful consideration was given to theoretically important implementation constructs, at the program, provider and community level. Findings indicate that local level factors shaping program implementation vary across communities, and a range of approaches are needed to support successful program uptake.

What are the implications of your research to inform future policy or practice initiatives? Data will be triangulated with baseline and follow-up data tracking program activities, in order to examine implementation fidelity, leading to policy and practice recommendations to improve child health behaviours and outcomes.

98. Implementation and perceived benefits of a mobile food market in low income neighbourhoods in Ottawa, Ontario – Jane Platts

Co-authors: Aganeta Aganeta Enns, Elizabeth Kristjansson

Background: Many Canadians fall short of the Canada Food Guide recommendations for fruit and vegetable consumption. Many individual level interventions have been tried, but they fail to consider the influence of context. A growing number of interventions are aimed at changing the environment in which people live. We will present evidence on the outcomes of a novel intervention to increase accessibility and affordability of fruits and vegetables to people living in low income neighbourhoods with poor access to a grocery store.

Objectives: Our objectives were to: 1) learn whether the Market Mobile had benefits for participants and their communities. 2) learn about factors in context and implementation that may impact on success.

Methods: The Market Mobile went to four communities every second week. Leaders created a bright and fun atmosphere, with activities for children and adults. The principal investigator volunteered with Market Mobile; she also assessed implementation and fidelity. The perceived benefits of the Market Mobile were assessed by the principal author in semi-structured interviews at baseline and after the intervention had been running for 5 months. In total, 37 people participated in the first round of interviews and 20 people participated in the second round.

Results: Implementation results indicated that 99% of the people who completed the surveys were planning to return to the Market Mobile. Low price and convenience were mentioned most frequently as reasons for the market's appeal. Other reasons included friendliness, location and community spirit. Impact results will touch on perceived benefits and perceptions of how the program contributes to their community. We will also discuss how participants' perceptions align with perceptions of the organizers.

What are the implications of your research to inform future policy or practice initiatives? This can be used to better understand the needs of communities with poor access to food to promote the development of tailored interventions and effective resource allocation.

99. Enabling policy for healthier retail food environments in the City-Region of St. John's, NL – Nathan Taylor

Co-authors: Rebecca Hasdell, Catherine Mah

Background: The retail food environment has an important influence on population health and nutrition. Entrepreneurial actors are integral to health-promoting changes in the food environment, but are understudied in the health literature. Small business owners can support empowerment in local economies, or change the retail setting to support healthy dietary behaviors. However, food entrepreneurs often face structural barriers.

Objectives: To identify and analyze policy levers enabling or restricting health-promoting actions among retail entrepreneurs in the city-region of St. John's, NL

Methods: This study comprised an environmental scan and informant interviews. Interview participants were recruited through purposive sampling among known regional food policy networks. In-depth, semi-structured interviews were conducted with n=15 key informants encompassing: policy practitioners, restaurants, small stores, and primary production or secondary processing incorporating direct sales to consumers. Interviews lasted an average of 52 minutes. All interviews were transcribed and compiled in a qualitative analysis software dataset, cleaned, and validated, then qualitatively coded for emergent themes.

Results: We detected four influential policy levers. 1. Greater transparency and heterogenous support at the catalyst stage for new food business ideas. 2. Formal mechanisms or platforms for intersectoral engagement. 3. Municipal fiscal instruments. 4. Addressing the practical burden of navigating policy and institutions, for both public and private sector actors.

Conclusions: Participants held positive outlooks for St. John's and the surrounding region. Despite the presence of structures that were typically not enabling, our findings revealed a clear convergence in attitudes and experiences within the policy environment that identify options for improvement.

What are the implications of your research to inform future policy or practice initiatives?

Small business stakeholders are often viewed in direct competition and are understudied as actors in health promotion. This research can help to inform municipal structural or policy process to nurture a healthy food environment.

100. Accounting for recall bias in foodborne outbreak investigation – Patrick Seitzinger

Co-authors: Nathaniel Osgood, Cheryl Waldner

Background: The fallibility of human memory has long been recognized as a key limitation to foodborne outbreak investigation. The ability to associate an outbreak of enteric illness with a common food exposure relies largely on the accuracy of data collected from food history questionnaires. Traditionally, these questionnaires are often administered as much as a week after the onset of symptoms as part of local or regional outbreak investigations, and potentially after to 2-3 weeks for national investigations.

Objectives: The purpose of this study was to investigate the effect of recall bias on the validity of food history data in a context comparable to outbreak investigations, and to characterize the food exposures of a previously understudied segment of the Canadian population.

Methods: The food consumption of 96 university students was collected using Ethica, a smartphone-based data acquisition system. Comprehensive food histories were captured through a combination of digital images, meal descriptions, and daily food exposure mini-surveys. This real-time data was used as a reference to measure the sensitivity and specificity of food history questionnaires administered after 7 or 18 days (2.5 weeks). The questionnaires and time intervals used in this study were designed to resemble those of enteric outbreak

investigations conducted by public health officials in Canada.

Results: The validity of food history data collected after 18 days was found to be consequentially low with sensitivities ranging from 15.8% to 77.8% for 15 foods of interest, and specificities ranging from 21.2% to 92.1% with no significant improvement observed after 7 days. The magnitude of the effect that recall bias had on the accuracy of dietary memory was found to vary with food type.

Conclusions: Recall bias has a significant and measurable effect on the accuracy of dietary recall. Through multidisciplinary collaborations, advances in areas of psychology may be applied to epidemiological studies to inform best practices public health.

What are the implications of your research to inform future policy or practice initiatives? This study serves as a first step to quantifying the implications of recall bias so that they can be adjusted for and mitigated in future outbreak investigation strategies.

101. Edutainment and the use of a zombie pandemic scenario to promote emergency preparedness: A cautionary tale – Frank Houghton

Background: Emergency preparedness is a notoriously hard topic to promote, particularly among young adults. Given the recent revival of interest in the Zombie genre it is perhaps not surprising that the CDC adopted this theme to help promote emergency preparedness. However, initial findings show no increase in emergency preparedness and a worrying focus on firearms and weapons. Given global levels of mortality and morbidity from weapons and firearms, particularly among young males, this possible focus is an issue of concern.

Objectives: To explore the potential impact of adopting a Zombie pandemic theme while promoting emergency preparedness to increase a focus on firearms.

Methods: Four separate studies were undertaken. Two RCTs were conducted with an opportunistic sample of elementary school children, while another RCT was conducted with a third opportunistic sample of undergraduate students. In all three studies participants were randomly assigned into either a Zombie pandemic scenario or a natural disaster scenario. Following a short film depicting the respective scenarios, which included neither firearms nor other weapons, participants were then asked to list essential items they felt they would need in an emergency kit. A fourth study combining quantitative and qualitative approaches examined responses to the CDC's Preparedness 101: Zombie Pandemic.

Results: Respondents in the Zombie pandemic scenario in all three RCTs were significantly more likely to include weapons and firearms in their emergency kit lists than those exposed to the natural disaster scenario. The CDC's Zombie blog was also noted to contain a significant focus on firearms.

Conclusions: Although an engaging and entertaining scenario has been developed to promote emergency preparedness, results clearly indicate an unfortunate focus on firearms which accompanies it.

What are the implications of your research to inform future policy or practice initiatives? Efforts to develop other engaging scenarios to promote emergency preparedness are required. When adopting an entertainment-education approach, it is important to think through all of the possible associations of using a particular scenario.

102. The *makeCalgary* Network: A collaborative research platform for healthy cities – Jason Cabaj

Co-authors: John Brown, David Down, Carolyn Emery, William Ghali, Jennifer Hatfield, Brenda Hemmelgarn, Gavin McCormack, Barry Phipps, Nancy Pollock-Ellwand, Peter Sargious, Nishan Sharma, Jackie Sieppert, Christine Walsh

Background: Launched in 2011, *makeCalgary* is a multi-faculty/cross-sectoral initiative focused on understanding how the physical and social infrastructure of cities affects human well-being through education,

community engagement, and research. As a community-engaged scholarship platform, *makeCalgary* conducts relevant research that is translatable into impactful policies and initiatives.

Objectives: To accelerate activities of a collaborative research platform designed to increase understanding of the association between urban design, municipal policies, and health.

Target Groups: The *makeCalgary* initiative is closely associated with the Urban Alliance, a formal research partnership between the University of Calgary (UofC) and the City of Calgary. It engages multiple university faculties, City of Calgary stakeholders, Alberta Health Services, and community agencies that contribute to municipal policies and initiatives that define Calgary's socio-cultural fabric.

Activities: Catalyst funding from UofC's Office of the Vice-President (Research) was obtained to accelerate research activities in alignment with *makeCalgary*'s priority themes of 'Active Cities', 'Mitigating Social Vulnerability', and 'Vibrancy and Leisure.' A project coordinator was hired to support project teams, broker partnerships, support external funding applications, and conduct knowledge translation activities. A series of stakeholder "Coffee Chat" sessions were held to explore potential collaborative opportunities, culminating in a fall 2016 networking/convening event.

Deliverables: Funding for team-based catalyst project awards (~\$25k each) was allocated in a competitive and transparently-adjudicated allocation process with the explicit mandate for interdisciplinary teams to conduct early phase work positioning them competitively for external peer-reviewed funding, and with particular focus on cross-sectoral collaborations that create pathways to societal impact.

Implications: *makeCalgary* is stimulating further community engagement, networking, and collaboration to create walkable, vibrant, resilient, equitable, and healthy 21st century cities. The launch of a large-scale research platform demonstrated the transformational potential of UofC's Human Dynamics in a Changing World priority theme and will catalyze further internationally-relevant design and research activities.

103. Developing an Integrated Mobility Plan (IMP) for Halifax – Alison Shaver

Co-authors: Hanita Koblents, Rod McPhail, Mark Nener, Tanya Davis

Background: The Centre for Disease Control and Prevention notes that "when health is considered among the goals of transportation policy and land use planning, the resulting policy can help reduce air pollution; prevent traffic injuries and deaths; and lower obesity, diabetes, cardiovascular disease, and cancer rates" (Transportation HIA Toolkit, 2015). As such, Public Health has committed staff resources to support the development of the Integrated Mobility Plan (IMP) in order to ensure a health lens is embedded in the development of this new transportation plan. The IMP presents an opportunity to promote health through prioritizing active modes of transportation, ensuring safe street design and advocating for increasing transit ridership.

Objectives:

- Provide a choice of travel options emphasizing public and community based transit, active transportation, carpooling and other alternatives to the single occupant vehicle
- Promote community development that supports affordable and sustainable transportation
- Anticipate and plan for future transportation infrastructure needs
- Embed a complete streets approach in municipal policy

Target Groups: Policy and decision makers, municipal Council and staff, local businesses, community groups, and residents of Halifax

Activities: The IMP is a tangible example of the importance of:

- Working in partnership across departments and governments (specifically Public Health working with municipal partners)
- Community engagement (targeted engagement, knowledge translation, public engagement)

- Embedding health in all policies

Deliverables: In June 2017, the IMP presentation to Council will be the result of many months of collaboration, public engagement, and progressive transportation and land use planning.

What are the implications of your policy or practice initiative to inform future research?

- Stronger relationship between Public Health and the Municipality
- Approved policies that will create supportive environments for healthy living
- Clear role for Public Health within land use and transportation planning
- More progressive role outlined for the Municipality in areas of active and healthy communities, higher-order transit, goods movement, etc.

104. Collaboration a key to building capacity in a rural ferry dependent community – Brenda Fowler

Co-author: Nancy Rowan

Objectives: To provide local access to a comprehensive set of health services inclusive of health promotion, prevention, primary and emergency care for a rural BC ferry dependent community of 4200.

Target groups:

- Entire Island population for primary and emergency care. The community was unable to recruit and retain doctors. Many vulnerable within the community could not or would not travel to the city to seek services.
- Target groups for health promotion and prevention are the mentally ill, drug and alcohol dependent, vulnerable seniors (especially those living alone) and vulnerable youth.

Activities:

- Construction of a community owned and operated medical clinic and urgent treatment facility.
- Physician recruitment
- Creation of community awareness and knowledge of the social determinants of health.
- Collaboration of local doctors with not for profits and interested citizens
- Establishment of a Community Health and Wellness Collaborative

Deliverables:

- Clinic and urgent treatment facility opened in 2012 resulting in fewer hospital admissions most primary and urgent care managed locally.
- Successful recruited and retained 3 physicians
- Partnerships with the health authority resulting in more services delivered locally e.g., mental health and home care nursing and social worker services.
- Community groups, physicians and organizations collaboration has successfully resulted in grants for seniors day care, peer led exercise programs, child and youth programs and community education.

Evolving Challenges:

- Meeting rural health needs within a system which is specialized and urban centric
- Enabling rural communities to find innovative approaches to building community capacity
- Increasing individual capacity to manage one's own care
- Redefining relationships with the health system

Relevance:

- Actions taken on Gabriola Island have resulted in reoriented health services, created a supportive environments, strengthened community action and personal skill development.

Implications for Research:

- Creating sustainable health care in rural communities contributing to new models of care.
- Capacity building within a healthy community framework

105. 2011 update to the Ontario Marginalization Index – Trevor van Ingen

Background: The Ontario Marginalization Index (ON-Marg) is an area-based measure that can be used to understand how marginalization drives health inequities at the neighbourhood-level in Ontario. Previously, ON-Marg used data from the long-form census, however, the high non-response rate of the 2011 National Household Survey made it less appropriate for studying marginalized populations.

Objectives:

- Update ON-Marg using alternative administrative data sources to replace indicators previously based on the long-form census.
- Explore the relationship between health and area-based marginalization in Ontario through interactive information products.

Methods: ON-Marg was originally developed using a principal component factor analysis of 42 indicators. In an iterative process, variables with low factor scores were removed until 18 indicators across four dimensions remained. The index has been calculated for 2001 and 2006 at the dissemination area level.

The updated ON-Marg uses indicators from several administrative data sources to replace indicators previously based on the long-form census. Statistics Canada Taxfiler, Immigration, Refugees and Citizenship Canada, Registered Persons Database, and Municipal Property Assessment Corporation data are being utilized for the 2011 update.

Results: The updated 2011 ON-Marg is expected to be released in 2017. Public Health Ontario will use the updated index in interactive information products to explore the relationship between health and area-based marginalization in Ontario.

Conclusions: The 2001 and 2006 versions of ON-Marg have been widely used in government, health care and public health organizations for research and population health equity assessments. The development of the 2011 ON-Marg will provide a more recent update to an important tool for assessing neighbourhood-level marginalization in Ontario.

Implications: The availability of a 2011 ON-Marg will allow for more recent analyses of trends in area-based marginalization and population health equity over time. The interactive products will allow stakeholders to more easily access data on population health inequities, and utilize that information to reduce health inequities in Ontario.

106. Healthy aging and social connectedness in a Northern context: Considerations for municipal planning – Nathaniel J. Pollock

Co-authors: Andrea Andersen, Martha MacDonald, Meghan Mills, Michele Wood, Margo Wilson

Background: Health determinants such as social support, food security, and the built environment play important roles in promoting seniors' health, and in delaying the onset and impact of diseases associated with aging. Social isolation has been shown to be an important factor for both physical and mental health among seniors. Interventions that promote social connectedness have shown some benefit in reducing isolation.

Objectives: By examining the local context for aging in Labrador, this project seeks to contribute policy-relevant and contextualized knowledge to municipal planning related to infrastructure and seniors' services. The objectives of this study are to understand how older adults and seniors perceive healthy aging, and to explore factors that contribute to social connectedness.

Methods: This community-based, qualitative study involves a partnership between the regional Inuit government, a local wellness coalition, and a research team based in Labrador. During the initial phase of the project, we carried out community consultations to develop an understanding of local seniors' issues and the current state of supportive services. We engaged organizations that serve seniors including faith groups, health and social care programs, and local governments, to help develop relevant research questions. We then

conducted semi-structured interviews with 23 community-dwelling adults aged 60 years and older in two Labrador communities, Makkovik and Happy Valley-Goose Bay.

Results: Participants emphasized the important roles of both family and friends in meeting basic needs and helping seniors continue to live at home. These relationships help facilitate involvement in food harvesting, and social and cultural events. Seniors also noted the benefits of accessible community space as an important factor in fostering social connections.

Conclusions: These results underscore the value of informal and multigenerational social networks for healthy aging, while also highlighting opportunities for local governments to support initiatives that may reduce isolation among seniors in a Northern context.

107. A place to cook: A scoping literature review – Lindsey Vold

Co-author: Wanda Martin

Background: There has been a growing concern with health equity in public health systems worldwide. It is well known that the primary drivers shaping health are not medical treatments or genetics, but the living conditions we interact with or that are imposed upon us. Food and housing insecurity are pervasive problems in North America, but the relationship between both is not well understood and is often targeted in silo interventions.

Objectives: The objectives are to identify literature gaps between housing and food, identify research and public health interventions targeting both determinants, and recommendations on how to address health equity from an intersectoral approach.

Methods: The chosen methodology is a scoping review by Arksey and O'Malley (2005) using a Social Determinants of Health conceptual framework. The preliminary research question was "What are the surrounding factors in studies that focus on housing instability and food security that affect equity in health and wellbeing?"

Results: Proponents of housing and food insecurity are vast, with major determinants being income, social support network, housing tenure, individual health, and the built environment. Silo interventions are ineffective in achieving health equity and addressing multiple social determinants of health. Pathways to address food and housing insecurity require coordinated efforts. Practical interventions exist, but most interventions remain theoretical.

Conclusions: Housing and food are intrinsically linked. Healthy housing is the next step in socially just and environmentally friendly housing that promotes social cohesion. There is growing need to address the effects of housing and food insecurity with coordinated efforts. Intersectionality and intersectoral collaboration are required to achieve health equity.

What are the implications of your research to inform future policy or practice initiatives? There is an increasing importance to assess and respond to health inequities, as we all will collectively brace for the repercussions of poor policies. The information generated by this thesis supports planning strategies aimed at approaching health disparities across the social gradient.

108. Reducing mental health stigma and creating conversations among Asian men in Vancouver through workshop-based interventions – Nimesh Patel

Co-authors: Peter Hoong, Cindy Jiang, Sharalyn Jordan, Marina Morrow

Background: Although Asian populations are the fastest growing population in Canada, the stigma surrounding mental illness among Asian men in Canada has not been systematically explored. This National study included 1608 men from Toronto, Calgary and Vancouver.

Objectives: The paper will be focused on examining the effectiveness of workshops to reduce the effects of both social and internalized stigma related to mental illness among Asian men at one study site – Vancouver, BC.

Methods: This is a mixed method research study. Participants were randomized into four intervention groups: Acceptance Commitment Training (ACT), Contact-based Empowerment Education (CEE), combined, or control. Quantitative data were collected at baseline, post- intervention, 3 months, and 6 months post intervention. Focus groups were conducted at baseline and 6 months post-intervention. Qualitative and quantitative data will be analyzed using the analytic framework of intersectionality and regression models, respectively.

Results: 432 (59.9%) of the 721 randomized men attended the workshops. Preliminary data analysis shows the complex interconnections between culture, ethnicity, masculinity, stigma and mental health. Preliminary analyses suggest that workshop completion resulted in participants reporting being more mindful, having more acceptance of mental health challenges, and feeling more empowered to engage in mental health advocacy work.

Conclusions: We will conclude with a discussion of the effectiveness of the workshops in reducing social and internalized stigma.

What are the implications of your research to inform future policy or practice initiatives? This is the first large scale Canadian research study aimed at reducing stigma related to mental illness in Asian communities with a focus on men. The research process itself was highly interactive and was designed to engage men in their communities in long term discussions about mental health. The findings from this research will give direction to community, provincial and federal level mental health policies and services to enhance the understanding of Asian men's experiences and the quality of mental health care.

109. Wanted: Program theory for a realist synthesis of implementing public health interventions – Marjorie MacDonald

Co-authors: Bernie Pauly, Anita Kothari, Ruta Valaitis, Thea van Roode, Heather Strosher, Heather Manson, Geoff Wong

Background: Evidence-informed interventions are important to improve population health and reduce health inequities but we need more knowledge about how to implement these successfully. Few systematic reviews have been conducted on PH intervention implementation but traditional systematic reviews do not fully capture the breadth of PH interventions. We used realist synthesis, a methodological alternative that identifies what works for whom, under what conditions to address this challenge. A first step in doing a realist review is the development of an initial program theory that guides the research process.

Objectives:

- Describe the development of our program theory;
- Present the theory and discuss its applicability for studying PH implementation; and
- Discuss learnings about implementation of PH interventions.

Methods: We selected the Consolidated Framework for Implementation Research (CFIR) from among 10 implementation frameworks and constructed a coding framework based on CFIR concepts. We tested it by coding several PH implementation studies. As expected, we identified gaps in CFIR for studying PH implementation. We revised it accordingly using it to guide the remainder of the review.

Results: Important constructs for understanding implementation in PH were missing in the CFIR, including: characteristics of community and population, aspects of community-level interventions, community engagement, and implementation outcomes specific to PH interventions.

Conclusions: Implementation frameworks that have been used to study implementation of health care interventions do not contain constructs specific to PH that can affect successful implementation. Our adapted

CFIR framework provides a more relevant framework for guiding PH implementation intervention development and evaluation.

What are the implications of your research to inform future policy or practice initiatives?

This framework can be used prospectively by practitioners and policy makers to develop appropriate interventions to guide successful implementation and retrospectively to study the implementation process.

110. Predicting chronic homelessness: A preventive approach – Annie Duchesne

Co-authors: Katherine Maurer, Nestor Arcia

Objectives: In recent years, efforts have been made to address chronic homelessness, which is associated with poor health outcomes. Despite this, there is limited research on prospectively predicting chronic homelessness from baseline characteristics; the results of which may help design preventive interventions. Our study explores if chronic shelter use can be predicted using baseline characteristics, including some social determinants of health.

Methods: We followed 1414 homeless men in an administrative database for 365 days and classified their shelter use as transitional (short stays, few episodes), episodic (short stays, many episodes) or chronic (long stays, few episodes). We then ran a multinomial logistic regression to determine the differences between chronic and transitional clients at the time of recruitment controlling for health problems, lifetime substance use, lifetime mental health problems, a dozen measures of psychosocial vulnerability, age, adherence to shelter rules, and time homeless prior to recruitment.

Results: Chronic shelter users were more vulnerable than temporary users for mental health, age, adherence to shelter rules, disability and time spent homeless prior to recruitment. No other variables were statistically different. However, our model had low predictive ability. Post-hoc testing found that the model correctly classified only 10% of our chronic sample.

Conclusions: Our model can be interpreted as having minimal predictive ability (McFadden, 1979). These results suggest the extent to which chronic homelessness can be predicted by baseline characteristics is limited.

What are the implications of your research to inform future policy or practice initiatives? While some individual characteristics can be considered risk factors, using them to preferentially assign services will probably be ineffective in preventing chronic homelessness. We can't reliably predict who will become chronic based on baseline information. Therefore, offering equal access all individuals remains the most valid way to administer supportive services and housing.

111. Implementing a clinical tool to screen for poverty and intervene in primary and non-primary care settings – Helen Coo

Co-authors: Eva Purkey, Imaan Bayoumi, Allison Maier, Andrew Pinto, Christina Klassen, Bisola Olomola, Shannon French, Matti Allen, Michael Flavin

Objectives:

- Train a sample of health care providers (HCPs) in the use of a clinical tool designed to universally screen patients for poverty and to intervene, where warranted;
- Implement the tool across a range of health care settings;
- Conduct an implementation evaluation.

Methods: Twenty-two HCPs (family physicians, nurse practitioners, paediatricians) from a variety of care settings in Kingston, Ontario attended a workshop entitled "Treating Poverty" to learn about a new clinical tool to assist them in screening for poverty and intervening, where warranted. Over a subsequent three-month period, the HCPs implemented the tool in their practices and tracked the number of patients screened. Surveys

were distributed to patients to assess the acceptability of being screened for poverty. Following the study period, focus groups were held with HCPS to explore the barriers to and facilitators of implementing the tool.

Results: Among 148 patients, the majority (72.3%) agreed that HCPs should ask patients about their financial situation, and agreement was high even among those who reported feeling uncomfortable when asked if they were having trouble making ends meet. The proportion of patients screened during the study period was low (~10%); lack of time and simply forgetting to screen were some of the barriers encountered. Despite this, most HCPs strongly supported normalizing the discussion of a patient's financial situation.

Conclusions: To achieve the intended goal of helping patients living in poverty to increase their income, thus reducing the negative effects of poverty on health, certain barriers need to be addressed to ensure that the tool is fully implemented as planned.

What are the implications of your research to inform future policy or practice initiatives? Our findings can be used to inform the implementation of similar initiatives to screen for and intervene on poverty in healthcare settings.

112. **Aboriginal relationship and cultural competency courses – Michelle Rand**

Co-author: Alethea Kewayosh

Background: First Nations, Inuit and Métis (FNIM) peoples bear a disproportionately high cancer burden and face a number of health disparities, barriers and gaps to health services. One barrier to FNIM receiving adequate cancer care to address this burden is the experience of culturally insensitive healthcare, and at times, subtle and overt racism and discrimination outside and within the healthcare system.

Objectives: Cancer Care Ontario has developed Aboriginal Relationship and Cultural Competency (ARCC) courses that stress the importance for frontline healthcare professionals to understand and apply FNIM cultural sensitivity and safety to provide effective care.

Target Groups: The courses are geared to healthcare providers and others working with FNIM people and communities, however the uptake has extended far beyond health professionals and has reached those who want to better understand FNIM history and culture.

Activities: The nine ARCC courses examine the concept of cultural sensitivity and safety for FNIM people, including cultural awareness, colonization and the determinants of health, history and political governance, Indigenous knowledge and traditional health. The courses also take stock of the current landscape of community health services, as well as challenges in service provision.

Deliverables: With over 3,000 course registrations, the ARCC courses were developed to foster stronger cultural safety in health practice in order to improve person-centred care. Patients and families who experience culturally safe healthcare are more likely to access care earlier; feel more at ease and empowered throughout the process of receiving care; and follow treatment plans recommended by healthcare providers. In short, cultural safety is a critical component for improving patient experiences and outcomes.

What are the implications of your policy or practice initiative to inform future research? Culturally sensitive, community based research is needed to identify whether or not cultural safety courses, like these, have a positive impact for FNIM people going through the healthcare system and their interaction with providers.

113. **Path to prevention: Recommendations for reducing chronic disease in First Nations, Inuit and Métis – Michelle Rand**

Co-authors: Alethea Kewayosh, Uslam Aslam

Background: Cancer Care Ontario (CCO) and Public Health Ontario published the 2012 report Taking Action to Prevent Chronic Disease which examined the leading chronic diseases. One of the 22 recommendations from

this report was to “ensure that the actions to address risk factors associated with chronic diseases consider the barriers to health faced by First Nations, Inuit and Métis (FNIM) in Ontario”. The Path to Prevention report was developed to address the high burden of chronic disease by identifying opportunities to reduce population-level exposure to four key risk factors: healthy eating, active living, alcohol consumption and tobacco use.

Objectives: The Path to Prevention report provides recommendations through strategies, policies and initiatives needed to address the many health challenges, while recognizing distinct sociopolitical, historical and geographical contexts of FNIM. The 22 recommendations were developed through extensive engagement with FNIM and then validated to ensure the recommendations accurately reflected the communities’ priorities.

Target Groups: While the recommendations are for the Government of Ontario, the implementation will involve participation by FNIM partners and collaboration with a range of organizations that work with FNIM peoples.

Activities: One of CCO’s key roles is to create a collaborative structure that includes FNIM communities and other key cross-sectoral partners to develop, plan, implement and evaluate the implementation of recommendations. In addition, specific roles for CCO that are part of its prevention mandate are identified in each of the recommendations.

Deliverables: The recommendations are focused on creating environments in which FNIM peoples can make healthy choices. Governments can support the efforts of individuals, families and communities, and address gaps in the health system.

What are the implications of your policy or practice initiative to inform future research? Culturally appropriate, community based research will be imperative to understand how the policies and recommendations affect FNIM communities and whether or not they make an impact on the social determinants of health and chronic disease outcomes.

114. Ilusittiarinniq: Inuit Chronic Disease Prevention and Management Framework – Anna Claire Ryan

Background: Inuit continue to experience much higher rates of chronic disease and face significant health disparities compared to non-Indigenous Canadians. Effective solutions will involve working with Inuit to address the underlying determinants and focus on a holistic view of health and wellness.

Objectives: Chronic disease continues to be one of the most serious health issues facing Canadians. To address high rates of chronic disease in Inuit communities, there needs to be a focus on improving overall health and wellness, not only by treating and managing chronic disease but also preventing its development. Ilusittiarinniq meaning health and holistic wellbeing, is an Inuit-specific Chronic Disease Prevention and Management Framework designed to outline a vision and a high level approach for addressing chronic disease for Inuit living across Inuit Nunangat and to act as a tool to help guide meaningful planning and action from the whole health system.

Target Groups: All levels of government, policy makers, Inuit organizations, partners in Inuit health, the research community, non-profit organizations, and service providers.

Activities: This session will be an interactive and include both lecture and discussion.

Deliverables: Ilusittiarinniq: Inuit Chronic Disease Prevention and Management Framework provides an Inuit path forward, one which meaningfully engages communities, respects and values culture and traditional teachings, acknowledges the impact of the social determinants of health and advocates for collaboration across sectors and jurisdictions working in this area.

What are the implications of your policy or practice initiative to inform future research? This Framework creates opportunity to reflect on existing health care programs, services, systems and approaches; draws on the strengths of Inuit knowledge and culture; identifies what’s working and what is not and identifies further research and actions to be taken to ensure that needs of individuals, families and communities are truly being met.

115. Improving cancer screening rates with mobile cancer screening services for remote Indigenous communities and underserved areas in Northwestern Ontario – Julia Bailey

Background: In Northwestern Ontario approximately 12% of the population identifies as Indigenous, compared to approximately 4% of the general population of Ontario. Statistically, cancer is diagnosed at a later stage within Indigenous populations, which can limit treatment options and influence survival rates.

Objectives: The Screen for Life Mobile Coach's (coach) primary purpose is to increase cancer screening rates in Northwestern Ontario, including Indigenous populations. Through a combination of the cancer screening services provided on the coach, relationship building and outreach, our goal ensure early detection of cancer, thus minimize the burden of cancer on Indigenous populations and our health care system.

Target Groups: Indigenous women and men living in Northwestern Ontario (on reserve and off reserve)

Activities: The coach offers breast, cervical and colorectal cancer screening to approximately 70 communities, including 24 Indigenous communities. Historically, it has been challenging to maintain satisfactory cancer screening rates in Indigenous communities. Concerted efforts, specific to Indigenous populations, have been launched in recent years to build relationships and create awareness of the importance of cancer screening through community visits, educational opportunities and networking prior to the coach's arrival. When these activities occur within a reasonable timeframe prior to a scheduled screening event, we have been successful in boosting screening rates and cancer screening understanding.

Deliverables: We will report cancer screening volumes, community feedback and specific community needs which inform the coach operations, outreach and relationship building to maximize screening rates. Examples of effective and ineffective factors in creating a successful screening environment will also be included.

What are the implications of your policy or practice initiative to inform future research? Correlating the efforts behind the Screen for Life coach with Indigenous populations can inform the effectiveness of outreach, relationship building and education in similar programs of volume based operations.

116. Manitoba trends in index angiograms among Status First Nations people and all other Manitobans – Elizabeth McGibbon

Co-authors: Annette Schultz, Moneca Sinclair, Randy Fransoo

Background: Canadian trends in coronary artery disease (CAD) suggest a growing health disparity for First Nations populations. The incidence of CAD is higher among First Nations populations; they experience CAD at younger ages and short-term outcomes are worse compared with other Canadians. Empirical evidence to advance our understanding of this disparity is needed.

Objectives: The main objective was to identify CAD relevant trends among Manitoba (MB) 'Status FN' (FN) and among all other Manitobans, reporting population rates separately and comparing population demographic and co-morbidity differences with MB FN and all other Manitobans who received an 'index angiogram' (Angiogram) during 2000-2009.

Methods: Person-level health services use data held by the Manitoba Centre for Health Policy was analyzed to address our objective. Population-based 2008 Angiogram rates for each group are reported. Descriptive analysis of demographic, urban vs rural residency, socio-economic status and Charlson comorbidity index are presented by group for those who received an Angiogram during 2000-2009.

Results: In 2008, 205 of the 69,197 FN adults (0.30%) received an Angiogram, compared to 2867 of the 851,904 other Manitobans (0.33%) ($p=0.18$). During 2000-2009, the Charlson index scores indicate FN people were significantly sicker at time of receiving an Angiogram; means 1.32 vs 0.78 ($p<.0001$). Also 28.7% of FN had been hospitalized with AMI in the previous week vs 25.3% ($p=0.0028$). Finally, mean age of FN people was 56.25 vs 63.76 ($p<.0001$).

Conclusions: First Nations people were significantly younger and sicker at the time of receiving their Angiogram. First Nations people appear to receive an Angiogram as part of urgent care versus planned primary CAD healthcare.

What are the implications of your research to inform future policy or practice initiatives? Key finding has significant health policy implications in terms of CAD detection and intervention for First Nations peoples.

117. A scoping review of adult Indigenous heart health literature: Mapping the worldviews shaping our knowing and practices – Elizabeth McGibbon

Co-authors: Annette Schultz, Moneca Sinclair, R. Michael Fisher, Janice Linton

Background: The Truth and Reconciliation Commission's Calls to Action, invites healthcare leaders to advance their understanding of health. They are challenged to approach healthcare beyond a biomedical worldview to support understanding that health status is influenced by historical and ongoing structural factors. Given the context of evidence-based practice within healthcare, we conducted a scoping review of evidence informing our collective understanding of heart health among Indigenous populations.

Objectives: The primary objective was to map worldview diversity within published heart health literature (2004-2015) specific to Indigenous populations.

Methods: A Two-Eyed Seeing approach informed our study, which acknowledges a distinction between Indigenous worldviews and Western worldviews. The intention is to cultivate respect for both; neither dominates. We gratefully acknowledge Elder Mary Wilson, Grandmother of the Four Directions for respectful dialogue concerning the study process and results. We searched Medline, Embase, and CINAHL; retrieving 825 articles. After screening processes, 139 articles were eligible for data extraction, which included article descriptors, problem vs solution focus, and categorization into one of four worldviews: biomedical, blend of biomedical and social sciences, critical social, and Indigenous.

Results: Of the 139 eligible articles, almost half were from Australia (45%), and 36% from the United States. Most were problem-based studies (81%) that identified a health issue. Ninety-five percent were situated within a biomedical or blend of biomedical and social science worldviews.

Conclusions: The documented worldview preference underlying this evidence-base is not surprising, but is problematic. The absence of evidence drawing on multiple worldviews serves to silence and discount historical, racial, and cultural differences. Thereby, an absence of evidence required to transform culturally unsafe practices and diminish a health disparity.

What are the implications of your research to inform future policy or practice initiatives?

An imperative reconciliatory step is to advance our healthcare evidence-base through research driven by Indigenous worldview.

118. Community consultation with regards to tuberculosis (TB) in an Inuit community in Nunavik, Quebec – Anne Fortin

Background: TB is curable and preventable. Yet, prevalence remains high and outbreaks occur in Inuit communities in Nunavik, the most northern region of Quebec.

In May and June 2016, Nunavik Regional Board for Health and Social Services conducted a consultation in a community affected with TB in Nunavik, as part of a community mobilisation intervention for TB.

Objectives: To collect information on TB knowledge, attitudes and practice among stakeholders, so as to influence planning of a community mobilisation intervention aimed at curbing the TB epidemic in the community.

Methods: A qualitative methodology was used. Semi-structured interviews were conducted by a community wellness worker (CWW) in Inuktitut or English with 30 community members representing various stakeholders' groups: patients, Elders, youth, community leaders, as well as Inuit and non-Inuit healthcare workers. Content analysis was done, identifying predisposing, facilitating, reinforcing factors to health care seeking behaviours.

Results: Barriers to care included poor knowledge with regards to 1) TB early and late symptoms and seeking care, 2) risk of transmission with type of exposure and 3) treatment risk-benefits (with taking alcohol/drugs, with pregnancy, with DOT), stigmatisation linked to the disease, poor communication on diagnosis and treatment, missed diagnosis at healthcare level and provider poor knowledge of correct procedures. Despite communications in past years, communication strategies were still seen as a way to prevent TB

Conclusions: Multiple barriers to health seeking behaviour for TB care and prevention were documented in the consultation and could be transferable to other Inuit communities affected by TB.

What are the implications of your research to inform future policy or practice initiatives? Three recommendations are proposed for future practice: 1) Knowledge and communication strategies to improve knowledge of community and reduce stigmatisation, 2) CWW training to reinforce their role in community clinics, and 3) provision of proximity, accessible and culturally safe primary care services to reinforcement TB care and prevention at primary care level.

119. **Engaging indigenous community participation when conducting research using health administrative data** – Sarah Funnell

Co-author: Lisa Bourque-Bearskin, Angeline Letendre, Peter Tanuseputro, Jennifer Walker

Background: Chapter 9, the Tri-Council Policy Statement on Ethical Conduct for Research (TCPS-2) describes ethical research with Indigenous people. First Nations principles of OCAP® (ownership, control, access, possession) further highlight the significance of engagement and governance. How these key documents apply to studies using administrative health data is less clear.

Objectives:

- Collaborate with the Canadian Indigenous Nurses Association (CINA) in the design, delivery and evaluation of an end-of-life care research project.
- Apply Indigenous community based research processes to a study using administrative health data.
- Establish a trusting partnership between research scientists and CINA that is mutually beneficial while acknowledging UNDRIP (United Nations Declaration on the Rights of Indigenous Peoples).

Methods: *Two-eyed Seeing* is an approach which recognizes the importance of both Indigenous ways of knowing and Western knowledge in understanding and interpreting the meanings of data considered within research. Used in the development of the research agreement, protocol, ethics application, and Terms of Reference for this study, this concept is also aligned with the principles of the TCPS-2, Chapter 9 in working to meet the unique needs of this project.

Results: The CINA Research Committee and an advisory team of nurses, physicians and administrators have developed a research agreement that will guide the use of administrative health data to study Indigenous end-of-life care.

Conclusions: Engaging Indigenous people is essential to research that focuses on issues of Indigenous health, and which are derived data from health administrative databases. Such engagement will ensure that cultural perspectives are central and reflected in the research.

What are the implications of your research to inform future policy or practice initiatives? This research will contribute to best practices in using health administrative data to describe issues of health for Indigenous people.

120. An indigenous model of emergency and disaster planning – Stephanie Montesanti**Co-author:** Wilfreda E. Thurston

Background: In June 2013, a severe flooding of the Bow and Elbow Rivers affected southern Alberta. Among the hardest hit communities was the Siksika First Nation, about 100 kilometers east of Calgary. Funding from Alberta Health supported development of a community wellness plan for Siksika First Nation— a Nation-led initiative to promote health and wellness and strengthen resilience of the Nation.

Objectives:

- Document Siksika Nation’s community wellness plan;
- Identify best practices in disaster recovery and mitigation in First Nation communities; and
- Develop a culturally appropriate framework for disaster recovery and mitigation in First Nation communities

Methods: The university researchers developed a partnership agreement with the Siksika Nation to document their nation-led community wellness response. Data collection included key informant interviews, attendance at meetings where we took notes, site visits to the Siksika Health Centre, the schools, temporary housing units and the evacuation centre; as well as a review of publicly available and internal documents relating to emergency management on Siksika Nation.

Results: The flood exacerbated existing health and social inequities in Siksika First Nation. Siksika Nation’s work to mitigate the impact of the flood followed a holistic or socio-ecological model that took the determinants of population health into consideration. The plan focused on the mental health of flood evacuees, the needs of children and youth and family, interdepartmental collaboration among service departments in the Nation.

Conclusions: A number of aspects of an Indigenous framework for disaster and emergency planning arose from this study. Recognition of traditional ways of life and cultural protocols were considered important in recovery and mitigation strategies.

What are the implications of your research to inform future policy or practice initiatives? Insights from the disaster response in Siksika Nation provided valuable lessons to inform and improve future disaster response planning by the federal and provincial governments as well as the Nations. The forest fire in Fort McMurray in Alberta in 2016 has further reinforced the urgent need for a framework.

121. Socioeconomic inequalities in health among off-reserve Indigenous Canadians: Trends and determinants – Mohammad Hajizadeh**Co-authors:** Min Hu, Amy Bombay, Yukiko Asada

Objectives: To examine trends in income-related inequalities in health among off-reserve Indigenous Canadians over the period between 2001 and 2012.

Methods: Our study population of off-reserve Indigenous Canadians (aged 18 and older) came from three nationally representative Aboriginal Peoples Surveys (APSs, 2001, 2006 and 2012, n=68,032). We used the relative and absolute concentration indices (RC and AC, respectively) to quantify income-related inequalities in self-perceived poor or fair general health (a well-validated measure of health status) for men and women, within the three Indigenous populations (First Nations, Métis, and Inuit), and in different geographic regions in each survey period. We performed decomposition analysis to determine factors that explain income-related inequality in health among Indigenous Canadians.

Results: The prevalence of poor/fair health status among off-reserve Indigenous Canadians increased from 18% in 2001 to 22% in 2012. The RC and AC demonstrated pro-rich inequalities in health among Indigenous Canadians. The results were robust when we stratified the analysis by sex, Indigenous ethnic groups, and by different geographic regions. The extent of relative (absolute) income-related inequalities in health increased by 23% (42%) from 2001 to 2012. Income-related inequalities in health increased statistically significantly within First Nations and Métis populations as well as in Atlantic provinces, Ontario, Alberta, British Columbia and

Territories. Decomposition analyses indicated that, besides income itself, occupational status, educational attainment and behavioral factors were the most important factors contributing to pro-rich distribution of poor/fair health among Indigenous Canadians.

Conclusions: The health status of off-reserve Indigenous Canadians has deteriorated and there is growing socioeconomic inequalities in health among these populations.

Implications: Socioeconomic inequalities in health among Indigenous Canadians warrants considerable public health policy attention. Since socioeconomic inequalities in health among Indigenous Canadians are determined by diverse factors, policies which addresses the broader array of social determinants of health may mitigate these inequalities.

122. Meaningful youth involvement in health promotion – Cuystwi (Let's go!): Indigenous youth wellness project – Gabriella Emery

Background: Youth should be supported to fully engage in the development of health promotion initiatives in their communities. Health promotion initiatives for Indigenous youth require youth leadership and meaningful participation to be effective; youth know what they need. Historically, youth have played an integral role in Indigenous communities; their voices were heard and valued. Their roles and responsibilities were based on their maturity level and provided the youth with a sense of belonging. Through colonization these distinct roles and responsibilities have diminished. The role of youth is largely absent from health agendas and from decision making processes.

Objectives:

- Develop an online Indigenous youth wellness quest (Cuystwi) for youth in BC with a high level of meaningful youth and community involvement.
- Explores ways to teach Indigenous youth history from our perspective and promote wellness through culture.
- Eleven communities from BC contributed to online tool.

Target Groups: Indigenous youth ages 10-15

Activities:

- A think tank in Vancouver including youth from 20 Nations in BC
- Youth and Elder led Advisory Board
- Youth paid and honored for the input and time
- Youth led feedback sessions on Cuystwi content
- Video workshops to support youth to create their own content

Deliverables:

- Skill strengthening opportunities for youth on advisory board
- Youth developed content including videos and interactive activities
- Young Indigenous staff on project team
- Youth evaluated content
- Two on-line interactive wellness quests with topics on identity strengthening, connecting with culture, understanding the ongoing effects of colonization and tools to deal with racism

What are the implications of your policy or practice initiative to inform future research? Youth identified and driven health promotion has the potential to help strengthen identity and transmit culture across generations in the present and the future. Youth driven health promotion programming is not only a way to ensure content is relevant and safe but that it is decolonizing in nature.

123. **Strength within: Community-based suicide prevention with young Aboriginal adults of Northern British Columbia** – Henry Harder

Co-authors: Travis Holyk, Tammy Klassen-Ross, Tina Strudsholm, Andrea Reimer

Objectives: The Strength Within research project is a response to an invitation from Carrier Sekani First Nations to address suicide prevention with young adults between the ages of 25-45 years. A suicide prevention intervention will be developed and tested. The intervention will support suicide awareness as well as competency development in traditional and cultural practices.

Methods: In step with aboriginal methodology, our methods are informed by the understanding that community needs and values are of primary importance. This methodology also supports a resiliency based approach to suicide as a public health issue. To demonstrate this, our research is under the guidance of an Advisory Committee comprising Carrier Sekani youth, adults, and elders. Furthermore, we adopt mixed methods approach to data collection and rely on face to face interviews, focus groups, and validated questionnaires as sources of both qualitative and quantitative data.

Results: Currently we are seeking input from the community based Advisory Committee regarding the structure and content of the suicide awareness training as well as the nature and extent of training in traditional and cultural practices.

Conclusions: This research is an example of a community and resiliency based approach to reducing health inequities and addressing the public health issue of suicide among young aboriginal adults of Northern BC.

What are the implications of your research to inform future policy or practice initiatives? The health and wellbeing of Aboriginal people and their communities is deeply impacted by the determinants of health. Intergenerational trauma and associated health inequities are public health issues that require interventions at the community and policy level. Community based research and intervention development, such as the Strength Within project, may provide an example of addressing health inequities through community empowerment and healing.

124. **Cancer in Inuit: Risk factors and screening** – Caroline Cawley

Co-authors: Maegan Prummel, Alexandra Hizaka, Sehar Jamal, Michelle Rand, Amanda Sheppard, Loraine Marrett, Paani Zizman, Christine Lund, Jason Leblanc

Background: Many of the common cancers diagnosed among Inuit in the north can be attributed to modifiable risk factors. Little is known about the cancer risk profile of Inuit living in Ontario and elsewhere in the south.

Objectives: Estimate the prevalence of cancer-related risk factors and screening among Inuit living inside and outside Nunangat, and in Ontario specifically where sample size permits.

Methods: Modifiable cancer risk factors (tobacco, alcohol, body weight and diet) were measured for Inuit living in Ontario, inside Nunangat and outside Nunangat using the 2012 Aboriginal Peoples Survey. The 2012 Canadian Community Health Survey (CCHS) was used to estimate risk factor prevalence for non-Aboriginal Ontarians for comparison. Screening uptake was measured for Inuit in northern and southern Canada and non-Aboriginal Ontarians using the CCHS (2005-2012). All estimates were age-standardized to the 2006 Inuit population living outside Nunangat.

Results: The prevalence of smoking was highest, and food security lowest, among Inuit in Nunangat compared to all other groups. Approximately three-quarters of Inuit in Nunangat were current smokers, and about half lived in food secure households. Inuit in Ontario and outside Nunangat more broadly were significantly more likely to smoke cigarettes and significantly less likely to live in food secure households than non-Aboriginal Ontarians. Inuit in Ontario and outside Nunangat more broadly were also twice as likely to be obese as non-Aboriginal Ontarians. Pap test uptake was similar across all groups, but a significantly higher proportion of Inuit in the north were overdue for colorectal cancer screening.

Conclusions: The prevalence of multiple cancer risk factors is higher among Inuit than non-Aboriginal Ontarians. However, the cancer risk profile of Inuit peoples varies by region.

What are the implications of your research to inform future policy or practice initiatives? Culturally appropriate cancer prevention strategies created with support from Inuit partners are needed. Additionally, more Inuit-specific health data are required, especially for the growing urban Inuit population outside Nunangat.

125. An assessment of the first year of a ban on the use of tanning beds and lamps among adolescents in Ontario, Canada – Caroline Cawley

Co-authors: John Atkinson, Loraine Marrett, Jennifer McWhirter, Victoria Nadalin, Cheryl Rosen, Thomas Tenkate

Background: Ultraviolet radiation from tanning bed/lamp use is a risk factor for skin cancer. The Skin Cancer Prevention Act (Tanning Beds) came into effect in Ontario in the spring of 2014. The Act prohibits the sale and marketing of tanning services to those under 18 years of age.

Objectives: To describe and compare the use of tanning equipment by Ontario adolescents before and after the Skin Cancer Prevention Act came into effect.

Methods: Two surveys of Ontario adolescents under age 18 (grades 7-12) were conducted: one immediately before the Act came into effect (spring 2014), and another one year later (spring 2015). The surveys focused on tanning in the previous 12 months, including methods used to obtain or keep a tan, length and location of tanning bed/lamp use, noticing signs/warning labels posted in tanning establishments, and tanning beliefs/knowledge.

Results: There was no reduction in the percentage of adolescents reporting use of tanning beds/lamps one year after the Act came into effect, for males and females and across every school grade. Most adolescents who used tanning beds and lamps did so in commercial facilities. There was a significant increase between surveys in the proportion of adolescents who noticed warning signage and who were required to wear eye protection when tanning. Most adolescents who were refused the use of tanning beds/lamps (72%) were deterred from tanning for the year.

Conclusions: One year after the Skin Cancer Prevention Act came into effect, there was no decline in tanning bed/lamp use by adolescents in Ontario. Being refused access to commercial tanning facilities can prevent adolescents from using tanning equipment.

What are the implications of your research to inform future policy or practice initiatives? Greater enforcement of the Act is needed, as adolescents continue to use commercial tanning facilities. Ensuring that operators comply with the law by refusing service to adolescents is important for the Act to be effective in reducing underage tanning.

126. A content analysis of indoor tanning health warning labels across Canada – Jennifer McWhirter

Co-authors: Alessia Borgo, Seema Mutti-Packer

Background: Despite artificial ultraviolet radiation (UVR) increasing the risk for skin cancer, indoor tanning (IT) remains a popular behaviour. Provincial legislation requires IT facilities to post health warning labels (HWLs); however, the content presented in these labels has not been studied nor evaluated.

Objectives: To examine provincial/territorial IT HWL content in order to identify current IT labeling practices.

Methods: IT legislation and corresponding HWLs were collected via the Canadian Legal Information Institute and an environmental scan, respectively. A directed content analysis was conducted to code each label based on principal components of the Health Belief Model, the Extended Parallel Process Model, IT behaviour research, and tobacco HWL best practices. A descriptive statistical analysis summarized the data.

Results: Eleven provinces/territories had IT legislation that required warning signage; labels were available for 10 jurisdictions. There were 21 English labels; 7 of these had corresponding French versions. Among the 21 labels, text content focused on: legal aspects of youth access ($n=15$), aesthetics risks ($n=13$), and health risks ($n=15$), including skin cancer ($n=15$), eye risks ($n=4$), skin burns ($n=3$), and death ($n=1$). Skin cancer was the most common health risk mentioned, but it was rarely characterized by severity and was not quantified. Of labels with a message frame, all presented loss frame messaging ($n=15$). Four labels provided an informational cue to action, one addressed self-efficacy, and none conveyed the benefits of UVR avoidance or response efficacy information. Lastly, no labels contained graphic images.

Conclusions: Although most jurisdictions require signage, the findings suggest IT HWL content may not be informed by health communication theory or best practices, raising questions about their potential efficacy.

What are the implications of your research to inform future policy or practice initiatives? Improvement of IT HWL content is recommended through the development and testing of new evidence-informed labels and best practice guidelines. Strengthening IT HWL content could increase their efficacy, maximizing the impact of existing laws.

127. Evaluating the comprehensiveness and stringency of indoor tanning legislation across Canada – Jennifer McWhirter

Co-author: Sydney Gosselin

Background: Ultraviolet radiation from indoor tanning increases the risk of skin cancer. The use and sale of indoor tanning is regulated provincially, but the content of indoor tanning legislation has not been characterized.

Objectives: To determine the number of provinces/territories with indoor tanning legislation; to develop an instrument to assess legislation stringency and comprehensiveness; and to use the instrument to describe legislation across the country.

Methods: Acts and regulations were obtained from the Canadian Legal Information Institute. A 45-item instrument was developed and validated. The instrument has an overall stringency score out of 59 based on sub-scores within 10 categories: access, advertising, warning signs, client information, screening, unsupervised tanning, operator training, exposure dose, protective eyewear, and enforcement. Each law was coded and scored with the instrument.

Results: Eleven provinces/territories had indoor tanning legislation. The mean score was 25 out of 59. All jurisdictions with legislation restricted youth access, but there were no restrictions for adults. Seven of 11 jurisdictions restricted advertising directed to youth and five prohibited misleading health claims in advertising to youth, but only two jurisdictions prohibited such claims more broadly. All jurisdictions with legislation required warning labels. Three jurisdictions required use of protective eyewear. All jurisdictions mandated inspection of indoor tanning facilities, but there were inconsistencies regarding whether this was complaints-based or pro-active. Finally, less than half mandated that indoor tanning facilities must provide notice of operation to authority.

Conclusions: Legislation stringency and comprehensiveness may need improvement. Most jurisdictions had legislation, which focused mainly on protecting youth. Health warning label content may compete with misleading health claims. The nature of the required inspections raises questions about the likelihood of compliance.

What are the implications of your research to inform future policy or practice initiatives? The results highlight strengths and weaknesses of indoor tanning laws for policy makers and contribute to efforts to evaluate and strengthen indoor tanning legislation.

128. Coffee consumption: A hot topic for chronic diseases in the Western world – Josiah Marquis**Co-authors:** Roshni Sandhu, Oluwakemi Ogunbayode**Background:** Coffee consumption is associated with reduced all-cause-mortality risk. However, substantial heterogeneity in strength and direction of risk exists among specific chronic diseases.**Objectives:** To summarize the peer-reviewed literature on the risk and protective effects of coffee consumption on the most prevalent chronic diseases in industrialized societies.**Methods:** Using PubMed, systematic reviews with meta-analyses of cohort studies, case-control studies, or randomized control trials were located. Pooled estimates of association (e.g., pooled odds ratio) for regular coffee consumption were summarized for the 10 leading causes of chronic disease death in men and women, resulting in a total of 13 diseases (Government of Canada, 2015). Data were also summarized when meta-analyses had been conducted on subgroups of major disease classes (e.g., stomach cancer). Visual representations of summarized qualitative and statistical data were created to facilitate knowledge translation.**Results:** Results suggested a protective role against diseases such as Liver Cirrhosis (pooled RR: 0.56, 95% CI=0.44-0.68, $I^2=83%$) and Parkinson's Disease (pooled RR: 0.75, 95% CI=0.69-0.82, $I^2=29%$). Coffee consumption appears to increase the risk of other diseases, such as lung cancer (pooled RR: 2.18, 95% CI=1.26-3.75, $I^2=63.3%$) although heavy coffee and tobacco consumption are correlated and residual confounding cannot be ruled out. The estimated effect of coffee on other diseases such as stomach cancer (pooled RR: 1.12, 95% CI=0.93-1.36, I^2 value=37%) cannot be separated from chance.**Conclusions:** Our summary of several meta-analyses suggests that coffee may be an enjoyable and easily modifiable protective factor for some of the leading chronic diseases. However, substantial heterogeneity in effect estimates of coffee consumption for specific disease risk, including possible risk effects indicates that it is premature for public health professionals to formally recommend coffee consumption to prevent chronic disease.**129. Development of Canada's first national low-risk gambling guidelines – Shawn Currie****Co-authors:** Chantal Robillard, David Hodgins, Matthew Young, , Louise Nadeau, Catherine Paradis**Background:** Gambling is a legal behaviour that poses potential risks to Canadians. Problem gambling is recognized as a significant public health issue, yet there is currently a lack of evidence-informed guidelines that provide individuals who gamble with recommendations on how to minimize the risk of gambling-related harms.**Objectives:** Similar to Canada's Low Risk Alcohol Drinking Guidelines, this project aims to develop Canada's first national Low-Risk Gambling Guidelines (LRGGs) to help Canadians make informed and responsible decisions about their gambling.**Target Groups:** The project targets non-profit organizations, addiction professionals, policy makers, public health agencies, as well as gambling regulators and industries interested in raising the public's awareness regarding low risk gambling.**Activities:** Led by the Canadian Centre on Substance Abuse with funding from Quebec responsible gambling organization Mise sur toi, a scientific working group was formed in April 2016 and tasked with developing the guidelines. Using Canadian and international population datasets, the group has been assessing the likelihood of developing gambling related harms associated with different gambling patterns (i.e., frequency, duration, and expenditure). During this presentation, the research plan will be presented and input will be sought from the audience on the methods employed and other strategic considerations to take into account when developing LRGGs.**Deliverables:** A technical report will summarize the guidelines as well as the evidence that informed the development of the LRGGs. The low risk gambling guidelines will support the development of training material

and capacity building programs for primary care practitioners and the crafting of low-risk gambling public awareness campaigns.

What are the implications of your policy or practice initiative to inform future research? The project will generate low-risk gambling guidelines based on the highest quality evidence available. It is hoped that development and promotion of these guidelines will contribute to the reduction of gambling-related harms.

130. Reframing reducing harms from gambling as a public health priority – Jess Voll

Co-author: Melissa MacKay

Background: Problem gambling clearly maps to many of the social determinants of health and has a shared trajectory with other mental health addictions. Despite this, reducing harms from gambling has failed to gain significant traction alongside other addictions as a public health priority.

Objectives: This oral presentation will challenge public health professionals to consider why reducing harm from gambling is a public health responsibility by:

- Reviewing the research linking problem gambling to the social determinants of health and the goals of health promotion
- Discussing the differences between the way in which problem gambling and other addictions are currently treated within the public health field
- Exploring how a public health lens could be applied to effectively reduce harms from gambling while also improving co-morbid conditions
- Share how Gambling Research Exchange Ontario is beginning to work locally to integrate gambling into public health work

Target Groups: Public health professionals, policy makers

Activities: Interactive presentation in which:

1. The results of our state of evidence report on the relationship between the social determinants of health and harms from gambling will be shared.
2. Participants will be challenged to examine problem gambling within a public health approach, and begin to think about how to apply the knowledge to their work.

Deliverables: Presentation with available slides and link to our state of evidence report.

What are the implications of your policy or practice initiative to inform future research? Our state of evidence review is currently underway, but when completed, will identify priority populations that are disproportionately affected by gambling harms due to the underlying social determinants of health at play. Our initiative will inform public health professionals, policy makers, and researchers of the harms related to gambling and how they map to the social determinants, and what the key priority populations are. Practitioners will be able to apply the research knowledge to their local context to work to reduce harms from gambling.

131. Online safety and young parents – Devon Greyson

Co-author: Cathy Chabot, Anna Carson, Jean Shoveller

Background: Young people's internet safety has become a matter of great concern, following recent high-profile instances of online sexual exploitation of teen girls. As a marginalized population, young parents may be at increased risk for online bullying and coercion, but they may also stand to benefit from the social and information support available via social media.

Objectives: This paper reports on the online safety and privacy practices of young parents (15-24 years at baseline), including experiences with social media and cyberbullying.

Methods: Data were collected from an ongoing longitudinal study of young parents living in two metropolitan regions in British Columbia: Greater Vancouver (GV) and Prince George (PG). Qualitative interviews were conducted with 114 young parent participants (n= 62 in GV; n = 52 in PG).

Results: Young parents in this study, and especially young mothers, used the internet to meet adolescent developmental needs and to help navigate their roles as new parents. While such online interactions provided information and social connection, they also carried risks to the privacy and safety of young parents and their children. Participants engaged in social media for personal support and information sharing, but several reported experiencing judgement or bullying in such fora. There was a great deal of variation in the degree and manner in which individual young parents took measures to protect online privacy. The advice of parents, teachers, and other respected adults was cited as influential in shaping young parents' online privacy practices.

Conclusion: Online bullying may replicate or reinforce offline targeting of vulnerable youth. However, young parents often take some measures to protect their own and their children's online privacy.

What are the implications of your research to inform future policy or practice initiatives? The study findings provide grounds for refining public health education interventions aimed at raising awareness of online privacy risks and teaching young people to mitigate them.

132. What information is influential to vaccine hesitant mothers? – Devon Greyson

Co-author: Julie Bettinger

Background:

Vaccine hesitancy—reluctance or refusal to accept vaccination despite availability—poses a significant threat to global immunization efforts. Attempts to reduce hesitancy by providing information have often proven ineffective, and we currently do not have a clear understanding of how information actually influences parental vaccination beliefs and practices.

Objectives: This study reports on the health information practices of currently-hesitant and formerly-hesitant mothers.

Methods: Mothers whose attitudes toward vaccination had changed since their school-aged (6-12 years) children were infants were recruited via primary schools in Greater Vancouver and via Facebook. Data was collected via semi-structured individual interviews in community settings, and analyzed using constructivist grounded theory.

Results: We interviewed 23 mothers, of whom 9 had become less vaccine hesitant, 9 had become more hesitant, and 5 had experienced multiple changes in vaccine attitudes since their children were born. Mothers whose hesitancy had *decreased* placed value in advice from trusted health care providers, and in consistent and verifiable vaccine safety and effectiveness information that was possible to triangulate among trusted sources. Those whose hesitancy had *increased* reported a lack of clear and reliable information, particularly following a health event such as autoimmune diagnosis or adverse event following immunization (AEFI). Online and offline peer information sharing was most influential when parents had underlying concerns that they felt were not well addressed by health care providers.

Conclusions: Health care providers, especially family doctors, are trusted information sources for vaccine hesitant parents. However, parents with concerns may need to triangulate information from multiple sources in order to feel confident vaccinating their children. Parents of children who have experienced an AEFI or who have certain chronic health conditions may require additional, tailored information support in order to begin or continue vaccinating.

What are the implications of your research to inform future policy or practice initiatives? These study findings provide recommendations for health care provider education on how to communicate with vaccine hesitant parents.

133. Equity-based childhood immunization policy-making in urban centres across the Canadian Prairies: A comparative analysis – Thilina Bandara

Co-author: Cory Neudorf

Background: One key indicator of population health is childhood immunization coverage rates. Equitable immunization coverage overall ensures that vulnerable populations, who are more likely to be exposed to pathogens and less likely to have access to preventative services, will have long-term protection against disease. As equity is one of the main goals of the public health enterprise in Canada, it is important to assess which programming and policy practices allow local public health units to deliver equitable immunization coverage to Canadians.

Objectives:

- Which health regions have reduced MMR coverage inequities in Canada?
- Which interventions and/or policies have worked to reduce inequities and where?

Methods: I am investigating five large urban prairie centres utilizing the Urban Public Health Network to directly engage public health practitioners as research partners. Firstly, I will conduct health-inequalities-over-time measurements on 10 years of MMR immunization coverage data from each region. Secondly, upon observing the inequity trends, I will conduct a policy-based inquiry to assess which policies urban public health units employed over those 10 years to reduce immunization inequities in their jurisdictions. Based on this evidence, I will then provide insights into where equity-based considerations fit into modern public health practice.

Results: Results are forthcoming and will be in a presentable form by April.

Conclusions: I will provide a portrait of inequities in MMR coverage across the prairies, and demonstrate the blended use of epidemiology and policy-analysis in health inequities research. Additionally, my use of CIHR's integrative knowledge translation principles ensure that, by involving the Urban Public Health Network, the evidence generated will be translated effectively into practice.

What are the implications of your research to inform future policy or practice initiatives? My study will provide valuable insights into how public health can utilize equitable immunization public health practices to improve population health.

134. Parent-reported pain management practices during infant vaccinations – Caitlin McNair

Co-authors: Vibhuti Shah, Noni MacDonald, Anna Taddio, Horace Wong, Lucie Marisa Bucci

Background: There are many evidence-based interventions that can be used to mitigate needle pain during infant vaccinations; however, prior studies demonstrated they are uncommonly used by parents. These studies; however, were primarily carried out prior to publication of a national clinical practice guideline on this topic (Taddio et al., CMAJ 2010). In light of the new guideline, the pattern of use of pain interventions warrants re-examination.

Objectives: To determine current patterns of use of pain management strategies by parents during infant vaccinations.

Methods: 3420 new mothers were recruited from an academic hospital's postnatal ward to participate in a randomized controlled trial about vaccination between October 2013 and October 2015. One-third of mothers (n=1140) who received general information about vaccination were asked to report on their experiences at their infants' 2, 4, or 6 month vaccinations. Mothers were asked to report on use of specific pain interventions: infant holding, breastfeeding, bottle-feeding, sucrose solution, topical anesthetics, distraction, and soothers.

Results: Follow-up interviews were available for 826 (72.5%) of participants: 37%, 34%, and 29% reported on pain management practices after 2, 4, and 6 month vaccinations, respectively. The average maternal age was 33.6 years and 52% of infants were male. Overall, self-reported utilization rates for the different interventions

were: 84.8% for holding, 51.2% for breastfeeding, 13.6% for bottle-feeding, 3% for sugar water and 1.8% for topical anesthetics, 70.8% for distraction, and 21% for soothers.

Conclusions: The results demonstrate variable uptake of a variety of evidence-based interventions during infant vaccinations. Qualitatively, these rates are higher than earlier studies, suggesting a positive impact of the clinical practice guideline on pain management practices.

Implications: There is some uptake of evidence-based pain management interventions by parents during infant vaccinations. Additional efforts are needed to increase uptake further, in particular, for sucrose and topical anesthetics. Reducing infant pain has the added benefit of improving the vaccination experience for parents, which may reduce vaccine hesitancy.

135. Parent-reported reasons for not using pain mitigation interventions during infant vaccinations –

Horace Wong

Co-authors: Caitlin McNair, Anna Taddio, N MacDonald, Lucie Marie Bucci, V Shah

Background: Vaccine injections can be distressing for infants. In previous studies, parents reported that they would use pain mitigation interventions if they were educated about them. However, among parents educated about pain mitigating interventions, the incidence and barriers to utilization of pain mitigation interventions is not well elucidated.

Objectives: To determine the reasons for non-use of pain mitigation interventions during infant vaccinations among parents who were educated about them.

Methods: In a randomized controlled trial including hospitalized new mothers after the birth of an infant, education about evidence-based pain mitigating interventions was provided using either a pamphlet or a pamphlet and video. Mothers were contacted after 2, 4, or 6 month infant vaccinations and asked to report on pain mitigation strategies used, specifically breastfeeding, sucrose solution, or topical anesthetics. The reasons for non-use of these strategies were documented according to 3 domains of the Consolidated Framework for Implementation Research (CFIR): 1. Intervention characteristics (e.g., adaptability, complexity, cost), 2. Individual characteristics (e.g., knowledge, attitudes, self-efficacy), and 3. Inner setting characteristics (e.g., leadership engagement, available resources).

Results: Altogether, 2280 mothers participated. Outcomes were available for 1723 (76%). The average number of children per family was 1.5 and 54% of infants were male. Twenty-nine percent did not use any of the pain mitigating interventions during infant vaccinations. For breastfeeding, 68% of mothers that did not use this intervention reported intervention characteristics as the main barrier to implementation. For sucrose and topical anesthetics, 64% and 77%, respectively, reported individual characteristics.

Conclusions: Parent self-reported reasons for non-use of pain mitigating interventions vary according to the specific intervention. Future efforts to increase use of specific interventions should address these barriers.

What are the implications of your research to inform future policy or practice initiatives? By identifying specific barriers to utilization of pain mitigating interventions, tailored interventions can be developed to address them, improving implementation success.

136. Parent-reported willingness to use pain mitigation interventions during infant vaccinations: Is it predictive of future use? – Anna Taddio

Co-authors: Horace Wong, Noni MacDonald, Luci Marisa Bucci, Caitlin McNair, Vibhuti Shah

Background: Parents have reported concerns about infant distress during vaccinations and that they would use interventions to mitigate pain if they are educated about them. There are no studies, however, that have

documented that self-reported willingness to use pain mitigating interventions after being educated about them is predictive of future utilization.

Objectives: To evaluate whether mother's willingness to use pain mitigation interventions at future infant vaccinations is predictive of their use.

Methods: Hospitalized mothers after the birth of an infant participated in a randomized controlled trial where they were educated about evidence-based pain mitigation interventions (breastfeeding, sucrose, topical anesthetics) and reported their willingness to use the interventions at future infant vaccinations. The proportion of mothers reporting use of the interventions at 2, 4, or 6 month infant vaccinations was compared between those who previously said they would use them and those who said they would not use them using a Chi-square test. Sensitivity and specificity were also calculated.

Results: Altogether, 2280 mothers participated; outcomes were available for 69% of them. Mothers' self-reported intention to use any of the interventions was significantly predictive ($p \leq 0.005$) of future use. Sensitivity ranged from 74% for topical anesthetics, to 83% for sucrose, and 93% for breastfeeding. Specificity was 17% 35%, and 48% for breastfeeding, sucrose and topical anesthetics, respectively.

Conclusion: Self-reported willingness to use pain mitigation interventions was predictive of future use. Importantly, if mothers said they would not implement the intervention, it was likely that they reported not doing so in the future, while if they said they would implement the intervention, it was less predictive of future use.

Implications: Parents' willingness to use pain mitigation interventions is a predictor of future use. Additional research is needed to address gaps in education and other barriers that prevents higher uptake rates.

137. Telling individuals to look or not to look during vaccination: Is there a difference in fear and pain? – Priyanjali Mithal

Co-authors: Meghan McMurtry, Pamela Simmons, Caitlin McNair, Rebecca Pillai Ridell, Anna Taddio, Lisa Burry, Tessa Cornelissen, Horace Wong, Derek Stephens

Background: Immunizers commonly advise individuals to "Look away from the Needle" during vaccinations. However, whether this strategy is effective for reducing needle pain and fear is not known. Looking away may act as a distraction. Conversely, it may allow individuals to imagine it is worse than it actually is.

Objectives: To compare the effects of looking at the needle vs looking away from the needle on fear and pain during vaccination.

Methods: This was a pilot study of University of Toronto pharmacy students undergoing routine flu vaccinations. They were asked about preferences to look at vs. look away from the needle during vaccination and then assigned to 4 groups: 1) preference to look and randomized to look, 2) preference to look and randomized to not look, 3) preference to not look and randomized to look, and 4) preference to not look and randomized to not look. They self-reported fear and pain during vaccination.

Results: Altogether, 160 individuals participated; 66% were female. ANOVA revealed a significant main effect of group on fear ($p=0.0002$) but not pain ($p=0.36$). Those who preferred to not look at the needle and were randomized to look had the highest fear scores compared to all other groups. For fear and pain, there was a significant effect of gender: $p=0.03$ and 0.0008 , respectively. Females had higher scores.

Conclusions: This pilot suggests individuals who prefer to not look at the needle and are asked to look have higher fear during vaccination. These data support the current practice of telling people to look away. The results should be confirmed in a larger sample size and another population.

What are the implications of your research to inform future policy or practice initiatives? The present study provides evidence for an easy, cost-effective psychological strategy to alleviate unnecessary fear associated with vaccinations.

138. Promoting flu shot awareness and accessibility using an incentive-based mHealth application in British Columbia, Canada -Lauren White

Co-authors: Marc Mitchell, Megan Nobrega, Braden Root-McCaig

Background: The Carrot Rewards application ('app') was developed as part of a novel public-private partnership to reward Canadians with loyalty points (e.g., movies, groceries) for engaging in healthy behaviours (e.g., completing health quizzes, walking more, visiting a flu shot clinic).

Objectives: Since getting the flu shot remains the best protection against influenza viruses, the objective of this study was to examine whether Carrot Rewards could promote flu shot awareness (i.e. clinic locations) and accessibility (i.e. clinic visits) in British Columbia (BC) with a multi-faceted flu shot 'intervention'.

Methods: The new intervention included: 1) a reward for completing a brief flu shot quiz; 2) a reward for viewing an in-app flu shot clinic map; 3) location-based push notifications (i.e. users notified when within 200m of participating pharmacies); 4) bonus code cards (i.e. users received bonus code after speaking with a pharmacist about the flu shot). Number of quizzes completed, map views, push notifications sent, and bonus codes redeemed in the first week (of the four-week intervention) are presented.

Results: The flu shot quiz was completed by 15,341 users (out of 55,704; 28%). Among those completing the quiz, 46% ($n = 7,047$) viewed the in-app map (vs. 4% *unrewarded* click-through rate typically observed in app). As well, 4,093 push notifications were sent and 53 bonus codes were redeemed (i.e. clinic visits). From the follow-up survey ($n = 37$), 35% of respondents were not aware that they could receive a flu shot at participating pharmacies, 81% reported learning something from the pharmacist about the flu shot, and 24% of respondents reported actually getting the flu shot.

Conclusions: The Carrot Rewards app may offer one way of increasing flu shot clinic awareness and accessibility.

What are the implications of your research to inform future policy or practice initiatives? Smartphone- and incentive-based interventions may help reduce the health risks associated with influenza by promoting awareness and accessibility of flu shot clinics in BC pharmacies.

139. Narrowing the policy gap: Lessons from years 2 and 3 of the British Columbia Influenza Prevention Policy – Haley Farrar

Co-authors: Donna MacDougall, Charmaine McPherson, Antonia Di Castri

Background: Influenza is a common illness that is potentially fatal to vulnerable populations, particularly those that are in hospital. It is recommended by the Canadian National Advisory Committee on Immunization that healthcare workers (HCWs) be immunized against influenza to avoid infecting these high-risk populations. However, influenza immunization rates across healthcare organizations remained suboptimal. In 2012, British Columbia's (BC) provincial government implemented a provincial-wide influenza prevention policy requiring HCWs to be either immunized against influenza or wear a mask when providing patient care during the influenza season.

Objectives: This presentation reports on the second of two studies, which focused on years 2 and 3 of the policy. Key facilitators and barriers in implementing a province-wide condition-of-service HCW seasonal influenza immunization policy were explored.

Methods: A case study approach was used to examine this policy implementation event. Qualitative data were collected through key documents and individual interviews ($n=35$), which used a criterion-based sampling frame. Framework analysis, a technique developed for policy studies, and Prior's document analysis were used to analyze data.

Results: Policy implementation varies by geographic region and gaps persist in immunization tracking. Debate regarding the scientific evidence used to support the policy fuels resistance from particular groups, including

physicians. Despite these challenges, findings suggest that the policy has been normalized and habituated, largely due to static policy objectives.

Conclusions: This study emphasizes the importance of ongoing inter-professional and cross-sectoral program evaluation in BC. While adherence for many may be routine, implementation processes must continue to respond to contextual issues in an effort to narrow gaps in policy and to continue to engage stakeholders to ensure compliance.

What are the implications of your research to inform future policy or practice initiatives? Findings provide timely evidence to support similar influenza immunization policy development, implementation, and research in other Canadian jurisdictions.