PUBLIC HEALTH 2**19 SANTÉ PUBLIQUE

30 APRIL-2 MAY
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CENTRE SHAW

**Oral Abstract Program**

**Programme des résumés oraux**

## ORAL PRESENTATION 01

| Tuesday 30 April | 10:30-12:00 | Room 202 |

**Do statutory holidays impact opioid-related hospital admissions among Canadian adults? Findings from a national case-crossover study - Chantal Houser**

**Co-authors:** David Huynh, Amir Jasarevic, Paul Villeneuve

**Introduction/background:** In Canada and many developed countries, the number of adverse opioid-related events, such as hospital visits and deaths, have risen substantially in recent years. While hospitalization data has demonstrated seasonal and day of week patterns for these events, to date, the impact of holidays has not been characterized.

**Methods:** We applied a time-stratified case-crossover study design to determine whether statutory holidays were associated with hospital-opioid related admissions in Canada between January 2011 and December 2016. Opioid admissions in individuals 15 years and older were identified through ICD-10 codes from discharge diagnoses captured within the Canadian Discharge Abstract Database. Descriptive statistics were applied to characterize trends by season and over the 5-year period. Conditional logistic regression was used to describe the associations between party/social (e.g., Canada Day) and family (e.g., Christmas) holidays. Stratified analyses were done to explore differences in these associations by age, and sex.

**Results and analysis:** We observed seasonal patterns with higher numbers of opioid-related hospital admissions from the end of June to end of September (mean of 1177 per week) compared to the end of December to end of March (mean of 756 per week). There was a reduced odds of opioid-related hospital admissions on holiday days (odds ratio [OR]=0.91, 95% CI: 0.88, 0.95) relative to non-holiday days. Similar reductions in risk were on family (OR= 0.86, 95% CI: 0.79, 0.94) and party/social holidays (OR= 0.90, 95% CI: 0.84, 0.97). The associations between holidays and opioid related events did not vary greatly by age or sex; however, a greater decrease in admissions was found among men on family holidays (OR=0.79, 95% CI: 0.70, 0.89).

**Conclusions and implications for policy, practice or additional research:** Our findings suggest that there is a reduced risk of opioid-related admissions on holiday days, especially on family holidays. These findings can inform healthcare staffing resources and health promotion activities to reduce the impacts of opioid use in Canada.

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**Words Matter: Newspaper Representations of Alberta's Opioids Crisis - Amanda Barberio**

**Co-author:** Brian Ladd

**Introduction/background:** A recent study by Statistics Canada found the national rates of opioid hospitalizations were patterned by social and economic factors. In Alberta specifically, preliminary analysis of surveillance data suggests the rate of opioid hospitalizations follows an income gradient. While harms from opioids appear to be patterned socioeconomically, mainstream media may be misrepresenting this reality. We seek to determine how and to what extent Alberta newspapers are speaking to the socioeconomic dimensions of the opioid crisis.

**Methods:** This study conducts a qualitative content analysis of newspaper articles pertaining to any aspect of Alberta's opioid crisis between January 2011 and May 2018. Newspapers of interest for the two largest cities in each of Alberta Health Services' (AHS) five Zones were determined from a directory of online Alberta newspapers. Three main themes were identified a priori as subjects of analysis: representation of risk for harm from opioid use; perceived causes of the crisis; and actual or proposed solutions. Additional themes were named after a pilot coding exercise. Articles were coded using NVivo version 11.1 by two reviewers working together.

**Results and analysis:** 16 newspapers were included and initially yielded 707 articles. Analyses continue, but the initial ~10% of coded articles reveals numerous statements suggesting universal risk of opioid-related harms (e.g., "Fentanyl overdoses are spread out across the city…a scourge that knows no income boundaries"). Causes

of the crisis are largely presented in terms of opioid availability and potency, and the role of criminal drug elements, while the vast majority of solutions discussed focus on overdose reversal and harm reduction initiatives (e.g., naloxone distribution and treating addictions).

**Conclusions and implications for policy, practice or additional research:** Our findings can inform future internal (AHS) and external (public) communications by supporting more accurate framing of the crisis, and may support advocacy for upstream interventions that address socioeconomic drivers of the distribution of opioid deaths and harms in Alberta.

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**Regional Estimates for Prevalence of Non-Medical Use of Prescription Opioids in Canada - Elizabeth Nugent**

**Co-authors:** Joshua Black, Richard Dart

**Introduction/background:** The ongoing surveillance of non-medical use (NMU) of prescription drugs in Canada is limited. The presence of product-specific data for NMU, motivations, and behaviors of controlled substances would assist in the creation of successful regulatory and public policy. In light of high prescribing of opioids and recent policy shifts at Health Canada, this report provides regional prevalence of NMU of prescription opioids and associated motivations.

**Methods:** The Survey of Non-Medical Use of Prescription Drugs Program is a pan-Canadian, cross-sectional online survey of the general adult population. Data for 10,007 respondents were collected during 3rd quarter 2017 and weighted to provide national prevalence estimates. NMU was defined as use of a prescription opioid "without a doctor's prescription or for any reason other than what was recommended by your doctor/dentist/pharmacist". Misuse was defined as NMU for treating pain or another medical condition; abuse was defined as NMU for enjoyment or to get high. To create stable estimates of misuse and abuse measures, Atlantic provinces were combined together, as were Western provinces; Québec and Ontario could be reported independently.

**Results and analysis:** It was estimated 2.6 million Canadians non-medically used a prescription opioid in the past year. The national prevalence was estimated as 8.6% (95% Confidence Interval: 7.9%-9.2%). By province, NMU prevalence estimates ranged from 3.6% (0%-7.7%) in Newfoundland and Labrador to 12.0% (10.8%-13.1%) in Québec and 12.1% (2.1%-22.0%) in Prince Edward Island. Amongst those who have non-medically used in their lifetime, misuse was common (>85% in all regions). Proportions of abuse were: 10.6% (8.3%-13.0%) in Québec; 20.0% (15.8%-24.3%) in the West region; 25.5% (20.6%-30.5%) in Ontario; and 29.8% (18.0%-41.6%) in the Atlantic region.

**Conclusions and implications for policy, practice or additional research:** Notable geographic heterogeneity exists between provinces for NMU and the underlying reasons for NMU. These data provide population estimates of prevalence that at informative when developing strategies to reduce risk from prescription opioids.

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**Changing landscape of opioid use in British Columbia: A shift towards fentanyl-seeking behaviour -Brittany Graham**

**Co-authors:** Kristi Papamihali, Alexis Crabtree, Christopher Mill, Mohammad Karamouzian, Margot Kuo, Sara Young, Jane A. Buxton

**Background:** British Columbia (BC) declared a public health emergency in April 2016 in response to a rise in overdose deaths due to increased prevalence of fentanyl-adulterated drugs. The BC Harm Reduction Program periodically surveys clients at harm reduction distribution sites across BC to assess substance use trends and uptake of harm reduction services. In February 2015, 13% of respondents reported using fentanyl while urinalysis detected fentanyl in a third. It is commonly suggested people are at risk of overdose through unknowingly using drugs contaminated with fentanyl. We aim to determine changes in intentional fentanyl use as well as elucidate discrepancies between self-report and actual drug use.

**Methods:** The client survey was distributed to harm reduction site clients over a two-month period in 2018. Quantitative survey data was analyzed using descriptive statistics and compared to previous survey data. Urine samples were collected from a subset of the participants and Toxicology Screens were performed by LifeLabs.

**Results:** Surveys were obtained from 486 clients and urine samples from 316 participants across BC. Most common self-reported opioids used in the past week were heroin (49%) and fentanyl (43%). Conversely, urinalysis results demonstrated presence of heroin in 26% of participants and fentanyl in 58%. 39% of respondents indicated they would use the same amount if their drugs tested positive for fentanyl while 44% reported that they would use less. In the past 6 months: experiencing an accidental opioid overdose was reported by 19% of respondents; and 57% reported witnessing an opioid overdose.

**Conclusions:** Self-reported drug use and urinalysis identified discrepancies in what drugs people think they are using and what is actually being used. Intentional fentanyl use has tripled over 3.5 years.

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**Pursuing change in illicit stimulant use in the context of daily injectable opioid agonist treatment: a grounded theory study with patients at Vancouver's Crosstown Clinic - Heather Palis**

**Co-authors:** Kurt Lock, Scott MacDonald, Scott Harrison, Martin Schechter, Eugenia Oviedo-Joekes

**Introduction/background:** For people with severe opioid use disorder not responding to first-line treatments, evidence supports the effectiveness of injectable opioid agonist treatment (iOAT), where patients inject pharmaceutical-grade opioids daily under the supervision of nurses. Outcomes include significant reductions in opioid use, crime, health improvements, and modest declines in illicit stimulant use (i.e. cocaine and amphetamines). This study was designed to investigate how the use of illicit stimulants changes in the context of daily iOAT care.

**Methods:** Interviews were conducted with 31 patients at the first iOAT clinic in North America. Following a grounded theory approach, sampling, data collection, and analysis were conducted simultaneously. Interviews were audio-recorded and transcribed verbatim.

**Results and analysis:** Coding proceeded in three stages, open line-by-line, focused coding, and theoretical coding. The process of changing stimulant use in iOAT care was found to have four stages: 1) building capacity: where daily iOAT medication offered a sense of "freedom", and contact with care providers offered "connection"; 2) realizing potential: where participants described "identifying evolving goals" (e.g. relationships, health, employment) and "finding hope", seeing these goals as realistic; 3) taking action: where participants described "gaining control" over their stimulant use (e.g. practicing financial responsibility) and engaging in meaningful alternative activities (e.g. hobbies); 4) sustaining change: where participants described "recognizing progress" and "becoming experts" in their own health and service needs. When integrated, these four stages form the process of "pursuing change". Engagement in "pursuing change" varies with participants' personal and structural circumstances, and with the costs and consequences of stimulant use faced in the context of prohibition (e.g. health problems, overdose, criminalization).

**Conclusions and implications for policy, practice or additional research:** Findings can support clinicians in understanding patients' evolving needs relating to their pursuit of stimulant use recovery in the context of iOAT care as treatment with injectable opioids expands across Canada.

## ORAL PRESENTATION 02

| Tuesday 30 April | 10:30-12:00 | Room 204 |
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**The association between walkability and physical activity varies by age - Rachel C Colley**

**Co-authors:** Tanya Christidis, Isabelle Michaud, Michael Tjepkema, Nancy Ross

**Introduction/background:** Walkability is positively associated with physical activity (PA) and utilitarian walking in adults. Evidence is emerging to suggest that more walkable neighbourhoods may be less conducive to PA in children. The purpose of this study is to examine how the association between walkability and PA varies by age and domain of PA.

**Methods:** Using the Postal Code Conversion File (PCCF+), the 2016 Canadian Active Living Environments (Can-ALE) data base was linked to Canadian Health Measures Survey (CHMS; 2009-2015) and Community Health Survey (CCHS; 2015-2016) data. PA was measured using the Actical accelerometer in the CHMS (n=13,220; age 3 to 79 years) and using a questionnaire in the CCHS (n =102,230; age 12+ years) that asked respondents to report PA by domain: transportation, recreation, occupation, household.

**Results and analysis:** Accelerometer-measured moderate-to-vigorous PA (MVPA) was higher in more walkable neighbourhoods when compared to less walkable neighbourhoods in adults. No differences were observed in MVPA across levels of walkability in children and youth. In controlled regression models, walkability was positively associated with MVPA in youth and adults, but not in children. Self-reported transportation PA was higher in more walkable neighbourhoods compared to less walkable neighbourhoods while recreational PA was lower in more walkable neighbourhoods. In controlled regression models, walkability was positively associated with transportation PA, but not recreational PA.

**Conclusions and implications for policy, practice or additional research:** The strength and direction of association between walkability and PA varies by age and domain of PA. Walkability comprises a very specific set of factors that appear to support utilitarian walking in adults. Further research is needed to identify and examine other built environment characteristics that support PA in children (e.g., playability, parks, safety, etc.) and recreational PA in adults (e.g., greenness, presence of trails, etc.).

**Understanding the link between outdoor play in early childhood and parents' perceptions of neighborhood safety in British Columbia - Savithri Cooray**

**Co-authors:** Alisa Almas, Barry Forer, Eva Oberle

**Introduction/background:** Outdoor play (OP) is a critical part of healthy development in early childhood. Several benefits of OP have been outlined. For example, playing outdoors is linked to more vigorous physical activity and it provides important opportunities for developing social and emotional competencies (e.g., in free play with peers, children have to decide what to play, which rules are involved, and when to start/end a game). Yet, OP has declined significantly over the past decades whereas involvement in indoor sedentary activities has increased. This trend has been connected to physical health problems in childhood (e.g., obesity) and the link to mental health challenges has also been discussed.

The present study investigates the to which degree parents' perceptions of safety in their neighbourhood and trust in neighbours to look out for children was linked to the amount of time children played outdoors.

**Methods:** We draw from data on the Childhood Experiences Questionnaire (CHEQ; 172 items) collected between 2013 and 2018 in 14 school districts in BC (N = 4,298 children). Parents completed the CHEQ in the first two weeks of Kindergarten-entry. We focused on items pertaining to neighborhood safety, parents' trust in their neighbors to look out for children, and the frequency of children's OP (i.e., how many days per week). Demographic variables (e.g., household income, parent education level) were control variables.

**Results and analysis:** Perceptions of neighbourhood safety and trust in neighbours were positively related to children's OP in the neighbourhood. Hierarchical regression analyses indicated that over and above controls, the neighbourhood variables explained 9% in variability in children's outdoor play frequency. Differences between communities will be investigated.

**Conclusions and implications for policy, practice or additional research:** Findings from this study suggests that two important social conditions in populations – perceived safety in the neighbourhood, and trust in neighbours were associated with children's OP, a marker for health and wellbeing in development

### Measuring the Mental Health Burden and Determinants of Mental Health Among School-Aged Children & Youth: A local public health perspective -Rosanna Morales

**Co-author:** Sue French

**Introduction/background:** There is minimal guidance for local public health units on the measurement of mental health among school-aged children and youth. To address this gap, we developed a framework on factors influencing the mental health of children and youth and used the framework to guide the measurement of mental health in Peel.

**Methods:** We systematically searched published and grey literature and contacted key informants to identify existing frameworks on children and youth mental health. From the 1,035 documents identified from the search, three articles were critically appraised and two were used to develop the framework. We used the framework to guide our selection of mental health measures. Using administrative and health survey data, we determined the prevalence of mental wellbeing and the determinants of mental health among Peel children and youth.

**Results and analysis:** The framework describes mental health as two dimensions: mental wellbeing and mental illness. It uses the Socioecological Model to organize determinants of mental health at five levels of influence: individual, family, learning environment, community and society.

In Peel, 37% of Grade 7-12 students experience moderate-to-high levels of psychological distress. Students have positive relationships at home and at school that can promote mental wellbeing but also engage in unhealthy lifestyle behaviours (i.e., inadequate sleep, lack of physical activity and unhealthy eating) that can contribute to negative mental wellbeing.

From 2007 to 2016, the rates of emergency department visits for anxiety and mood disorders almost tripled among Peel children and youth. Female students are more likely to be distressed and suffer from anxiety, mood and eating disorders, while males are more likely to engage in violent behaviours and to be affected by substance-related, schizophrenia, neurodevelopment and personality disorders.

**Conclusions and implications for policy, practice or additional research:** We developed a framework to guide the measurement of mental health in school-aged children that can be applied to any local public health unit.

### Risk and protective factors for self-regulation at school entry - Erin Hetherington

**Co-authors:** Sheila McDonald, Nicole Racine, Suzanne Tough

**Introduction/background:** Self-regulation, defined as the ability to manage emotions, regulate behaviors, and focus attention, are developed early in childhood and provide the underpinnings for social, emotional, and behavioural well-being in childhood. Early identification of risk factors can help inform interventions to promote school readiness. The objective of this study is to examine which factors are associated with poor self-regulation among children at age 5

**Methods:** A total of 1688 women participating in a longitudinal cohort study in Alberta completed questionnaires from pregnancy up to when their children were five years of age. Self-regulation was measured at age 5 by maternal report on the Behavioural Assessment Scale for Children-2 (BASC-2). Children who scored "at risk" on the attention, executive function or emotion control subscales were considered to be at risk for poor

self-regulation. Multivariable logistic regression models were used to estimate adjusted odd ratios (AOR) for poor self-regulation.

**Results and analysis:** Twenty-one percent of children had lower self-regulation skills, and this was higher among boys (24%) compared to girls (19%). Risk factors included lower family income (AOR 1.45 95% CI 1.07, 1.95), mothers with a history of adverse childhood experiences (AOR 1.53, 95%CI 1.08, 2.14), and mothers with lower emotional stability (AOR 2.16 95% CI 1.57, 2.97). Protective factors included high levels of social support (0.65, 95%CI 0.47, 0.88). Children of mothers who engaged in hostile parenting were more likely to have poor self-regulation (AOR: 3.00 95%CI: 2.21, 4.06). Children who watched more than 1 hour of television per day were at higher risk (AOR: 1.35 95% CI: 1.04, 1.73).

**Conclusions and implications for policy, practice or additional research:** Self-regulation skills are a key indicator of school success. Strategies that support decreasing hostile and ineffective parenting approaches could be beneficial. Finally, managing screen time may allow children to engage in other opportunities that foster self-regulation skills.

**Full-Day Kindergarten in Ontario, Canada and school-level trends in children's developmental health - Caroline Reid-Westoby**

**Co-authors:** Simon Webb, Eric Duku, Magdalena Janus

**Introduction/background:** An ongoing debate exists whether full-time kindergarten has a positive impact on children's outcomes compared to children who attend part-time. The purpose of this study was to examine associations of the full-day kindergarten (FDK) program with school-level developmental outcomes in Ontario, Canada over time.

**Methods:** School-level Early Development Instrument (EDI) data collected between 2010 and 2012 were compared between children attending 442 schools offering FDK and 2,348 schools offering half-time programs. Area-level socioeconomic status (SES) variables from the 2016 Canadian Census were included to account for the non-randomized nature of the FDK roll-out, which targeted lower-SES schools first. The roll-out of FDK started in 2010-11 and by 2014-15, all schools were offering it. School-level outcomes three years earlier, when no schools had FDK (2007-2009), and three years later, when all schools had FDK for at least a year (2015), were also examined as means of comparison.

**Results and analysis:** In all three time-points, the early FDK schools had poorer EDI scores across all five domains of development, compared to the non-FDK schools. Once they implemented FDK, the differences between the FDK and non-FDK schools decreased in the language and cognitive development and communication skills and general knowledge domains but increased in the physical health and well-being, social competence, and emotional maturity domains. When the remaining schools implemented FDK in 2015, these same changes were observed in these schools.

**Conclusions and implications for policy, practice or additional research:** Our findings suggest that the implementation of FDK was associated with a gain in the domains representing early academic skills and a decrease in socioemotional and physical areas. Higher reports of socioemotional problems observed in FDK schools might be due to children's fatigue or to educators observing children for longer. Now that all schools have FDK, lower-SES schools may need additional support to help improve these children's outcomes to the level of their higher-SES peers.

## ORAL PRESENTATION 03

| Tuesday 30 April | 10:30-12:00 | Room 205 |
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**Changing Childbirth in BC: Speaking of autonomy, respect, and choice in maternity care - Jasmina Geldman**

**Co-authors:** Saraswathi Vedam, Kathrin Stoll, Stephanie Black, Pam Young, Savannah Chapman, Sara Ortiz Escalante, Raquel Velasquez

**Introduction/background:** We report on findings from a large provincial study of patient-reported experiences of maternity care in British Columbia (BC).

**Methods:** Using a participatory research model, our multi-stakeholder team designed and conducted a mixed-methods cross-sectional survey of childbearing women in BC. Responding to priorities of patient partners, we developed and validated two novel scales and several indicators of patient autonomy and respect. We examined differential experiences by socio-demographic and prenatal risk profiles, type of care provider, nature of communication with providers, and interventions. We trained community members to lead 20 focus groups and co-lead the coding and analysis process. The participants and coders included groups of recent immigrants and refugees, and women who faced multiple barriers like homelessness, substance use, or incarceration.

**Results and analysis:** A geographically representative sample (n=2051) reported on 3400 pregnancies, and attended focus groups across the province (n=133). Most (95.2%) preferred to be lead decision-maker during care and 98% prioritized a trusting relationship with providers. After controlling for socio-demographic and pregnancy risk factors, patients of obstetricians had significantly lower autonomy (MADM) scores than midwifery clients (17% lower; IRR = 0.83; 95% CI= 0.81-0.85), as did women who felt pressured to accept a Caesarean (6% lower, IRR=0.94; 95% CI=0.89-0.98). Women who had a difference in opinion with their provider, and those who felt their provider seemed rushed reported the lowest MADM scores (19% and 24% lower, IRR= 0.81; 95% CI=0.77-0.85 and IRR= 0.76, 95% CI =0.73-0.78 respectively). Disadvantaged populations described more difficulties accessing care, and more indicators of disempowerment. Key qualitative themes included patient-provider misaligned philosophy of care, and desire for expanded postpartum care and childbirth education.

**Conclusions and implications for policy, practice or additional research:** Poor communication between patients' and providers' preferences centers around interventions and perceptions of risk. Women from disadvantaged backgrounds struggled to navigate the maternity care system, and were more likely to feel less respected during care.

**Treating Postpartum Depression with 1-Day Cognitive Behavioural Therapy-Based Workshops - Ryan Van Lieshout**

**Co-authors:** Haley Layton, Meena Rangan, Mark Ferro, June Brown, Peter Bieling

**Introduction/background:** Postpartum depression (PPD) is a significant public health issue that affects up to 20% of women and is associated with an increased risk of future major depressive episodes, difficulties returning to work, increased healthcare utilization, and an increased risk of cognitive, behavioural, and emotional problems in offspring. However, just 15% of women receive treatment, which may be due to a lack of time, stigma, and difficulty accessing treatments they prefer most (i.e., psychotherapy).

**Methods:** We adapted a 1-day Cognitive Behavioural Therapy (CBT)-based workshop for depression used in general population samples for the postpartum setting, and using a one-group pretest-posttest design, pilot-tested its effects on depression, anxiety, mother-infant bonding, and healthcare utilization over three months. Eligible participants were 18 years or older, had given birth in the past year and had an Edinburgh Postnatal Depression Scale score≥10. Participants provided data three weeks before the workshop and nine weeks after

the workshop. Pretest-posttest results were compared using Wilcoxon rank sum tests and effect sizes were expressed with Hedges g.

**Results and analysis:** A total of 18 women participated. Their mean age was 33.5 years, and seven were taking psychotropic medications. Clinically and statistically significant reductions were seen in depression (p = <0.01) and anxiety (p = <0.01). Statistically significant improvements were seen in mother-infant bonding, specifically impaired bonding (p = <0.01), rejection and pathological anger (p = 0.01), and infant-focused anxiety (p = <0.01). Healthcare use decreased by 39% (p = 0.02).

**Conclusions and implications for policy, practice or additional research:** The findings from this pilot study suggest that 1-Day CBT-based workshops are a potentially effective and efficient means by which we can increase the number of women receiving treatment for PPD and reduce its burden on women, their families and the traditional healthcare system. The effectiveness of these workshops now requires testing in a randomized controlled trial.

### Evaluation of Postnatal Care for Mothers and Newborns in Rural Uganda - Tisha Dasgupta

**Co-authors:** Henry Woo, Damian Duffy, Mary Margaret Ajiko, Eleanor Reimer

**Introduction/background:** The days following childbirth is a crucial time for mothers and newborns, as most complications and mortality occur in this period. Although high neonatal and infant mortality rates have been recorded in Uganda, improving postnatal care (PNC) has been neglected, especially in rural areas. The country also failed to meet the 2015 Millennial Development Goals target on child mortality and maternal health. The purpose of the study was to analyze the quality of PNC, compliance rate to World Health Organization (WHO) guidelines, and barriers to improved care.

**Methods:** The 'WHO recommendations on Postnatal care for the mother and newborn' guide was adapted into questionnaires for mothers and maternity staff. Timing and number of postnatal contacts, and content of postnatal care for both mother and newborn in the first 6 weeks of life were elucidated. Total number of births, complications and mortalities during the study period were also recorded. Compliance rate of WHO guidelines, and thematic analysis of barriers to care and overall experience was performed.

**Results and analysis:** From July 15- August 4, 100 mothers and 17 staff members were recruited at Soroti Regional Referral Hospital (SRRH). There were 54 deliveries each week, 20% of which needed emergency surgical intervention and 5% resulted in infant mortality. Overall, only 50% of guidelines were implemented. Lack of education is the primary barrier to staff participation with 50% maternity staff unaware of the guidelines. The biggest challenge to accessing postnatal services as identified by mothers, is lack of transport and financial resources.

**Conclusions and implications for policy, practice or additional research:** Although there are programmatic strengths, half of the WHO guidelines are not being followed. The rate of complications and infant death at SRRH is high, even compared to the national average. Future directions include education seminars for hospital members, improved resource allocation for medications and staff, and advocating for policy change.

### Determinants of infant feeding practices among HIV+ Black mothers: Multi-country logistic regression analysis - Josephine Etowa

**Co-authors:** Jean Hannan, Seye Babatunde, Hugues Loemba, Egbe Etowa, Craig Phillips

**Background:** Determinants of infant feeding practices of HIV+ Black mothers within the context of psychosocial wellbeing and socio-cultural expectations are complex and interwoven. This paper presents findings from our study that examined factors influencing infant feeding choices and adherence to national guidelines by HIV+ Black mothers in Canada, Nigeria and USA.

**Methods:** The study obtained ethics approval. Of the mothers living with HIV recruited at meeting venues, 690 provided valid responses. Multinomial logistic regression was used to analyze their infant feeding practices (i.e.

exclusive breastfeeding, exclusive formula feeding and mixed feeding) during the infants first year of life to determine adherence to national guidelines of their country.

**Results:** Results indicated that high IOWA infant feeding attitude and motherhood scores led to adherence to the approved infant feeding practices in all countries. Mothers who adhered to the guidelines of their country: Canada, USA practiced exclusive formula feeding while Nigerian mothers practiced breast feeding. Mixed feeding, not recommended in any country was reported however, low. Mothers with high rating of their health provider's and/or baby's father's opinion for exclusive breastfeeding were more likely to practice it. Also, mothers who perceived the guideline as corroborating their healthcare provider's and/or baby's father's opinion were more likely to adhere to the guidelines. Mothers with knowledge of the guideline was not a factor for adherence.

**Conclusion, implications for policy, practice or additional research:** Provision of culturally appropriate, safe health and social services are necessary to insure adherence to national breastfeeding guidelines. This study's results can inform the development of knowledge translation tools including participatory workshops and stakeholders' meetings to address policy gaps must be developed. Thus, fostering adherence to guideline and optimal health outcomes for HIV+ Black mothers and their children.

**Preconception health of women with physical, sensory, and intellectual and developmental disabilities in Ontario - Lesley Tarasoff**

**Co-authors:** Simon Chen, Adele Carty, Yona Lunsky, Hilary Brown

**Introduction/background:** There is a growing recognition that preconception health, the health of all individuals of reproductive age, impacts reproductive and perinatal outcomes. One in 10 women of reproductive age has a disability, and growing numbers of women with disabilities are becoming pregnant. Yet, we know little about their preconception health. Our objective was to describe the preconception health characteristics of women with physical, sensory, and intellectual and developmental disabilities.

**Methods:** We conducted a population-based, cross-sectional study using Ontario health administrative data (2015-2016). We identified 15-44-year-old women with physical (n=254,844), sensory (n=87,639), intellectual and developmental (n=7,900), and multiple disabilities (n=27,920) and women without disabilites (n=2,303,066). Preconception health variables were social (poverty), health (chronic disease, teratogenic medication use, mental illness, history of assault), and health care factors (continuity of care). We described these characteristics using frequencies and percentages and compared women in each disability group to those without disabilities using standardized differences, wherein differences >0.10 were clinically meaningful.

**Results and analysis:** Compared to women without disabilities, women with intellectual and developmental disabilities were more likely to live in poverty. All four disability groups were more likely to have diabetes, hypertension, and asthma and to be using teratogenic medications. They were also more likely to have a mood or anxiety disorder, and women with physical, intellectual and developmental, and multiple disabilities were more likely to have a substance use disorder and to have experienced assault. However, all four groups were more likely to routinely access the same primary care provider, indicating high continuity of care.

**Conclusions and implications for policy, practice or additional research:** Research on factors contributing to poor preconception health among women with disabilities is needed, as are tailored interventions to improve their preconception health.

## ORAL PRESENTATION 04

| Tuesday 30 April | 10:30-12:00 | Room 206 |
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**Walking in Two Worlds: Western and Indigenous Knowledge Needs, Enablers, and Barriers Faced by Indigenous Health Practitioners - Margo Greenwood**

**Co-author:** Kim van der woerd

**Introduction/background:** Evidence-based medicine (EBM) in public health is predominantly determined through research and practice conducted through a Western lens, while Indigenous knowledge and evidence is either excluded from EBM or dismissed as lacking sufficient evidence. This study summarizes what constitutes evidence, how evidence is accessed, and how traditional knowledge is currently integrated into healthcare practice and contexts.

**Methods:** The study involved three levels of data collection: a literature review identifying Indigenous knowledge and evidence needs and barriers, semi-structured interviews and an on-line survey with Indigenous health practitioners for feedback on the barriers and enablers impacting their ability to access traditional knowledge and use it in their practice.

**Results and analysis:** Results confirmed that Western knowledge continues to be treated as the most legitimate form of knowledge which contributes to the privileging of Western knowledge frameworks in the Canadian health care and education systems, over Indigenous knowledges. The undervaluing of Indigenous knowledge stems from epistemic racism, one of the many impacts of colonialism and is particularly problematic in the healthcare context where epistemic racism and systemic racism work together to delegitimize Indigenous research and evidence, which impacts resource allocation and access to culturally appropriate care. Indigenous health practitioners continue to face unique challenges when dealing with the complex health needs of their Indigenous patients and often walk in two worlds where they simultaneously apply Western and Indigenous knowledge and evidence in their practice in order to optimally support the health and well-being of their Indigenous patients.

**Conclusions and implications for policy, practice or additional research:** The study highlights the need for Indigenous knowledge and evidence to be valued, validated, respected, and recognized as legitimate and integral to the health and well-being of Indigenous people. This is essential if reconciliation is to take place within the health care system.

**Nunavut End of Life Care Research Project: Solutions to Improve Care - Sidney Horlick**

**Co-authors:** Lily Amagoalik, Maria Cherba, Elisabeth Feltaous, Gwen Healey, Tracey Galloway, Shylah Elliott, Sharon Edmunds-Potvin, Katie Bellefonataine, Jennifer Colepaugh, Michelle Doucette-Issaluk, Linnea Ingebrigtson, Dawn Stewart, Victor Akande, Madeleine Cole

**Introduction/background:** The purpose of this study is to understand the experiences of end-of-life care from the perspective of patients, family members, and health service providers and to improve the systems and supports available for Nunavut residents receiving this care.

**Methods:** In 2016-17 we interviewed 10 community members and 20 health service providers across Nunavut's 3 regions. Transcripts were analyzed for thematic content and consistency across content domains.

**Results and analysis:** Interviews with community members revealed that in the context of end-of-life care, patients and families value relationships with health care providers. They want their health care providers to have a connection with their community, which is consistent with Inuit relational epistemologies and values (Healey & Tagak, 2014). The presence of skilled service providers with multiple years' experience working in the community was the strongest predictor of knowledgeable, community-engaged and culturally-appropriate end-of-life care. There is considerable inconsistency across regions in the availability of incumbent service providers,

and those without strong connections to communities struggle with issues of cultural awareness, communication, and adequate training for the challenging conditions and wide scope of practice required to provide skilled, end-of-life care in communities. Solutions to improve end-of-life care for Nunavummiut were identified by mapping findings against the existing network of services in order to identify those locations where the quality and consistency of end-of-life care may be enhanced by training, mentorship, and other supports to increase the incumbency, skills, communication and cultural awareness of health service providers.

**Conclusions and implications for policy, practice or additional research:** The study findings were used to develop a culturally-safe question prompt tool for health service providers to use to guide decision-making at the end-of-life stage. The utility of the tool in clinical practice will continue to be monitored.

### A cancer profile for First Nations in Ontario achieved through linked registry data and partnerships - Sehar Jamal

**Co-authors:** Maegan Mazereeuw, Alexander Yurkiewich, Carmen Jones, Diane Nishri, Jennifer Walker, David Henry, Alethea Kewayosh, Amanda Sheppard, Loraine Marrett

**Introduction/background:** Information on cancer burden among Ontario's Aboriginal population is limited due to lack of ethnicity data in health databases. The purpose of this project was to (1) Investigate the feasibility of a partnership combined with data governance and sharing agreements in providing useful cancer data to First Nations; (2) Estimate cancer burden in First Nations in Ontario from 1991–2010.

**Methods:** For over six years, researchers from Cancer Care Ontario and the Institute of Clinical Evaluative Sciences have partnered with the Chiefs of Ontario and First Nations to work towards building a strategy to track cancer patterns in First Nation communities. The partnership and underlying strategy involved linking the Indian Registry System (includes registered First Nations) to the Registered Persons Database (includes information on people with Ontario health insurance coverage) and the Ontario Cancer Registry using deterministic and probabilistic methods. Age-standardized estimates of cancer burden (incidence, mortality, survival and prevalence) were calculated for First Nations and other Ontarians.

**Results and analysis:** Compared to other Ontarians, First Nations had significantly lower incidence of prostate, female breast and brain cancer, but significantly higher incidence for colorectal, lung, kidney and cervical cancer. Incidence of cervical and male lung cancer declined significantly from 1991–2010. Five-year observed survival was poorer in First Nations compared to other Ontarians for cancers of the cervix and male lung. Over time, observed survival in First Nations improved for breast and prostate cancers.

**Conclusions and implications for policy, practice or additional research:** This work demonstrates that our collaboration and adherence to certain principles can produce information on cancer burden for First Nations in Ontario. Although cancer rates in First Nations may be increasing, decline in cervical and male lung cancer show progress. Continued partnership work will enable further development of cancer control.

### First Nations Data as a Support for Primary Care Service Innovation - Laurel Lemchuk-Favel

**Co-authors:** Paul Drosinis, Harmony Johnson

**Introduction/problem definition that demonstrates the need for a policy change:**

In BC, the primary health care sector is undergoing change and innovation to reduce its fragmentation and simplify its complexity. The First Nations Health Authority (FNHA), BC Ministry of Health (MOH), Health Authorities and Divisions of Family Practice are collaborating to develop an integrated system of person-centred primary and community care. First Nations specific primary care data is needed to support First Nations as they work with their partners to undertake planning, decision-making, and investment.

**Research Methods:** The BC First Nations Client File was linked to the Health System Matrix (HSM), an MOH population focused tool developed to understand health care needs of the province's residents through summarizing person-specific utilization and expenditure data into fourteen population segments. A comparison

was undertaken between First Nations and other provincial residents on utilization of primary care services in the HSM, and prevalence of chronic diseases.

**Results and analysis:** In 2014/15, First Nations had elevated prevalence rates in seventeen chronic conditions when compared other residents. Between 2008/09 and 2014/15, this gap lessened in four chronic conditions. Compared to other residents in 2014/15, First Nations had lower rates of attachment to physician services and were less likely to visit general practitioners. They utilized emergency departments (EDs) at higher rates, and had higher per capita ED costs across all fourteen HSM population segments. Their hospitalization rates for ambulatory care sensitive conditions, mental illness and substance use (< 74 years of age) were also higher.

**Recommendations and implications for policy, practice or additional research:** The findings support the need for cultural safety and humility, and First Nations specific primary health care solutions to be hardwired into provincial innovation. This study provides essential evidence for the development of integrated primary health care services for First Nations clients, and provide a First Nations lens to the creation of provincially-led primary care networks and primary care homes.

**Building a Conceptual Framework for Indigenized Methodology: a scoping review - Crystal Milligan**

**Introduction/background:** Even well-intentioned health researchers have struggled to translate their findings into better health among Indigenous populations. One reason is that mainstream ways of doing research tend to fit within a Western scientific paradigm and fail to reflect or consider Indigenous ways of being and knowing. Health researchers must engage in relationships with and between Western and Indigenous ways of being and knowing for new knowledge to translate into improved health, but academic literature contains little guidance informed by an Indigenous research paradigm.

**Methods:** A scoping review aimed to summarize the research and identify gaps related to culturally appropriate frameworks and methodologies for Indigenous health in Canada. Academic database searches (Medline, CINAHL, Embase, PsycInfo) were complemented with open-access searches of Indigenous health-specific databases and Google. After all screening and the application of inclusion and exclusion criteria, 18 articles were included in the review.

**Results and analysis:** The scoping review revealed richness in literature and understanding with regard to culturally appropriate frameworks for Indigenous health research. At the same time, the review supported the hypothesis that less is known about how we can apply these frameworks and guiding principles in practice. Analysis led to the development of a conceptual framework for Indigenized methodology that is rooted in respect, reciprocity, responsibility, and reflexivity as the four R's to achieve accountability in research relationships. Methods should flow from this conceptual framework and favour collective, process-oriented methods that address the four R's, often in an iterative format.

**Conclusions and implications for policy, practice or additional research:** For health research to make a difference in the lives of Indigenous peoples in Canada, researchers must position themselves within an Indigenous paradigm. Fulfilling our roles and obligations through the application of this conceptual framework represents a crucial contribution to decolonization, and a prerequisite for turning good intentions into good results.

**ORAL PRESENTATION 05**

| Tuesday 30 April | 10:30-12:00 | Room 209 |
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**Food insecurity among Canadian youth and young adults: Insights from the Canada Food Study - Jasmin Bhawra**

**Co-authors:** Sharon Kirkpatrick, David Hammond

**Introduction/background:** Food insecurity affects 1.3 million Canadian households, with approximately 12% of households experiencing compromised food access due to financial constraints. Youth and young adults are especially vulnerable to food insecurity, in part due to socioeconomic instability corresponding with their lifecourse stage. This study explores the relationship between sociodemographic correlates, self-reported health, and food security status among this sensitive cohort.

**Methods:** Data were drawn from the first wave (2016) of the Canada Food Study, a study of youth and young adults aged 16-30 years (n=3,000) from five urban centers (Toronto, Edmonton, Halifax, Montreal, Vancouver). Participants were recruited using face-to-face intercept sampling and completed online surveys. Comprehensive household food security data were collected using the Household Food Security Survey Module. Multinomial logistic regression was conducted to examine associations between food insecurity and age, sex, city, race/ethnicity, parental status (children/no children), body mass index, educational/employment status, income adequacy, household size, perceived general health, diet quality, and mental health.

**Results and analysis:** One in five participants was characterized as living in moderately food-insecure households, and almost one in ten lived in severely food-insecure households. Respondents who found it very difficult to make ends meet were significantly more likely to be classified as moderately (adjusted odds ratio [AOR]=20.37, $p<0.001$) or severely food-insecure (AOR= 101.33, $p<0.001$) compared to those who found it easy/very easy to make ends meet. Black or Aboriginal respondents were more likely to live in moderately (AOR= 1.96, $p=0.02$; AOR= 3.15, $p=0.001$) and severely food-insecure (AOR= 4.25, $p<0.001$; AOR= 6.34, $p<0.001$) households, compared to those who were mixed/other.

**Conclusions and implications for policy, practice or additional research:** The findings highlight young adulthood as a particularly vulnerable period for food insecurity, as a higher proportion of this sample lived in food-insecure households compared to the Canadian average. Policies should address factors that underlie financial instability and insecure food access among young people, especially those from marginalized groups.

**Children's Perceptions of the Ontario Student Nutrition Program's Farm-to-School initiative in Southwestern Ontario - Paige Colley**

**Co-author:** Jason Gilliland

**Introduction/background:** Poor nutrition is a principle contributor to the rising rates of obesity, type-2 diabetes, and other diet-related diseases among Canadian children. Identifying effective strategies for promoting healthy eating can aid in reversing declining nutrition levels and ultimately improve the overall health of children.

The Ontario Ministry of Children and Youth Services, together with several agencies, established the Ontario Student Nutrition Program's (OSNP) Farm-to-School initiative. The program delivers locally-sourced fruit, vegetable, and supplementary food group snacks to elementary schools. This approach offers consistent, high-nutrient-quality snacks that follow Ministry nutrition guidelines, a change from traditional school food models, where nutritional quality and sources of food vary greatly by school. With increased access to healthy food, the program supports children's nutrition and prevents diet-related diseases.

**Methods:** The purpose of my research is to assess children's perceptions of OSNP's Farm-to-School program through focus groups. Group discussions with child participants will assess influences of the program on their

dietary behaviours, preferences, intake, willingness to try, and nutritional knowledge. A total of 37 focus groups with children in grades 4-8 were conducted at 21 schools in Southwestern Ontario.

**Results and analysis:** Preliminary results suggest that the Farm-to-School program was positively received by the students. Some students indicated that the snacks helped them to feel full. Most of the children liked the foods offered, with few items that were disliked. The program also influenced many of the children to eat healthier at school and home. It was recommended by some of the students that they receive more and a greater variety of foods.

**Conclusions and implications for policy, practice or additional research:** The farm-to-school program had a positive impact on children's diets. Using the findings from this study, the program can be further improved and streamlined across all 480+ schools involved with OSNP. It is anticipated that this initiative will have a considerable influence on children's nutrition across Southwestern Ontario.

### Partnering with Child Care Providers to Support Children's Nutrition - Marcia Dawes

**Introduction/program need and objectives:** In the early years of life, child care providers can positively influence the nutritional health and long term growth and development of children. To facilitate this, provinces and territories across Canada have nutrition policies and regulations which support healthy eating environments in these settings. In Peel, child care staff identified a need for support to plan child care menus, understand the nutrition guidance documents and address gaps in nutrition knowledge and skill development.

**Program methods, activities and evaluation:** The Region of Peel - Public Health has developed resources that support the child care sector's efforts to comply with provincial child care regulations and nutrition guidance including: establishing a formal partnership with the local service system manager for Early Years and Child Care; submitting feedback to proposed child care regulatory amendments; participating in the development of provincial nutrition guidelines; forming an advisory committee drawn from Peel's child care community (e.g., supervisors, cooks, owners and operators); undertaking a menu review to establish local baseline data; piloting of sample menus for child care centres; and delivering education and training.

**Program results or outcomes:** Peel's collaborations are a cornerstone of our work to improve healthy eating for children in child care settings.

**Recommendations and implications for practice or additional research:** Region of Peel - Public Health has learned that the involvement of partners at all stages of project planning and implementation provides invaluable insights. Integration of their perspective fosters enthusiastic participation in public health initiatives and achievement of project goals across sectors. Additionally, this approach leverages the knowledge, skill and capacity of all partners in achieving the benefits of healthy eating for children in child care.

### Envisioning a School Food Program for Canada - Mary McKenna

**Co-author:** Carolyn Webb

**Introduction/background:** Currently, unlike many countries, our federal government does not fund school food programs; Canada's program and funding landscape is diverse and complex. The Coalition for Healthy School Food, with 43 members, works to improve access to healthy food for all Canadian K-12 students. Coalition members include municipal, provincial, and national organizations that fund school food programs and other non-profit organizations.

**Methods:** To better understand Coalition members' views, the coalition developed an on-line, open- and close-ended survey in October 2018 that included questions on program mandate, national program standards, distribution of funds, potential contributors to a cost-shared model, and preferred types of programs to receive federal funds.

**Results and analysis:** Results from 33 members (77% response) reflected the varied membership of the Coalition. Members support a national mandate to expand or establish programs (overall support 73%), ideally

in all schools (45%). Members support establishing national standards that require universal access by all students (82%), program evaluation (79%) food and nutrition (73%), food literacy (67%), and access to locally-produced food (55%). Members were most supportive of individual provinces/territories distributing funds (48%). A cost-shared model was preferred, including funding from provinces/territories (97%), parents/schools (61%), municipal governments (61%), and charities (61%), in addition to federal funds. While 55% of members supported funding for school lunches, others preferred that decisions regarding meals or snacks be flexible (48%). Members offered over 100 comments. The need for quality was a common theme – one member commented on the need to move beyond a charitable model towards programs that showcase "schools as good models, healthy food environments with standards and places that support food literacy and healthy habits and skills."

**Conclusions and implications for policy, practice or additional research:** A clearer understanding of where consensus and differences exist among members will inform ongoing Coalition discussions and strengthen future decision-making, partnerships, advocacy, and programming.

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**Evaluating the impact of a media literacy and food marketing intervention for children - Emily Truman**

**Co-author:** Charlene Elliott

**Introduction/background:** In light of children's exposure to high levels of food marketing, media literacy skills are needed to navigate advertising appeals promoting the consumption of unhealthy (e.g., high fat, salt and sugar) foods. Health-promoting media literacy education encourages children to use analytical skills to critically examine media messages, and recognize their influence on perceptions, in order to make more informed health choices. However, there is limited research on media literacy intervention efficacy where nutrition promotion is concerned, including how to measure the acquisition of analytical skills needed to navigate food marketing appeals. This study addresses those gaps through the evaluation of evidence-based health-promoting media literacy lesson plans for children focusing on critical knowledge of food marketing and packaging.

**Methods:** This is an educational intervention with pre-test/post-test design. Two evidence-based "Media Literacy & Food Marketing" lesson plans developed for grades 3-6, and grades 6-9, were used by teachers in the classroom. A measurement tool (four question assignment) was created to assess children's pre and post-lesson levels of critical knowledge about packaged food and marketing messages, in relation to specific core constructs contained within the lesson plans (e.g., analysis and evaluation skills).

**Results and analysis:** Students from two public schools in Alberta (one rural, one urban) took part in the evaluation between spring 2017 and spring 2018. A total of 71 students participated from grades five, seven, eight, and nine. Qualitative analysis (using Nvivo 12) of the participant responses showed small relative increases in analysis and evaluation skills in post-lesson responses, in comparison with pre-lesson answers.

**Conclusions and implications for policy, practice or additional research:** Overall, small increases in procedural and interpretive knowledge were observed around understanding of food marketing appeals, and ability to assess the nutritional content of packaged foods. This study provides researchers, educators and practitioners with an approach to evaluating the acquisition of critical analytical skills around food, nutrition and health.

**ORAL PRESENTATION 06**

**Tuesday 30 April**　　　　　　　　　**10:30-12:00**　　　　　　　　　**Room 210**

**Evaluation of cohort study recruitment methods for the INTerventions, Research, and Action in Cities Team (INTERACT) in Montreal and Vancouver - Daniel Fuller**

**Co-author:** Rania Wasfi, Zoe Poirier Stephens, Louis Drouin, Benoit Thierry, Meridith Sones, Meghan Winters, Yan Kestens

**Introduction/background:** Recruiting a representative sample of participants for cohort studies is crucial for a research project. Social media has meant rapidly changed recruitment practices at much lower cost than previous methods. However, there is concern that recruitment via social media will suffer from selection bias.

**Methods:** INTERACT used two primary methods for participant recruitment, social media advertising and letter mail. Recruitment in Vancouver and Montreal took place from April 12, 2018 until September 21st, and June 8th, 2018 until December 1, 2018. The target samples sizes for Vancouver and Montreal were 500 and 3000 respectively. We analyzed data from web traffic, letter mail out campaigns, social media advertising, and participant survey responses.

**Results and analysis:** We reached 65,806 (cost $2246) and 258,219 (cost $3907) potential participants via social media, in Vancouver and Montreal, respectively. For Vancouver and Montreal via letter mail we reached 8,614 (cost $9180) and 15,000 (cost $21,290). The cost to recruit 1 participant was $66 and $104 via letter and $10.7 and $7.3 via social media in Vancouver and Montreal, respectively. In Montreal those recruited via social media were more likely to have a graduate degree, less likely to have a high school education, more likely to be younger, and more likely to identify as a woman. We did not find income differences between those recruited via social media or mail, the income mode was $50,000 and $99,999 for both. Final analyses will include sociodemographic results from Vancouver and Saskatoon.

**Conclusions and implications for policy, practice or additional research:** Our results show that recruitment is very expensive and that costs vary by region. Social media is cheaper than letter mail. Social media recruitment does appear to increase the potential for selection bias by education, gender, and age but not income.

**Social Isolation, Frailty and Health Outcomes in Community-Dwelling Older Adults: A Scoping Review - Fereshteh Mehrabi**

**Co-author:** François Béland

**Introduction/background:** Over the past decade, the quantity and quality of social relationships in later life have become one of the main challenges facing an aging society. To date, several reviews of the relationship between social isolation and health, have yet to focus on frailty. Our objectives were to identify the state of research on the relationship between objective and subjective aspects of social isolation and frailty and their health outcomes among community-dwelling older adults and to point out gaps in the literature. The objective aspect includes social networks, social participation, and social support, the subjective aspect refers to the loneliness.

**Methods:** We searched articles published in English or French from 2001 to June 2018 in the following databases: Medline, Embase, CINAHL Plus, Scopus, Web of Science and PsycINFO.

**Results and analysis:** Our database search resulted in 4001 articles of which 22 papers from 13 different countries were eligible. Papers were reviewed, with a focus on the association between "social isolation and frailty" and on the association between "social isolation, frailty, and their health outcomes". Regarding the association between "social isolation and frailty", several studies demonstrated significant associations between social networks, social participation, loneliness, and frailty. However, the effect of social support on frailty was unclear. Few studies looked at the association between "social isolation, frailty and, health". All studies have shown that frailty was significantly associated with poor health outcomes including functional decline, falls, re-

hospitalization, and mortality. However, the nature of the effects of social support and social participation on frailty and health outcomes varied based on gender, social context, lifestyle and how frailty and social isolation are assessed

**Conclusions and implications for policy, practice or additional research:** Little attention has been given to the role of subjective aspects of social isolation. Longitudinal research examining multidimensional social isolation is warranted to explore which aspects of social isolation have more effect on frailty and health.

## Creating a Health Equity Strategic Plan that integrates community feedback - Cassandra Ogunniyi

**Co-author:** M. Mustafa Hirji

**Introduction/background:** Strategic focus is critical to successfully impacting health equity. When Niagara Region Public Health & Emergency Services embarked on creating a Health Equity Strategic Plan, including the voices of internal staff and community members was emphasized.

**Methods:** The Drivers Model was selected to guide the development of the plan. To inform this process, the team reviewed other health equity strategies, surveyed internal health equity related documents, and scanned recent literature. Primary data was collected from 228 participants through an online or in-person survey, ten focus groups, and 20 interviews involving internal staff, community members, community organizations, and corporate partners. After developing the strategic plan, feedback was sought from participants to ensure the details aligned with their initial contributions.

**Results and analysis:** The survey, focus groups, and interviews revealed four main barriers that Niagara residents face when accessing public health and health care programs: transportation; service accessibility due to a lack of knowledge about services, limited literacy and language skills, or limited availability of services, particularly mental health services; limited income for healthy living and to cover the costs of dental services; and discrimination due to being an older adult, homeless, Indigenous, or member of another marginalized group. Participants discussed the success of NRPH&ES in their outreach, experienced and knowledgeable personnel, and thorough collaboration and referrals. The Strategic Plan incorporates the themes from the research into four streams: importance of data and program planning, building skills and capacity within public health staff, enhancing collaborations with community partners, and raising awareness about the social determinants of health to inform policy.

**Conclusions and implications for policy, practice or additional research:** Public Health has the opportunity to maximize everyone's opportunity for health and wellbeing. Successfully advancing health equity requires strategic focus, understanding local barriers, collaborating with community partners, and raising awareness about the social determinants of health.

## Rural municipalities: The challenge to talk about poverty - Sophie Dupéré

**Co-authors:** Lucie Gélineau, Lorraine Gaudreau, Paule Simard, Marie- Hélène Deshaies, Marc- André Bonneau

**Introduction/background:** Healthy Cities is a health promotion strategy that supports local action on the determinants of health among which poverty is highly significant. As part of a research project funded by CIHR-FQRS, we sought to understand how rural municipalities members of the Quebec Network of Healthy Cities and small towns (RQVVS) address poverty issues, how poverty war perceived and the nature of the debates and positions it generated.

**Methods:** We conducted a two phases data collection in 2015 and 2016. The first consisted of 19 semi-directed individual interviews with key informants invested in social responses regarding rural poverty. The second consisted of four case studies of poverty-reduction initiatives conducted by 4 RQVVS member municipalities, documented through 29 individual interviews and seven collective interviews (55 people: initiative leaders, municipal councillors, stakeholders, users of services). Diversified qualitative analysis strategies were used, including thematic case and cross-case analysis and joint analysis sessions.

**Results and analysis:** The analysis showed three types of poverty in rural areas: people's poverty (hidden and stigmatizing), communities' poverty (loss of local services and jobs) and municipalities' as administrative entities (low financial capacity to invest in their development and infrastructure). Rural municipalities are, in general, less equipped to appreciate the extent of poverty, in part because of the limited access to socio-demographic data at the level of their territory or the mixed interest of elected officials. Social and relational proximity to people living in poverty can hinder the establishment of dialogue. The word itself tends to be wiped out in favor of terms such as "devitalization".

**Conclusions and implications for policy, practice or additional research:** This research highlighted the need to support rural municipalities to recognize the presence of poverty and implement poverty reduction interventions. We have developed a toolkit to do so.

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**Enhancing recruitment of marginalized populations in population health intervention research - Rania Wasfi**

**Co-authors:** Heather Orpana, Zoé Poirier Stephens, Meridith Sones, Daniel Fuller, Meghan Winters, Yan Kestens

**Introduction/background:** In observational population health studies it is a challenge to recruit a representative sample. Using non-representative samples can lead to biased conclusions and promote policies that may not be effective, or even harmful to some groups. Particular care is needed to ensure that marginalized groups, that is, people who are socially, culturally or financially disadvantaged, are included in research. This study reviews the literature to synthesize current knowledge on recruitment methods used to recruit disadvantaged populations that can be adopted in the context of population health intervention research.

**Methods:** We searched for articles published in peer reviewed journals and grey literature that discussed recruitment strategies targeting disadvantaged populations. We included English articles, identified through PubMed, Academic Search Complete (EBSCO), Web of Science and Google Scholar. Qualitative and quantitative studies as well as literature reviews were included. This included review articles published up 2018 (n=33), and original articles not discussed in those reviews and published in the last 10 years. We summarized sampling approaches, recruitment methods, and, where possible, the effectiveness of these methods vis-à-vis research study characteristics (e.g. survey types), retention and attrition of participants.

**Results and analysis:** In total, 80 articles were reviewed across research areas such as psychosocial, health and environmental research. Most of the studies were non-experimental observational studies, targeted populations included low-income and multi-ethnic groups, immigrants and GLBT populations. The use of social media, respondent-driven recruitment and recruiting through community partners were among emerging effective recruitment strategies. Barriers for recruitment included lack of trust, and perceiving no benefits linked to participation.

**Conclusions and implications for policy, practice or additional research:** To tackle the challenge of representing marginalized populations, a combination of recruitment strategies should be used (e.g., using social media groups, and peer referrals). New innovative strategies are also needed. Conducting research that represents all social groups is essential to inform future policies to reduce health inequities.

**ORAL PRESENTATION 07**

| Tuesday 30 April | 14:00-15:30 | Room 202 |
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**Leveraging the Canadian Health Measures Survey for environmental health research - Kate Werry**

**Co-authors:** Tom Kosatsky, Angela Eykelbosh, Annie St-Amand

**Introduction/background:** Since 2007, the Canadian Health Measures Survey (CHMS) has collected detailed nationally representative health and exposure data from approximately 29,000 Canadians. These data include levels of a wide range of chemical biomarkers measured in blood, urine, and environmental media. The extent to which this CHMS dataset has been used in the peer-reviewed environmental health literature has recently been assessed. Opportunities to further expand usage of the dataset have also been explored.

**Methods:** A literature search (2007–2018) was performed to identify peer-reviewed studies that have made substantive use of the CHMS dataset. Studies were analyzed according to the study type, data usage, populations studied, environmental health themes, citation/publication data, and institutional collaborations.

**Results and analysis:** Over 50 environmental health related CHMS studies were identified, including studies related to indoor and outdoor air quality, the built environment, and chemical and environmental tobacco smoke exposures. Approximately half of these studies exploited health indicator data to examine potential relationships between biomarkers and health outcomes. The proportion of these health indicator studies has increased relative to other study types in recent years. Increases were also observed in studies using combined datasets from multiple cycles. While the studies identified covered a range of environmental exposures, many CHMS variables remain underutilized. For example, volatile organic compounds have been measured in blood, indoor air and tap water, however publications to date have been limited to indoor air data. Additionally, the number of institutions involved in these studies is small with over half of the studies conducted by or in collaboration with CHMS partners (Statistics Canada, Health Canada, and the Public Health Agency of Canada).

**Conclusions and implications for policy, practice or additional research:** The CHMS dataset provides a valuable portrait of chemical exposures in Canadians of all ages, linked to a wide variety of health indicators. Many opportunities remain to exploit and expand both the use of the dataset and collaborations between government partners and research institutions.

**Building resilience in Indigenous communities in preparedness for communicable disease emergencies - Genevieve Monnin**

**Co-authors:** Michèle Deschamps, Eniko Neashish, Elaine McDougall

**Introduction/program need and objectives:** The Communicable Disease Emergency Tabletop Exercise (CDE TTX) Toolkit is designed to assist Indigenous communities in assessing how prepared they are for a CDE. It helps test their plans, evaluate their CDE responses, and revise/update their plans. Communities may also use it to develop a plan if none exists. Overall, it aims to enhance capacity within communities and empower Indigenous peoples.

**Program methods, activities and evaluation:** Indigenous Services Canada, First Nations and Inuit Health Branch (FNIHB), developed this Toolkit to provide Indigenous communities with the necessary tools to engage all partners, particularly those in municipal/regional/provincial public health, in better understanding their respective roles and responsibilities in preparing for and responding to a CDE on-reserve. Using the Toolkit, which consists of guides, templates, scenario and questions, and presentations, community members and relevant partners discuss simulated CDE scenarios and a variety of themes, such as communications, infection prevention and control practices, public health measures, etc. To evaluate its effectiveness, the CDE TTX Toolkit was piloted in two Indigenous communities, Waywayseecapo First Nation (MB) and Wemotaci First Nation (QC), in 2017-2018. Feedback was received and the Toolkit was revised accordingly.

**Program results or outcomes:** After its Toolkit-facilitated CDE TTX, Waywayseecappo First Nation developed an action plan that has since received Chief and Council approval, which will facilitate the development of its CDE plan. Wemotaci First Nation is now working towards improving its CDE plan, and streamlining it with its health and all-hazards plans.

In the meantime, FNIHB is adopting a Train-the-Trainer approach across Canada so that FNIHB Regional communicable disease staff can work directly with Indigenous communities to plan and implement regular CDE TTXs.

**Recommendations and implications for practice or additional research:** Once finalized, this Toolkit is expected to be adapted as needed by Indigenous communities for use in TTXs addressing other types of emergencies, such as drug overdoses, forest fires, floods, etc.

## The burden of lung cancer in Canada attributable to residential radon and air pollution - Priyanka Gogna

**Co-authors:** Tasha Narain, Dylan O'Sullivan, Paul J. Villeneuve, Paul A. Demers, Perry Hystad, Christine M. Friedenreich, Darren R. Brenner, Will D. King

**Introduction/background:** Canadian Cancer Statistics lists radon as the most important risk factor for lung cancer beyond smoking, followed by asbestos and air pollution. The purpose of this study was to quantify the current and future burden of lung cancer attributable to residential radon and PM2.5.

**Methods:** Meta-analyses were separately conducted to quantify the relationships of both radon and PM2.5 with lung cancer risk in a Canadian context. Residential radon exposures were estimated using the Cross-Canada Survey of Radon Concentrations in homes, adjusting for housing type and season. Residential exposure to PM2.5 was quantified using satellite derived data. Population attributable risks (PARs) were estimated for residential radon and PM2.5 exposures in 2015, and attributable cases for lung cancer were calculated using data from the Canadian Cancer Registry. Preventable lung cancer cases up to 2042 were estimated for both exposures based on plausible reductions in exposure.

**Results and analysis:** The risks of lung cancer from residential radon and PM2.5 in a Canadian context were estimated at 1.09 (95% CI: 1.06–1.12) per 10 µg/m3 and 1.08 (95% CI: 0.98, 1.18) per 100Bq/m3 respectively. The associated PARs for radon and PM2.5 were 4.19%, and 6.80%, leading to 1,355 and 2,200 attributable cases, respectively. If all homes in Canada currently above the residential radon guideline of 200Bq/m3 could be successfully mitigated, 1,003 cases of lung cancer can be prevented by 2042. If PM2.5 levels could be successfully reduced by 50% compared to current exposures, 3,642 cases of lung cancer could be prevented by 2042.

**Conclusions and implications for policy, practice or additional research:** We estimated a lower PAR estimate of residential radon exposure in the Canadian population compared to previous estimates. Our results suggest that PM2.5 may represent a more important risk factor for lung cancer in Canada than residential radon. These results can be used to inform policy regarding the burden of lung cancer attributable to residential radon and PM2.5 in Canada.

## Mobilizing Multi-sector Knowledge for Infectious Disease Public Health – A New Online Resource for TB Elimination in First Nations Communities - Margaret Haworth-Brockman

**Co-authors:** Shivoan Balakumar, Donna Atkinson, Roberta Stout

**Introduction/program need and objectives:** Tuberculosis has long been understood to be a "social disease with a medical aspect". Unfortunately, TB elimination efforts in First Nations communities with high TB incidence have focused more on clinical aspects of the disease, such as diagnosis and treatment, and less on the underlying social and Indigenous determinants of health that impact TB rates, such as poor housing conditions, inadequate nutrition, and a lack of community self-determination. Inter-sectoral action is considered critical to address these determinants. To help mobilize knowledge across sectors on the determinants of TB, we worked

with the Assembly of First Nations to develop a new online resource to support TB elimination in First Nations communities. The resource, which visually depicts the complexities of a typical TB patient journey, points to cross-sector roles and actions for public health. It can be used as an educational resource or framework for TB program planning and evaluation.

**Program methods, activities and evaluation:** Using an on-line systems mapping platform, we illustrate a patient's journey and intersections with public health interventions and structural and community level determinants. The resource was developed with iterative feedback from partners with expertise in TB and community priorities. It will be evergreen, with up-to-date information and new resources added regularly. Evaluation of the resource is ongoing.

**Program results or outcomes:** The TB Patient Journey has been used to facilitate discussions at a number of community and government meetings, cross-sector meetings with Canadian Mortgage and Housing Corporation, and was used as the foundation of a recent Canadian meeting on TB program performance indicators. Participants at this session will be invited to learn to adapt it for their community and settings.

**Recommendations and implications for practice or additional research:** The TB Patient Journey demonstrates an innovative and engaging approach to cross-sector knowledge mobilization for public health. Such resources can support public health efforts to eliminate complex social diseases such as TB in First Nations communities.

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**Jurisdictional scan of integrated surveillance reporting for HIV, STIs, viral hepatitis and TB - Debra Parry**

**Co-authors:** Karin Hohenadal, Liane Macdonald, Christina Renda, Michael Whelan, Michelle Murti

**Introduction/background:** Despite interest in a syndemic approach to the prevention and control of sexually transmitted and blood-borne infections (STBBIs), routine public health surveillance reporting generally focuses on single infections and does not integrate information on STBBIs at the population level. We conducted a jurisdictional scan to assess the extent of integration in STBBI and tuberculosis (TB) public health surveillance reports, to identify barriers and enablers of sustainable integrated STBBI and TB reporting, and utility for informing public health action.

**Methods:** A targeted website review of publicly-available surveillance reports of STBBIs and TB was conducted. Data were abstracted from relevant reports and categorized into four levels of integration: nonintegrated (no report or single infection routine reporting), limited (single infection by or among a population subgroup), expanded (co-occurrence of infection at the geographic level or among a subgroup) or comprehensive (co-infection at the individual level based on database matching, and other novel ways of reporting). We conducted semi-structured telephone interviews with jurisdictions with promising practices to understand benefits, barriers and enablers of integrated reporting.

**Results and analysis:** 49 public health organizations' websites were reviewed (Canada (n=19), the United States (US) (n=18), the United Kingdom (n=5) and Australia (n=7)) including agencies at the local (n=17), regional (n=24) and national (n=8) levels. The highest level of integration of these reports was limited or nonintegrated in the majority of organizations (n=26), expanded in 10 and comprehensive in 13. Jurisdictions interviewed (Canada (n = 2) and the US (n = 3)) commonly cited creating the data infrastructure platform and usage policies as a major barrier to integrated surveillance. Once overcome, however, enhanced understanding of syndemics in their region allowed jurisdictions to prioritize program and policy decisions.

**Conclusions and implications for policy, practice or additional research:** While there are challenges to integrating databases, we found jurisdictions that provide examples of the enablers and benefits to integrated STBBI and TB surveillance reporting.

**ORAL PRESENTATION 08**

| Tuesday 30 April | 14:00-15:30 | Room 204 |
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**Global Burden of Disease Study Trends for Canada from 1990 to 2016 - Justin Lang**

**Co-authors:** Samiah Alam, Leah Cahill, Aaron Drucker, Carolyn Gotay, Jeanne Francoise Kayibanda, Nicole Kozloff, Kedar Mate, Scott Patten, Heather Orpana

**Introduction/background:** The Global Burden of Disease (GBD) Study is a large and systematic effort to estimate the international burden of diseases and injuries from 1990 to 2016. We summarize the burden of disease in Canada across age and sex groups. We also identify changes in the leading causes of mortality and morbidity in Canada for 1990, 2006, and 2016.

**Methods:** We used Canadian data from the 2016 iteration of the GBD Study. The all-cause and cause-specific disability-adjusted life years for both sexes were summarised. We highlighted sex differences across age groups in disability-adjusted life years. We also compared 21 broad categories of diseases and injuries across three the time periods using disability-adjusted life year rates to identify changes in the leading causes of Canadian mortality and morbidity.

**Results and analysis:** In 2016, 56% of all-cause disability-adjusted life years were accounted for by four of the 21 broad disease and injury categories: cancers, cardiovascular diseases, musculoskeletal diseases, and mental and substance use disorders. In 2016, total disability-adjusted life years peaked between the ages of 60–69 years for both males and females. Between 2006 and 2016, the years of life lost rate declined by 12%, while the years lived with disability rate remained relatively stable (+1%), indicating that gains in disability adjusted life years during this period were predominantly driven by decreases in premature mortality.

**Conclusions and implications for policy, practice or additional research:** The pattern of mortality and morbidity in Canada reflects an aging population with overall improving population health. If these trends remain, Canada will continue to face the challenges of a population with increasing morbidity alongside decreasing premature mortality.

**Socioeconomic disparities in health-adjusted life expectancy in Canada -Michael Tjepkema**

**Co-authors:** Tracey Bushnik, Laurent Martel

**Introduction/background:** How long people live and how long they remain healthy has increased significantly over the past century in Canada. However, it is unlikely that these increases have been shared equally across socioeconomic groups. Using population-based cohorts spanning the past 10 years, this study will examine life expectancy and health-adjusted life expectancy according to income and education levels. To our knowledge, this is the first time recent information about socioeconomic disparities in health-adjusted life expectancy will be available at the national level in Canada.

**Methods:** This study will use the 2006 and 2011 Canadian Census Health and Environment Cohorts (CanCHECs) with a three year mortality follow-up to estimate life expectancy. Health status – used to adjust life expectancy – will be derived from responses to the Health Utilities Index Mark 3 (HUI3) instrument collected by the Canadian Community Health Survey for those aged 12 or older, and the Canadian Health Measures Survey for those under the age of 12. Health-adjusted life expectancy will be estimated using a modified version of the Sullivan method.

**Results and analysis:** Life expectancy and health-adjusted life expectancy for the household population will be estimated by sex and at age 1, age 20, age 35, age 45, age 55, age 65, age 75 and age 85 or older according to household income quintile and highest level of educational attainment categories. It is hypothesized that health-adjusted life expectancy will be lower for those in the lowest income quintile and with the lowest level of educational attainment, and that these groups will not have experienced the same gains over time as those with higher income or education. Sex differences in these socioeconomic disparities will also be examined.

**Conclusions and implications for policy, practice or additional research:** Current information about existing socioeconomic disparities in the quality of life of Canadians is essential for informing public policy.

## Canadian trends in mortality inequalities, using the Canadian Census Health Environment Cohorts (CanCHEC) - Emma Marshall-Catlin

**Co-authors:** Tracey Bushnik, Michael Tjepkema

**Introduction/background:** Socioeconomic mortality inequalities are present in Canada and abroad. Mortality rates are decreasing in Canada for both men and women, though at different rates when comparing by socioeconomic status. This study will quantify socioeconomic mortality inequalities in Canada and examine if they have changed over time by all cause and cause-specific mortality.

**Methods:** This study uses the 1991, 1996, 2001, 2006, and 2011 Canadian Census Health and Environment Cohorts (CanCHECs) linked to census data and five years of mortality follow up. It estimates age-standardized mortality rates by sex and socioeconomic status, for all cause and cause-specific mortality. Socioeconomic indicators used were LICO-ratio income quintiles and educational attainment. Annual percent change was used to examine trends over time, with pairwise comparison between socioeconomic groups.

**Results and analysis:** Findings revealed a stair-stepped gradient in all-cause mortality and cause-specific mortality by educational attainment and income quintile across each time period. The lowest mortality rates were among the university educated and the richest income quintile. Over the 25-year time period, women in the lowest income quintile did not see a significant annual percent decrease over time. Mortality inequalities by socioeconomic status in Canadian adults have increased for women by both income quintile and educational attainment. Mortality inequality trends vary by cause of death, with inequalities by income quintile and educational attainment increasing most notably for trachea, bronchus, and lung cancers.

**Conclusions and implications for policy, practice or additional research:** The data show clear mortality inequalities by socioeconomic position persistent over time. The results provide a better understanding for cause-specific health inequality trends over time, allowing more targetted public health approaches. These linked datasets can help advance knowledge in understanding health inequalities in Canada as well as provide a tool for on-going surveillance of health inequalities by different socioeconomic dimensions and causes of death.

## The development of the Chronic Disease Population Risk Tool (CDPoRT): a tool that predicts the incidence of chronic disease - Ryan Ng

**Co-authors:** Rinku Sutradhar, Walter Wodchis, Laura Rosella

**Introduction/background:** Informed decision-making by public health officials is needed for developing chronic disease prevention strategies. A prediction model that accurately predicts the incidence of chronic disease in a jurisdiction based on current population characteristics would be invaluable towards this process. To meet this need, we propose the development of the Chronic Disease Population Risk Tool (CDPoRT).

**Methods:** The Canadian Community Health Survey was linked to Ontario health administrative data to predict the incidence of four major chronic diseases over ten years (i.e. cardiovascular disease, chronic obstructive pulmonary disease, diabetes, lung cancer). Sixteen variables grouped as modifiable lifestyle behaviors (e.g. alcohol, smoking, diet and physical activity), sociodemographic factors (e.g. age, ethnicity, immigration, income, education, and marital status) and other health-related factors (e.g. asthma, body mass index, high blood pressure, secondhand smoke, self-rated health, and self-rated stress) were used as predictors. Sex-specific prediction models were developed using Weibull regression models for males and females separately. A full model, parsimonious model and simple model for each sex were developed by evaluating model performance for overall predictive accuracy (e.g. R-squared), discrimination (e.g. c-statistic) and calibration (e.g. calibration slopes).

**Results and analysis:** The cohort for developing CDPoRT contained 46,627 females and 36,540 males. The variables most predictive of chronic disease incidence for both sexes were age, BMI and smoking. These predictors made up the simple model. The full model cosnsisted of all predictors that were statistically significant. The full model had minimal improvements in model performance relative to the simple model; for example, in the female context, improvements in R-squared (0.160 versus 0.144), c-statistic (0.779 versus 0.767) and calibration slope (0.99 versus 1.01) were minimal versus the simple model.

**Conclusions and implications for policy, practice or additional research:** The next steps are to validate CDPoRT and to apply the model in various jurisdictions (e.g. public health units) to predict chronic disease incidence.

## Ontario is Decreasing Avoidable Mortality Rates but not in its Marginalized Neighborhoods - Austin Zygmunt

**Co-authors:** Claire Kendall, Paul James, Isac Lima, Meltem Tuna, Peter Tanuseputro

**Introduction/background:** Marginalized populations are at greater risk of adverse mortality outcomes. The objective of our study was to examine trends in avoidable mortality (AM) by level of neighborhood marginalization.

**Methods:** Decedents between 1993 and 2014 in Ontario (N = 1,740,158)were assigned to neighborhood marginalization quintiles using Ontario Marginalization Index dimensions: material deprivation, residential instability, dependency, and ethnic concentration. We calculated dimension and quintile specific age- and sex-adjusted ON-Marg Index AM incidence rates. We then calculated inequity in annual AM by determining the rate ratios between most (Q5) and least (Q1) marginalized quintiles for each ON-Marg dimension by overall AM and stratified into preventable AM and treatable AM.

**Results and analysis:** Overall, AM rates were almost halved from 1993 to 2014 (216 vs. 111 per 100,000 population) and this decline was greater for treatable AM (75 vs. 36 per 100,000 population) than preventable AM (128 vs. 88 per 100,000 population). Those living in the highest quintile areas (Q5) of dependency, material deprivation, and residential instability consistently had the highest AM rates for both preventable AM and treatable AM. Those in the most ethnically dense areas (Q1) had the lowest AM rates. Overall AM Q5/Q1 rate ratios (RR) comparing 1993 to 2014 increased for all marginalization dimensions: dependency (RR 2.11 vs. 2.58), ethnic concentration (RR 0.59 vs. 0.48), material deprivation (RR 1.63 vs. 2.23) and residential instability (RR 2.01 vs. 2.43); these gaps were generally larger for treatable AM than preventable AM.

**Conclusions and implications for policy, practice or additional research:** AM rates in Ontario decreased at a greater degree in non-marginalized neighbourhoods than marginalized neighborhoods, particularly for treatable deaths, a concerning finding in a population with universal access to physician services. Remaining AM is largely attributable to preventable deaths in highly marginalized neighborhoods, identifying an important area for future public health research and policy investment.

**ORAL PRESENTATION 09**

| Tuesday 30 April | 14:00-15:30 | Room 205 |

**Storefront Marketing to Teens: An Environmental Audit - Drew Bowman**

**Co-authors:** Leia Minaker, Jason Gilliland

**Introduction/background:** Nearly one third of Canadian youth are overweight or obese. Research also indicates that unhealthy food retailers are often concentrated around schools; thus, teenagers are exposed to such environments on a regular basis. Food environments are known to be highly influential in determining food purchasing and dietary behaviours among youth; however, this research has largely focused on accessibility to food retailers, rather than food advertising within the community environment. Food advertising research often focuses on child-directed marketing, primarily assessing the impacts of television advertisements on children's dietary perceptions. This study aims to better understand how food marketing is used within communities by food retailers and how this influences teen purchasing.

**Methods:** Collector for ArcGIS was used to conduct comprehensive food audits surrounding six high schools in London, Ontario. All food vendors (fast food, slow food, grocery, and convenience) within 2000m of each school were included. At each food vendor, all external and internal food advertisements were photographed. Additional 'food hubs' (e.g. mall food courts) that are known to be frequented by high school students were also audited. Content analysis was then used to assess, code, and thematize these food advertisements.

**Results and analysis:** Preliminary results indicate there is a correlation between density and proximity of food vendors surrounding high schools and frequency of teen-directed marketing. As proximity to high schools increased, the abundance of food marketing techniques and student-targeted specials also seemed to increase.

**Conclusions and implications for policy, practice or additional research:** The results of this study highlight the need for additional nutrition and zoning policies that restrict the selling and promotion of unhealthy foods to teens surrounding schools. It also provides insight for municipal decision-makers to consider the implications of food advertising to teenagers when designing healthy communities.

**How Much Money can be Made? Using the Huff Gravity Model to Predict Sales of Prospective Food Retailers in Atlantic Canada - Nathan Taylor**

**Co-authors:** Jillian Stymest, Catherine Mah

**Introduction/background:** Public health practitioners, city-planners and community food policy councils across Canada are prioritizing healthy food access with innovative policies and interventions. The objective of this project was to explore spatial methodologies for comparatively measuring food retailer location-selection based on public health need versus standard profit-based incentives. Profit-driven models of location-selection are valuable tools for food retailers in competitive regions but may skew food access to already saturated markets and underappreciate the potential for profit in areas with poor healthy food access.

**Methods:** To first understand the existing Atlantic Canadian market, existing businesses were ranked using their predicted sales volume and population-level variables within trade areas defined by the relative urbanity/rurality of each retail location. Following baseline businiess ranking, dissemination areas (DA) were subjected to a suitability analysis for novel retailers using population characteristics including income and household spending on food. Finally, a probabilistic Huff Gravity model was utilized to predict the profit potential of retailers located at each Atlantic Canada DA centroid.

**Results and analysis:** There was a clear domination of existing markets by chain retailers. In all four provinces at least 3 of the top 5 food retailers were chain businesses. Suitability mapping, as expected by model design, favoured high-income DAs with a large number of residents travelling by car. The Huff model predicted high profits in suburban neighbourhoods, with three of the four provinces highly ranking suburban and exurban DAs.

**Conclusions and implications for policy, practice or additional research:** Our analysis indicates that standard models of site-selection utilized by private-sector businesses may overemphasize neighbourhoods with existing access to grocery stores and supermarkets and may underestimate the potential for profit in low-access neighbourhoods. This work has the potential to influence novel retailer decision-making and improve healthy food access in Atlantic Canada.

**Socio-demographic correlates of ultra-processed food consumption among Canadians: analysis of 2015 Canadian Community Health Survey (CCHS)–Nutrition - Jane Polsky**

**Co-authors:** Milena Nardocci, Jean-Claude Moubarac

**Introduction/background:** There is growing evidence that diets high in ultra-processed foods (UPF) are of lower quality and increase the risk of obesity and other diet-related disease. We aimed to examine the relative share of UPF in the diet according to socio-demographic characteristics of Canadians.

**Methods:** This study used nationally representative data on 19,796 participants aged 2 or older in the 2015 CCHS–Nutrition. Intake of UPF was sourced from a dietary recall of all foods and drinks consumed by individuals in the previous 24 hours, which were classified according to the extent and purpose of industrial food processing using the NOVA classification. Multivariable linear regression models assessed the association between socio-demographic variables, including income, education, ethno-racial group and household food security status, with the dietary share of UPF (expressed as % of total daily energy intake).

**Results and analysis:** In 2015, UPF contributed nearly half of all daily calories to Canadians' diets (mean of 48.2%). In fully adjusted analyses, the mean dietary share of UPF was slightly higher among males than females, decreased with age and was unrelated to household income. Consumption of UPF was highest among non-immigrants (52.2%, 95% CI:50.6-53.8%), and those living in households with low levels of education (49.7%, 95% CI:46.9-52.5%) and with moderate or severe food insecurity (respectively, 49.2%, 95% CI:46.9-51.4% and 51.2%, 95% CI:47.8-54.5%). Among ethno-racial groups, Chinese (39.6%, 95% CI:36.7-42.6%) and South Asian (43.1%, 95% CI:40.2-46.1%) were the lowest consumers of UPF, with intakes substantially below the 'white' group (54.9%, 95% CI:53.0-56.8%; p-value<0.0001).

**Conclusions and implications for policy, practice or additional research:** Although consumption of UPF is alarmingly high in the overall Canadian population, there were substantial differences across multiple socio-demographic dimensions, notably by ethno-racial group, immigration and food security status. These findings are important for informing public health interventions and policies to reduce UPF consumption as a means of improving population diet quality.

**What are the criteria used to assess or improve the food supply quality: Findings from a scoping review and stakeholders' perspectives - Mylène Turcotte**

**Co-authors:** Jeanne Loignon, Sophie Desroches, Simone Lemieux, Marie-Claude Paquette, Daniela Zavala Mora, Véronique Provencher

**Introduction/background:** The aim of this study was to review the evidence on the criteria used to define the quality of the food supply. Specific objectives were to identify the quality criteria used for assessment or improvement of the food supply in the literature and to integrate them with stakeholders' perspectives.

**Methods:** The six steps proposed by Arksey and O'Malley's (2005) to review the scientific and grey literature were followed: 1) Identify the research question, 2) Identify relevant studies, 3) Select studies, 4) Chart the data, 5) Collate, summarize and report the data, and 6) Consultation. Medline, CAB abstracts, PsycInfo, Web of Science, FSTA, Google and other websites identified by knowledge users were searched to identify documents published between 2005 and 2017. The criteria were then complemented with those reported by the Food Quality Observatory's (FQO) stakeholders from various background.

**Results and analysis:** Of the 865 documents included, most were published after 2011 (n=651, 75.2%) in North America (n=548, 63.4%). They aimed to assess, modify or improve food supply quality (n=575, 66.5%) of food stores, schools or restaurants (n=632, 73.1%), and came from the public health or nutrition fields (n=729, 84.3%). Of the 41 documents qualitatively analyzed, availability, affordability, quantity, variety and promotion were the most often used criteria. To these five salient food supply criteria from the literature, FQO stakeholders added placement (e.g. location near cashiers) and sub-criteria of availability (e.g. attractiveness, taste, safety, from fair-trade, local, level of processing) and promotion (e.g. truthful information).

**Conclusions and implications for policy, practice or additional research:** These results expand the concept of food supply quality by defining more precisely the components of the consumer nutrition food environment. Practically, these integrated criteria will be used by the FQO to develop a common definition of food supply quality as well as tools to assess, monitor and compare this concept amongst settings and over time.

**A participatory project to address food security with partnering communities of the Williams Treaties First Nations - Ashleigh Domingo**

**Co-authors:** Kerry-Ann Charles, Rhona Hanning, Michael Jacobs, Deborah Brooker

**Introduction/background:** Access to food from traditional and market-based food systems is a priority identified by First Nations communities. The need for Indigenous-informed and culturally relevant approaches to address food insecurity is driven by the impact on holistic wellness and the growing prevalence of chronic disease. Through collaboration among the Williams Treaties First Nations (WTFN), Cambium Aboriginal Inc., the Ontario Ministry of Food, Agriculture and Rural Affairs, and the University of Waterloo, this project aims to improve access to healthy and culturally-relevant food in partnering communities of the WTFN.

**Methods:** This participatory project describes what has and will be pursued in a phased-approach (2017-2020) applying a mixed methods design. Objectives include: (1) to build a shared understanding of priorities, challenges and opportunities to strengthen food security; informed by secondary data analysis from the First Nations Food, Nutrition and Environment Study (FNFNES), and qualitative data collected and analyzed from community engagement; (2) to facilitate community capacity building by strengthening existing resources for enhanced uptake of community-identified projects; and (3) to support project development and sustainability through co-development of a project and process evaluation plan.

**Results and analysis:** Phase 1 outcomes include the following: a project advisory team established; formal and respectful relationships built; a review of published and grey literature on food security in Indigenous populations in Canada and food security strategies; and community-engagement sessions conducted to solicit input from community members. FNFNES data will be analyzed from the food security and socio/health/lifestyle questionnaires (Ontario, 2011-12). Prevalence rates of food security and associations with sociodemographic and wellness indicators will be examined.

**Conclusions and implications for policy, practice or additional research:** Findings from this project will further knowledge of Indigenous informed action to improve food security and highlight a pathway to holistic wellness through ties to food and culture. Promising projects identified will inform Ontario's plan to develop an Indigenous food and nutrition strategy.

## ORAL PRESENTATION 10

| Tuesday 30 April | 14:00-15:30 | Room 206 |

**Pregnancy and Parenting among Youth Experiencing Homelessness: Attitudes, Experiences, and Gendered Nuances - Stephanie Begun**

**Co-authors:** Cressida Frey, Katie Massey Combs, Michaela Torrie

**Introduction/background:** Pregnancy rates among homeless youth are much higher than those of their housed counterparts. Research is lacking on young men's attitudes and experiences, and also the influences which youths' gender identities and sexualities may have on their pregnancy and parenting outcomes and trajectories. This study expands this area by qualitatively exploring gender differentials, including youths' gender identities and sexual orientations, with regard to their attitudes and experiences of pregnancy and parenting while homeless.

**Methods:** Qualitative data were obtained from interviews with a diverse sample of 30 female, male, and gender non-conforming homeless youth, ages 18-21. To comprehensively capture the sample's lived experiences regarding pregnancy and parenting, transcripts were first independently and then collectively examined by three coders across three iterative rounds of coding.

**Results and analysis:** Though pregnancy is often viewed positively within this community, it is received and experienced differently for each gender and sexuality. For a cisgender female, though a pregnancy may initially elicit positive reactions from her surrounding social network, the burden of parenting in exceptionally challenging situations often falls solely on her. However, straight cisgender males are commonly perceived (sometimes unfairly) as avoidant of relationship or parenting responsibilities after a pregnancy is discovered. For LGBTQ youth, pregnancy and parenting often signify threats to their very identities, causing some youth to encounter violence and further social exclusion.

**Conclusions and implications for policy, practice or additional research:** Pregnancy prevention and parenting interventions are needed that are tailored to the uniquely challenging contexts of homeless youths' lives. Youths' unimpeded access to available reproductive and sexual healthcare services is essential, and services must be inclusively designed and delivered for youth of all gender identities and sexual orientations. Resources on parenting and co-parenting, particularly models that further engage and encourage young fathers' involvement, are desperately needed.

**Pregnancy rates in Ontario women with physical, sensory, and intellectual and developmental disabilities - Hilary Brown**

**Co-authors:** Simon Chen, Lesley Tarasoff, Yona Lunsky

**Introduction/background:** One in 10 women of reproductive age has a physical, sensory, or intellectual and developmental disability. Increased community integration and medical advances have resulted in more opportunities for childbearing for women with disabilities, but reproductive health care programs frequently do not meet their needs, possibly because of the persistent assumption that pregnancy is uncommon in this population. Our objective was to describe pregnancy rates in women with physical, sensory, and intellectual and developmental disabilities and compare these to women without disabilities.

**Methods:** We conducted a population-based study in Ontario, Canada, of 15- to 44-year-old women with physical (n=254,844), sensory (n=87,639), intellectual and developmental (n=7,900), and multiple disabilities (n=27,920) and women without disabilities (n=2,303,066) in 2015. Primary outcomes were overall and age-specific pregnancy rates per 1,000 women. We also measured rates of pregnancy ending in livebirth, stillbirth, miscarriage, and induced abortion. Rate ratios (RR) and 95% confidence intervals comparing women with and without disabilities were generated using Poisson regression.

**Results and analysis:** Overall pregnancy rates were lower in women with physical (49.8 pregnancies/1,000 women), sensory (50.8/1,000), intellectual and developmental (26.5/1,000), and multiple disabilities (36.8/1,000) compared to women without disabilities (54.0/1,000) (all RR <1.00 and statistically significant). However, when stratified by age, pregnancy rates in adolescents with physical, sensory, and intellectual and developmental disabilities were higher. Patterns for livebirths, stillbirths, miscarriages, and induced abortions were similar, but women with physical disabilities were more likely to have a stillbirth or miscarriage.

**Conclusions and implications for policy, practice or additional research:** While overall pregnancy rates were lower in women with than without disabilities, our findings show that pregnancy is not uncommon, as previously thought. Greater attention needs to be paid to the reproductive health care needs of women with disabilities, particularly adolescents and women with physical disabilities.

**Grounding Evidence Synthesis in Lived Experience: Priorities of Adolescent Mothers - Anna Dion**

**Co-author:** Neil Andersson

**Introduction/background:** Evidence synthesis without meaningful stakeholder engagement can overlook factors considered relevant and influential by stakeholders. We sought to ground a mixed methods evidence synthesis of adolescent pregnancy in the lived experience of adolescent mothers.

**Methods:** We conducted a parallel-results convergent mixed review on perinatal outcomes and experiences of adolescents. Articles were limited to primary research, during pregnancy to 12 months post-partum, in French or English, in Canada after 1980. Findings were summarized using thematic synthesis and descriptive statistics. Together with peer researchers, we prepared lay evidence summaries. These were shared with a group of 13 marginalized adolescent mothers, who subsequently identified and prioritized areas of concern. We focuses a second literature review around these priority issues, and then expanded upon them through semi-structured interviews with adolescent mothers.

**Results and analysis:** Our mixed methods review identified that adolescent mothers face disproportionate rates of poverty, higher rates of past experiences of abuse and higher rates of anxiety and depression than adult mothers. They also often feel they are perceived as incapable, highlighting the need for more comprehensive and youth-friendly services.

Adolescent women prioritized the experience of stigma in perinatal health and social services, specifically related to being identified as a child protection risk. Other priorities included inadequate housing, judgment around breastfeeding, a loss of social support and inaccessibility of community resources.

We categorized stigma in perinatal health as being invisible, and being seen as incapable or as a risk. Adolescent mothers further developed each of these categories by providing examples of how stigma manifested itself and its consequences.

**Conclusions and implications for policy, practice or additional research:** Grounding evidence syntheses in the lived experience of service users creates the opportunity to re-conceptualize a problem and its potential solutions. Moving towards people-centered health services requires that we take better account of how people's understandings of determinants of poor health intersect with conventional biomedical evidence.

**Shaping Health Equity Practice in Perinatal Public Health: A Review of Key Policy Documents in British Columbia (2002-2017) -Alex Kent**

**Co-authors:** Megan Black, Lenora Marcellus, Bernie Pauly, Sana Shahram

**Introduction/background:** Within public health, policy documents are essential tools that guide thinking and action in relation to program planning and service delivery. In British Columbia (BC), there has been a substantial amount of work to shape perinatal practice through provincial policy documents. A scoping review of key policy documents in BC was conducted as part of the Health Equity in Perinatal Public Health Services study, which is part of the Equity Lens in Public Health (ELPH) program of research. The scoping review was guided by the

research question: What is the policy context of applying a health equity lens in perinatal services in BC in relation to mental health promotion, prevention of mental disorders and harms of substance use?

**Methods:** The scoping review consisted of analysis of foundational provincial-level policy documents in BC published between 2002 and 2017. The dataset was limited to documents that outline strategic directions of perinatal systems, or that focus on mental health promotion, prevention of mental disorders and harms of substance use. Document analysis was employed to understand the extent to which health equity is prioritized and how it is acted upon.

**Results and analysis:** The scoping review identified several key documents that shape perinatal services in BC. Analysis surfaced dominant values and discourses that influence the prioritization of (or lack thereof) health equity in perinatal systems. Analysis also uncovered conflicts and convergences between policy documents in terms of supporting health equity work. Recommendations from the review include opportunities for advancing health equity within perinatal systems in BC.

**Conclusions and implications for policy, practice or additional research:** This presentation will inform public health practitioners', policy-makers' and researchers' understanding of how health equity is understood and taken up within perinatal public health. Furthermore, it will encourage examination of the context within which attitudes concerning the role of health equity in supporting pregnant and parenting women and their families are formed.

**Perinatal Mental Health in Newfoundland and Labrador: Nurturing the Seeds of Infant Mental Health - Martha Traverso-Yepez**

**Co-authors:** Caroline Porr, Roger Chafe, Anne Drover, Brenda Olford, Clare Bessell, Barbara Young

**Introduction/background:** Maternal mental distress during prenatal and postnatal periods can negatively impact the quality of the mother-child relationship and the whole family's health. We are conducting a participatory action-research to (i) explore ways to identify mothers who may be developing mental health issues during pregnancy and early years of parenting, and (2) investigate opportunities to enhance supports and services available for mothers under these conditions. The ultimate goal is to develop a maternal-infant mental health framework in NL.

**Methods:** In the presentation, we will report on the first two stages of the five-phase participatory action-inquiry design: 1) Finding the information: collecting research data through an environmental scan of the literature and interviews with front-line service providers in health care, public health, and community services and perinatal mothers, 2) sharing the information: through deliberative workshops and a consensus panel approach to determine the next stepts of designing and applying the course of action to follow.

**Results and analysis:** Through the interviews being conducted with service providers, we are identifying participants' work experience from his/her specific professional stance. We are also exploring with whom and how they connect with when referring to perinatal mental health program and services available. We are also interviewing mothers about their experience of the programs and services available and their suggestions of how they could be enhanced. The recommended framework pillars revolves around i) an integrated perinatal care system, ii) preventive education, iii) early screening and coordinated, timely follow-up, and v) consistent support networks.

**Conclusions and implications for policy, practice or additional research:** The need for well-coordinated maternal mental health framework and the networking for action is vital to tackle the differential needs of mothers suffering the broad range of mental disorders. The significant gain also lies on preventing infant developmental disorders and its potential negative impact throughout the lifespan.

**ORAL PRESENTATION 11**

| Tuesday 30 April | 14:00-15:30 | Room 209 |
|---|---|---|

**Does substance use prospectively predict exclusive e-cigarette use, exclusive cigarette use and dual use among Canadian youth? - Sarah Aleyan**

**Co-authors:** Mark Ferro, Sara Hitchman, Scott Leatherdale

**Introduction/background:** Cross-sectional evidence suggests that substance use behaviours are associated with increased e-cigarette use among youth. However, limited longitudinal studies exist examining whether youth substance use predicts a rise in e-cigarette use over time. As such, this study sought to examine the relationship between substance use characteristics and e-cigarette use among a sample of Canadian youth over 3 years.

**Methods:** 7652 grade 9 to 12 students participated in the longitudinal COMPASS study over three consecutive waves ($W_1$:2015-2016, $W_2$: 2016-2017, $W_3$:2017-2018). A multinomial logistic regression model examined whether past-30 day cannabis users and binge drinkers at baseline ($W_1$) were more likely to report using e-cigarettes only, cigarettes only, both products, or neither in the last 30 days at follow-up ($W_3$), controlling for relevant covariates.

**Results:** The prevalence of past 30-day e-cigarette use (3.2 to 13.6%), cigarette use (2.2 to 4.4%) and dual use (1.2 to 6.4%) increased significantly between wave 1 and 3 (p<0.0001). Current (past-30 day) cannabis users at wave 1 were more likely to report being dual users (OR = 2.63, 95%CI= 1.87-3.70), exclusive cigarette users (OR= 2.60, 95%CI= 1.78-3.80) and exclusive e-cigarette users (OR= 1.49, 95%CI= 1.07-2.08) at wave 3. Current (past-30 day) binge drinkers at wave 1 were more likely to report being dual users (OR= 3.26, 95%CI= 2.45-4.33), exclusive cigarette users (OR=1.96, 95%CI= 1.40-2.73) and exclusive e-cigarette users (OR=1.82, 95%CI= 1.42-2.34) at wave 3.

**Conclusions:** Cannabis users and binge drinkers were more likely to report being e-cigarette users at follow-up; these sub-groups may be important to target in e-cigarette prevention efforts.

**Implications for policy, practice or additional research:** Though e-cigarette use is generally discussed within the domain of tobacco control, our findings suggest that e-cigarette prevention efforts may also benefit from alignment with substance use programming.

**Developing a Working Model for Supervised Consumption Services in a Canadian Acute Care Facility - Catherine Deschênes**

**Co-authors:** Kelsey Anne Speed, Jennifer Brouwer, Kathryn Dong, Elaine Hyshka

**Introduction/background:** In light of the current opioid crisis, illegal substance use is a growing concern in Canada. Supervised consumption services (SCS) are a public health strategy that has been shown to minimize harm and mortality due to substance use; since 2003, 30 SCS have opened across Canada. In April 2018, North America's first in-hospital SCS opened at the Royal Alexandra Hospital (RAH) in Edmonton to meet the needs of patients who use drugs (PWUD). Literature exploring SCS in acute care settings is scarce, which is why we set out to examine front-line staff's perspectives about the SCS implementation in order to optimize the service for both staff and patients.

**Methods:** We conducted 10 group interviews with 41 RAH front-line staff members from July to October 2017 employing a focused ethnographic approach. The semi-structured interviews explored participants' perspectives on harm reduction, SCS, and potential catalysts and barriers to implementation. The interviews were recorded, professionally transcribed and the transcripts were managed and analyzed in ATLAS.ti. An inductive content analysis method was used to generate themes.

**Results and analysis:** Most staff members interviewed were open to the imminent SCS implementation, but some expressed reservations. Almost all participants felt that better clinical training and education about the psychosocial roots of substance use were needed in order to challenge the current hospital culture vis-a-vis PWUD and make the SCS successful. Logistically, there was an emphasis on clear procedures and communication between the SCS and the rest of the units to maximize safety and SCS accessibility for staff and patients.

**Conclusions and implications for policy, practice or additional research:** Our findings suggest that RAH staff prioritize accessibility, safety, and better staff education as means to successfully implement SCS. Our preliminary results informed the development of the RAH site, and the present insights may be able to enhance the care of PWUD and inform SCS initiatives in other Canadian hospitals.

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**Patient-Centered Care for Addictions Treatment: A Scoping Review - Kirsten Marchand**

**Co-authors:** Scott Beaumont, Jordan Westfall, Scott MacDonald, Scott Harrison, David C. Marsh, Martin T. Schechter, Eugenia Oviedo-Joekes

**Introduction/background:** Despite ongoing efforts aimed to improve treatment engagement for people with problematic substance use, evidence shows modest rates of treatment engagement and client-perceived barriers to care. Patient-centered care (PCC) is one widely recognized approach that may strengthen the responsiveness of addiction treatment to client's unique needs. PCC includes four core dimensions: a holistic and individualized focus to care, shared decision-making and enhanced therapeutic relationships.

**Methods:** This scoping review aimed to explore how PCC has been implemented, defined and measured among people with problematic substance use. Following the iterative stages of the Arksey and O'Malley framework, empirical (from Medline, Embase, PsycINFO, CINAHL and ISI Web of Science) and grey literature references were eligible if they focused on people with problematic substance use and implemented and/or measured PCC. Two reviewers independently screened the title/abstract and full-texts of references. Descriptive and content thematic analyses were performed on extracted data.

**Results and analysis:** One-hundred and forty-five references met inclusion from the 2951 de-duplicated references screened. Therapeutic alliance was the most frequent dimension of PCC (69%); consistently defined by trust, empathy and non-judgment. When quantitatively measured, therapeutic alliance was positively associated with treatment engagement and substance use outcomes. Shared decision-making was identified in 47 (32%) references and included clinical techniques aiming to increase client autonomy in treatment planning.

**Conclusions and implications for policy, practice or additional research:** Enhancing the therapeutic alliance between clients and addictions treatment providers may improve engagement and substance use outcomes. Strategies for increasing shared decision-making warrant further investigation given its potential to improve in-treatment processes (e.g., client-provider communications, client empowerment). This review contributes evidence that informs an operationalization of PCC for people with problematic substance use. Such operationalization is essential to establish clinical tools and strategies that can support the implementation and testing of PCC.

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**Policy and Programming Responses to the Opioid Crisis at Canadian Post-Secondary Institutions - Layal Mounzer**

**Co-authors:** Brieanne Olibris, Amir Attaran

**Introduction/problem definition that demonstrates the need for a policy change:** In 2016, the Public Health Agency of Canada attributed approximately 8 deaths/day and 16 hospitalizations/day to the emerging opioid crisis. Significant increases in overdose and death, spanning geopolitical boundaries and socioeconomic status, have resulted in a national public health crisis. The study aims to create a clear understanding of the scope of response to opioid use at Canadian post-secondary institutions.

**Research Methods:** An environmental scan of policy and programming decisions made in response to the opioid crisis at Canada's 96 universities was initiated with a review of publicly available documents and local and national media. Each of the 96 universities were invited to elaborate on their institution's decisions and response in an online survey. A qualitative content analysis and policy analysis of the document review and survey responses was conducted.

**Results and analysis:** The response to the opioid crisis by Canadian universities ranges from no response to the development and implementation of opioid-specific policies and harm reduction programming. Small, medium and large universities, as well as rural and urban universities, are compared in terms of the nature and timing of their response. A number of best practices - including explicit inclusion of opioid use and response in drugs and alcohol policies, extending the range of applicability of university policies to university-sanctioned or affiliated events (not just on-campus events), explicitly identifying who is responsible for delivering harm-reduction programming, and ensuring that students can access naloxone in a safe and judgement-free space - as well as areas for improvement have been identified.

**Recommendations and implications for policy, practice or additional research:** Identifying implemented best practices will inform and support the development of an effective response to the opioid crisis at Canadian and American post-secondary institutions. Post-secondary institutions are advised to adopt best practices in the development and implementation of policies in a timely manner.

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**Poly-substance use trends among COMPASS secondary school students from 2013-2017 - Gillian Williams**

**Co-authors:** Alex Zuckermann, Kate Battista, Scott T. Leatherdale

**Introduction/background:** Poly-substance use refers to the current use of two or more substances and is an understudied phenomenon among youth. While current estimates are unavailable, 2008 data found that 12% of Canadian students in grades 7-12 were current poly-substance users. The objective of this research was to examine poly-substance use trends among Canadian high school students over the past five years.

**Methods:** This research used data from the COMPASS study, a large prospective cohort study that collects behavioural health data from 60,000 students per year attending secondary schools (grades 9-12) in Ontario, Quebec, Alberta, British Columbia, and Nunavut. Five years of data were used, starting in 2013. Students reported current (i.e., past 30-day) cigarette, e-cigarette, alcohol, and cannabis use. Poly-substance users were defined as students reporting current use of more than one substance. Rates of substance use and poly-substance use were determined each year.

**Results and analysis:** Rates of poly-substance use have increased from 2013 to 2017: 19% of students reported current use of two or more substances in 2013 compared to 23% in 2017. Rates of non-use have remained stable (58% in 2017) and students reporting use of only one substance decreased from 24% to 19% over this time. This indicates that the proportion of students using substances is staying the same, but more students are engaging in poly-substance use. These changes seem to have been driven by increased use of e-cigarettes: 8% of students reported current use in 2013 and this number increased to 18% by 2017.

**Conclusions and implications for policy, practice or additional research:** Poly-substance use is on the rise among Canadian high school students and this trend appears to be driven by increases in e-cigarette use. Future policy, practice, and research should acknowledge this growing health behaviour among secondary school students.

**ORAL PRESENTATION 12**

| Tuesday 30 April | 14:00-15:30 | Room 210 |

**An analysis of mental health recovery discourse using cultural cognition theory - Ioana-Smarandita Arbone**

**Co-auhors:** Alireza Jamshidi, Jessica Wu, Srimanthy Srikugan, Yasmin Fouad, Mustafa Ahmed-Fouad, Dorina Arbone, Jacob Zolotenko

**Introduction/background:** This study aims to understand the ideological underpinnings of mental health recovery (MHR) through the use of cultural cognition theory (CCT). Understanding MHR is an important endeavor for the field of public health. CCT (Kahan, 2008) posits that conflicts in policies arise due to groups holding different values which are varied from individualist to communitarian values, and from hierarchical to egalitarian.

**Methods:** PsycINFO,WebofScience and SCOPUS databases were searched with the keyword "mental health recovery". A total of 1753 articles resulted with no year limitation. Afterwards, 10 articles were randomly selected for the following time periods: (i) 1960-1999; (ii) 2000-2004; (iii) 2005-2009; (iv) 2010; (v) 2011; (vi) 2012; (v) 2013; (vi) 2014; (vii) 2015; (viii) 2016; (ix) 2017; (x) 2018. After reading the papers, 87 relevant articles were categorized based on the types of values these articles adhere to (communitarian/individualist, hierarchical/egalitarian) as well as on the epistemological stance of the author (objective versus subjective).Our hypothesis stated that we would find two types of values: objective/hierarchical/individualist versus subjective/egalitarian/communitarian.

**Results and analysis:** Articles are mostly subjective (64.7%) and individualistic (72.4%) as opposed to objective (35.3%) and communitarian (27.6%).Through a chi-square test, we found that the hierarchism was related to individualism (p=.017), which supports our hypothesis from the beginning.

**Conclusions and implications for policy, practice or additional research:** The results found in this study support the assertion of CCT regarding different values being at play in policy discourse on mental health. It seems that articles on the hierarchical/individualist side conflict with articles on the egalitarian/communitarian side. Given that the discourse on MHR is highly individualistic (p=.000), we recommend a focus on communitarian research. For example, communitarian research would focus on the perceptions of a certain community. For practice and policy implications, we recommend referral to community-based resources and housing programs.

**Forum Theatre for Indigenous Youth Suicide Prevention - Cindy Jardine**

**Co-author:** Laurie-Ann Lines

**Introduction/background:** Tragically, suicide accounts for over a third of all deaths among Indigenous youth in Canada and is currently considered a major health crisis. High rates of youth suicide are understood to be reflective of the impacts of cultural disruptions linked to colonization. Forum Theatre was investigated as a primary suicide prevention strategy with Indigenous youth in First Nations and Métis communities. A form of Theatre of the Oppressed, Forum Theatre involves communities in identifying issues of concern, analyzing current conditions and causes of a situation, and collectively exploring solutions for change. It is distinguished by the intensive workshopping process leading to play development, and the interactive participation of the audience, who function as 'spectactors' in exploring alternative outcomes to the play.

**Methods:** Forum Theatre was introduced to four Indigenous communities representing a range of identities, geographies and governance systems. Activities included community meetings to gauge interest, training sessions for community members to actively participate in implementation, and pilot studies with youth. Evaluation methods included short surveys, reflective sharing circles, participant auto-ethnographies and/or researcher observations.

**Results and analysis:** Participants and researchers found Forum Theatre to be a powerful means of: bringing people together and building relationships; building confidence and leadership skills; establishing a trusting community environment; and raising and working through issues in a safe and supported environment. They also agreed that the workshopping process is as important as the play.

**Conclusions and implications for policy, practice or additional research:** Forum Theatre represents a unique form of intervention that appears to be particularly well-suited for involving Indigenous youth in a critical exploration of the risk factors and systems that shape youth suicide, and working with community members to develop concrete strategies for improved mental wellness in youth. It also offers a culturally responsive means to explore youth mental wellness through community contexts, and to use intergenerational knowledge and cultural practices to effect change.

**What Does the Literature Say About Social Disparities in School-Based Health Promotion Programming? - Jodi Kalubi**

**Co-authors:** Teodora Riglea, Hartley Dutczak, Geetanjali Datta, Nancy Hanusaik, Jennifer O'Loughlin

**Introduction/background:** The link between low socioeconomic status (SES), unhealthy lifestyle behaviours and chronic diseases is well established. Because all children and adolescents spend many hours each day in school, they have important potential to influence the development of healthy behaviours across SES. However, little is known about social disparities in school-based health promoting interventions (HPI). The objective of this scoping review was to provide an overview of published research on this topic.

**Methods:** A systematic search of the PubMed and Social Services Abstract databases was conducted. A total of 138 unique citations were identified. After independent screening by two authors (JK, TR), 12 studies published before July 2018 and pertaining to schools, HPI, and social disparities were retained. An additional 3 studies were identified and retained after hand-searching key journals. HPI were defined as interventions offered to all students during class hours, separately from the mandated curriculum. For each study, evidence on disparities in availability and outcomes of HPI was collected, as well as the role of HPI in increasing or reducing disparities.

**Results and analysis:** All articles provided evidence related to the effectiveness of HPI in schools. Three identified issues regarding stigma and participation when targeting at-risk students thus supporting universal HPI. Six reported reduced availability of HPI in low SES schools. Four reported an SES gradient in HPI effectiveness. Few evaluated whether HPIs reduced or increased health disparities, five identified this as an important knowledge gap. Still, the majority of studies maintained that HPI have potential to narrow disparities.

**Conclusions and implications for policy, practice or additional research:** The literature on this topic is not well developed. Impact evaluation of school-based HPI rarely assesses their effect on social disparities. More research is needed to build an evidence-base in this realm and help inform decision makers. Specifically, data are needed on whether HPI benefit all children and whether they reduce SES gaps.

**Physical literacy enriched communities: A home, school, and community approach to improving physical literacy - Natalie Houser**

**Co-authors:** Marta Erlandson, Marnie Sinclair, Louise Humbert

**Introduction/program need and objectives:** Despite the well-recognized health benefits associated with physical activity, it is well known that Canadian children and youth are not sufficiently active, and one suggested way to enhance physical activity participation is through the development of physical literacy. Physical literacy aligns with a health approach as it is focused on the individual, it fluctuates, and it must be continuously pursued, similar to what is seen with various other health indicators. Additionally, it is suggested that those meeting physical activity and sedentary behaviour guidelines have higher physical literacy, thus influencing a healthier lifestyle. This presentation will share the current experiences of a team focused on creating a physical literacy enriched community in a small city in Saskatchewan. Our goal is for community leaders and stakeholders

in families, schools and the community to understand and embrace the importance of increasing the physical literacy and physical activity of children and youth.

**Program methods, activities and evaluation:** Together with Saskatchewan in motion and the Partners for Physical Literacy (with representation from Sport, Education, Recreation and Research) this project uses as community action process to weave physical literacy into a community's very essence. The Partners for Physical Literacy work collaboratively with provincial, regional, community and school leaders to support community action to enhance the physical literacy and increase physical activity opportunities of children and youth and their families through communication, mobilization, leader support and evaluation. Using Saskatchewan in motion's 5 step process that seeks to uncover and use the strengths within communities as a means for sustainable behavior change.

**Program results or outcomes:** This presentation will share our initial findings including the results of a community survey, focus groups, planning sessions and the assessment of approximately 700 children in the community. In addition, the joys and challenges of using a community action process will be discussed.

**Recommendations and implications for practice or additional research:** This home, school, and community approach will share a way in which physical activity and physical literacy can be enhanced by taking a shared responsibility approach. Through this approach, we are hopeful to enhance physical activity and physical literacy experiences, and in the process improving associated health benefits through improved participation rates.

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**Anxiety and Mood Disorders among Immigrants to Canada: Sociodemographic, Socioeconomic, and Immigration Characteristics - Tasneem Khan**

**Co-authors:** Farooq Naeem, Martin Cooke

**Introduction/background:** As of 2016, 21.9 percent of Canadians were immigrants, and this population continues to grow and change. International studies have found migration and associated processes to be risks for psychiatric illness including Mood Disorders (MD), and Anxiety Disorders (AD). These illnesses are potentially devastating to patients and their families and costly to society. In Canada, 3.5 million people annually use health services for MD and AD. Although it is an emerging area, there are limited socio-epidemiological studies of mental illness, particularly MD and AD, that consider the diversity of the immigrant population in Canada.

**Methods:** Statistics Canada's confidential masterfile of the Canadian Community Health Survey 2015-2016, which consists of self-reports on MDs and ADs was accessed at the Southwestern Ontario Research Data Centre. Binary multivariable logistic regression models were used to examine sociodemographic, socioeconomic, and immigration characteristics (country of origin, language spoken at home, time in Canada, and immigration age) as predictors of MD and AD.

**Results and analysis:** Multivariable models show immigrants to be at significantly lower risk for MD and AD compared to non-immigrants. Risk increases with time in Canada for both illnesses among immigrants, with different effects for both AD and MD. Females compared to males were at higher odds of illness among both immigrants and non-immigrants. Among immigrants, those in low income compared to middle income had higher odds of both illnesses, whereas being married, identifying with 'non-white' race/culture, speaking languages other than English was protective against illness.

**Conclusions and implications for policy, practice or additional research:** Study results provide useful insight for understanding immigration risks for mental health and suggest the use of new data addressing immigration class and diagnostic indicators of illness. Gender and income are potent factors for MD and AD outcomes among immigrants. There is also evidence of a "transition effect", whereby immigrants' mental health deteriorates with time in Canada.

## ORAL PRESENTATION 13

| Wednesday 1 May | 10:45-12:15 | Room 202 |
|---|---|---|

**Comparison of self-reported and accelerometer-measured physical activity in Canadian youth - Rachel C Colley**

**Co-authors:** Gregory Butler, Didier Garriguet, Stephanie A Prince, Karen C Roberts

**Introduction/background:** Correlation and agreement between self-reported and accelerometer-measured physical activity (PA) is generally low. The objective of this study is to compare estimates of PA from a newly developed Canadian questionnaire with those obtained using accelerometers in 12 to 17 year olds.

**Methods:** PA was self-reported by domain (transportation, recreation, school, occupational/household) as part of the new Physical Activity Youth Questionnaire (PAYQ) in the Canadian Health Measures Survey (CHMS; 2014-2015; n=464). The CHMS also collected PA data using the Actical accelerometer. Descriptive statistics, correlation and mean difference analyses were used to compare and contrast self-reported and accelerometer-measured variables.

**Results and analysis:** The sum of recreational and school PA was the PAYQ-derived variable that was most closely aligned with accelerometer-measured moderate-to-vigorous intensity PA (MVPA) (48.1 versus 48.6 minutes per day) and percentage meeting the PA guidelines (PAG) (32.7% versus 27.2%). According to the PAYQ, Canadian youth reported an average of 65.8 minutes per day of PA from all domains including: recreation (30.3 minutes per day); transportation (14.7 minutes per day); school (25.0 minutes per day); household/occupation (3.0 minutes per day). Self-reported and accelerometer-measured PA estimates were poorly correlated (R ≤ 0.21).

**Conclusions and implications for policy, practice or additional research:** Population-level estimates of PA and percentage meeting the PAG were well-aligned between the Actical and the PAYQ; however, large differences were evident at the individual level. The results of the present study add to a growing body of literature that suggests accelerometer-measured and self-reported PA are assessing different aspects of the same behaviour and that caution should be applied when using data from these two methods interchangeably.

**Physical Activity  as a mental health intervention - Mind Fit activates teens - Samantha Hartley-Folz**

**Co-authors:** Sarah Blackmore, Anuschka Naidoo

**Introduction/program need and objectives:** Mind Fit is a prevention/early intervention program for teens with mild to moderate symptoms of depression. It uses a non-stigmatizing community environment - YMCAs and other community-based facilities to provide physical activity and psychoeducation to improve low mood and anxiety.

**Program methods, activities and evaluation:** Mind Fit is adapted from an evidence-based program for adults. The program recruits teens through schools, counsellors, social media and parents, reaching out to teens that are not engaging in community-based physical activity. The program was piloted in Vancouver in 2017, and has since been expanded to 10 additional sites across BC. Evaluation includes pre and post program assessments and process evaluation. The initiative is supported by the BC Physical Activity Strategy Action Plan co-led by the BC Ministry of Health and the BC Alliance for Healthy Living.

**Program results or outcomes:** Pre-assessments show that program participants have very low physical activity levels on joining the program. After 8 weeks of 2 hour sessions (1 hour physical activity and 1 hour group mental wellness visit), teens are demonstrating increased interest and capacity for physical activity and minor improvements in physical activity levels. Promising increases in social and school connectedness have been identified by post assessments. The program is funded until March 2020 with external evaluation supported by UBC's Guy Faulkner and Erica Lau.

**Recommendations and implications for practice or additional research:** Mind Fit shows promise as a means of reaching a particularly vulnerable teen population, those with mild to moderate depression. The program is low barrier - it does not require a doctor's referral and is provided at no cost to participants. Participants access to physical activity is further supported by free gym memberships and increased comfort accessing community facilities. Further evaluation will demonstrate whether increased confidence and capacity in teens will translate to increased physical activity over time.

**Student Wellness Initative Towards Community Health (SWITCH): A student-led public health approach to health and wellness in Saskatoon, Saskachewan - Indiana Best**

**Co-author:** Karen Cederwall

**Introduction/program need and objectives:** Statistics Canada designated Saskatoon's core residential communities as having the highest rate of households in Saskatoon living below low income. These residents are disproportionately impacted negatively by all Social Determinants of Health (SDoH), putting them at a greater risk of developing health problems. SWITCH aims to address the SDoH through delivering equitable access of outreach and clinical services to improve the health, education, and skills of clients while working to augment the training of future professionals.

**Program methods, activities and evaluation:** SWITCH operates out of an existing community health clinic and offers clinical services from an interdisciplinary team of healthcare and social welfare disciplines. Professional mentors work collaboratively with post-secondary students to assess patients in a non-judgmental environment to provide a holistic, patient-centered healthcare plan. Outreach services offered each shift include a nutritious meal; educational programming that focuses on health literacy and empowering clients to achieve positive and sustainable health outcomes; and child minding. Child minding is provided so individuals can access the services SWITCH offers, with bus tickets given so individuals/families can access transportation to and from SWITCH. Overall, SWITCH has the opportunity to offer a range of primary/complimentary health services in a timely, accessible manner that addresses the complex needs of our community. Numbers of individuals who utilize our services and the specific services utilized are recorded each shift to continually evaluate services, ensuring they are centered around community needs.

**Program results or outcomes:** In 2017, SWITCH serviced 8,043 visits from core community residents who accessed interdisciplinary services. Each SWITCH shift addresses SDoH from a holistic approach, ultimately fulfilling public health competencies of providing "population-focused, equitable, and client-centred" services. Volunteers and mentors benefit from learning in a collaborative environment and developing strong interpersonal skills with community members.

**Recommendations and implications for practice or additional research:** Showcasing SWITCH will highlight the potential of student-led public health approaches to health and wellness in the community.

**How Can Comprehensive School Health Improve Student Achievement? - Katherine Eberl Kelly**

**Co-author:** Susan Hornby

**Introduction/problem definition that demonstrates the need for a policy change:** Educational settings have long been associated with health promotion activities. Yet, while educators are strong advocates for student health and well-being, these outcomes are not directly related to academic achievement. The Pan-Canadian Joint Consortium for School Health (JCSH) together with the Social Program Evaluation Group (SPEG) at Queen's recognized that healthy students are better learners but evidence showing this was lacking.

**Research Methods:** The JCSH commissioned and worked with Dr. John Freeman and his team at Queen's University to develop a Core Indicators Model (CIM) to show the effectiveness of comprehensive school health (CSH) in building a culture of well-being and achievement in the school setting and in the lives of students. The initial framework in 2013 and the 2016 revision were developed out of a review of peer-reviewed and grey

literature, interviews with Health and Education experts across the country, and collaboration with a JCSH Advisory Committee.

**Results and analysis:** A framework was developed, with two versions – table and circular ecological – to provide direction on how this work can support school health and student mental well-being. This work will support school leaders in the following four areas: resources to inform data that will, in turn, enhance classroom teaching and learning; determine the need for school and district policies and practices related to CSH; establish strategies for supportive school environments; and identify partnerships and services related to CSH that benefit student achievement.

**Recommendations and implications for policy, practice or additional research:** Student success is defined by more than academic outcomes. In this presentation, we show that a whole-child, whole-school approach to student health and well-being impacts student physical and mental health, school engagement, improved social and emotional outcomes and, yes, academic results.

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**Identifying risk and protective factors for anxiety impacting academic performance in post-secondary students - Konrad Lisnyj**

**Co-authors:** Regan Russell, Andrew Papadopoulos

**Introduction/background:** Anxiety rates have risen greatly in recent years, specifically in post-secondary student populations. Extensive research has identified risk and protective factors of anxiety in this population, as well as the factors impacting academic performance individually. Comparatively, fewer studies have examined the interrelationship of the risk and protective factors of academic anxiety, to which this study addresses this gap.

**Methods:** The American College Health Association collects information on post-secondary students' habits, behaviours, and perceptions of various health topics, including stress through the National College Health Assessment (NCHA) survey. This cross-sectional observational study utilized the 2016 NCHA survey data from 1,864 respondents at a post-secondary institution in southwestern Ontario. Univariable and multiple logistic regression analyses were performed to measure the association between various risk and protective factors of anxiety and its implications on the academic performance of students at the 5% significance level.

**Results and analysis:** Ten variables were significant at the univariable level: being diagnosed with or receiving treatment for anxiety and self-reporting one's general health as below average were the two greatest risk factors, while managing daily responsibilities and contributing to society were the two greatest protective factors. The multivariable model yielded nine significant factors: being diagnosed with/treated for anxiety and being interested in receiving information on depression/anxiety were the two greatest risk factors, whereas managing daily responsibilities and identifying as male were the two greatest protective factors.

**Conclusions and implications for policy, practice or additional research:** This study identified several factors affecting anxiety that impacts academic performance. Wellness interventions should integrate a proactive approach that diminish risk factors and promote protective factors to alleviate the burden of academic anxiety in post-secondary students.

## ORAL PRESENTATION 14

| Wednesday 1 May | 10:45-12:15 | Room 204 |
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**Navigating the Complexity of Population Health: Using Theory of Change to Support Program Planning and Evaluation within Public Health - Stephanie Gee**

**Co-author:** Nancy Ramuscak

**Introduction/program need and objectives:** Within a broad public health mandate, health units make strategic program decisions to address the health needs of the local population. Health is complex, influenced by an interaction of biological, behavioural, social, cultural, and environmental factors. Impacting the health of a population requires targeting multiple risk and protective factors with a program of interventions. A Theory of Change (TOC) is an organization's theory of how and why complex change will occur as a result of its work. Region of Peel–Public Health (ROP–PH) is piloting the use of TOC to support program planning and evaluation aimed at achieving population health outcomes.

**Program methods, activities and evaluation:** Developing a TOC involves critical reflection about what is required to bring about change, over time, within a particular context. Beginning with an ultimate outcome, the process backward maps all the necessary and sufficient preconditions/outcomes to create a pathway of change. Interventions and indicators are mapped onto the outcomes to identify the work needed to effect change and measure success. The end product is a narrative and visual representation of the causal framework, which can be used for strategic and program planning; monitoring and evaluation; and communication.

**Program results or outcomes:** ROP–PH is piloting a facilitated TOC development process with cross-divisional teams within three areas of public health practice: tobacco, influenza, and chronic disease prevention. This presentation will describe the process and discuss the benefits, challenges, and lessons learned from implementing TOC within public health.

**Recommendations and implications for practice or additional research:** A TOC is an organization's impact story. Applied to public health program planning and evaluation, TOC supports professionals to identify and question assumptions about their work and deepen their understanding of how and why public health outcomes contribute to population health. Researching the utilization of TOC within public health would contribute to understanding how to foster evaluative thinking and build evaluation capacity among public health professionals.

**Public Health Digitization in Nova Scotia - Latifa Mnyusiwalla**

**Co-author:** Gertrude Oliver

**Introduction/program need and objectives:** Public health digitization is a silent stream in the eHealth landscape where acute and primary care implementations dominate the conversation. Immunization registries and communicable disease management systems are key to modernizing public health practice, reporting and surveillance, and protecting and enabling a healthy population. This presentation aims to share Nova Scotia's journey in becoming one of the only jurisdictions in Canada, and globally, to have a single, seamless system for the management of immunization, vaccine inventory, and communicable disease data.

**Program methods, activities and evaluation:** In January 2017, Nova Scotia embarked on an ambitious project to configure and deploy the Inventory, Immunization, and Communicable Disease/Outbreak modules of a comprehensive public health information system (Panorama) over a 23-month period. A consulting firm partnered with the system vendor to serve as the implementation team. Working Groups (WGs) made up of public health nurses, medical officers of health, administrative staff, epidemiologists and managers were established to support the implementation and drive decisions.

**Program results or outcomes:** At present, the Inventory and Immunizations modules have been deployed, with the Communicable Disease/Outbreak module to follow at the end of 2018. The project is on track within the original schedule, and to date, is the fastest deployment of a provincial public health system in Canada. The transition from a primarily paper-based system to an electronic system requires business transformation. Critical success factors include strong support from all levels of the Public Health system; a well-experienced, multi-disciplinary implementation team; and empowerment of end-users to make recommendations and develop procedures that work well with their collective business. Engaging end-users early through WGs fostered ownership of the project. Decision-fatigue, time-pressures, and not fully understanding implications of decisions were identified by WG members as risks.

**Recommendations and implications for practice or additional research:** Engagement of practitioners from all levels has allowed for transformation of business practices of the Nova Scotia public health system, and to take full advantage of Panorama in improving information access, sharing, surveillance, reporting, and program evaluation.

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### The Health Belief Model in HPV Vaccine Literature: Focus on Parents in North America - Ioana-Smarandita Arbone

**Co-authors:** Christian Garcia, Dorina Arbone

**Introduction/background:** Human papillomavirus (HPV) is the most common sexually transmitted infection (STI) in Canada and not only (Government of Canada, 2017). However, there are HPV vaccines available, but for the best results, they need to be administered before sexual debut or before possible infection with HPV (Government of Canada, 2017). Because of this, parents of teenagers play a crucial role in decisions about HPV vaccination and they may be the main reason behind the current low HPV vaccination uptake (Patel & Berenson, 2013). Using the health belief model (HBM) as a theoretical framework, this scoping review focuses on North American parents' perceptions of the HPV vaccine. The choice of HBM is based on its common use in health behaviour literature (Glanz, Rimer, Viswanath, & 2008) and its pertinence to HPV vaccine behaviours (Radisic et al., 2017; Reiter et al., 2009).

**Methods:** Interdisciplinary databases SCOPUS and WebofScience were searched using the keyworkds "HPV vaccine" and "HBM". This resulted in 98 studies. After reading the articles and selecting only those that focused on parents from North America, and that explicitly used HBM, 13 articles were left.

**Results and analysis:** We found that 1) the safety of vaccine is the primary reason for not vaccinaying; 2) parents prefer to vaccinate their children as close to sexual debut as possible, and 3) anticipated regret and recommendation to use the HPV vaccine by the physicians show significant associations.

**Conclusions and implications for policy, practice or additional research:** We suggest that educational campaigns, which should be tailored to different minority groups, could impact positively upon the parents knowledge about the safety of the vaccine. HBM should be used as a theoretical framework to guide HPV vaccine-related research, along with the constructs of anticipated regret and recommendation. Future research should address some limitations in the literature such as lack of research on minority groups and lack of longitudinal studies.

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### Vaccinating Pregnant Women: Are Women's Healthcare Providers Hesitant? - Courtney R. Green

**Co-authors:** Kyla Kaminsky, Ève Dubé, Jocelynn Cook

**Introduction/background:** Maternal vaccination coverage rates are less than optimal, despite the significant positive impact on outcomes for mothers and their babies. Women's healthcare providers comprise the first point of contact for women seeking antenatal care and strongly influence a women's decision to receive vaccinations. With over 390,000 births in Canada a year, a small increase in vaccination rates could have a

significant impact. The main objective was to determine current knowledge, beliefs, attitudes and practices of women's healthcare providers related to vaccination in pregnancy.

**Methods:** An online survey was developed by an expert committee including representatives from partner associations and informed by a literature review. Participants were recruited via partner membership lists. All data sets were anonymous.

**Results and analysis:** A total of 1,173 responses were collected and analyzed using descriptive statistics. Fifty-nine percent of respondents reported administering vaccines in their practice – most commonly the influenza vaccine (84%). The top reasons for not administering vaccines were: "outside scope of practice" (40%); "no reliable access" (31%); "low volume of patients" (25%); and "lack of staff" (24%). For those that did not administer vaccines, 34% referred them elsewhere. Sixty percent of respondents reported that they administered vaccines to pregnant women; 67% recommended the influenza vaccine, while 23% recommended the pertussis vaccine. Only 27% of respondents reported receiving information on pertussis vaccination during pregnancy in the past 12 months.

**Conclusions and implications for policy, practice or additional research:** These data indicate that most women's healthcare providers are supportive of vaccination during pregnancy; however, they lack information about its importance and safety. Specific training around pertussis vaccination is needed. Changes in immunization practices can reduce the number of cases of maternal and fetal morbidity and mortality related to vaccine-preventable illnesses leading to potential cost savings to our healthcare system.

**The Challenges and Needs of Immunization Program Managers to Improve Vaccine Acceptance and Uptake - Chandni Sondagar**

**Introduction/background:** While Immunization programs in Canada have successfully reduced the prevalence of several infectious diseases, challenges to improving vaccine coverage remain.

To better understand the challenges immunization program/promotional managers (IPM) face in improving vaccine acceptance and uptake (VAU), the Canadian Public Health Association 1) conducted a series of consultations with experts from across Canada and 2) performed an environmental scan to assess the number of resources available to support the needs of IPM. Findings from both the consultations and environmental scan identified several gaps, challenges, and areas where additional support and development is needed.

**Methods:** A list of Canadian experts whose roles included the planning, development, implementation and promotion of immunization programs were identified and invited to participate in either a 45-60 min semi-structured key informant (KI) phone interview or a half-day focus group (FG) consultation. Responses were categorized into major themes and key search terms were developed to guide an environmental scan for resources relevant to the Canadian context in grey literature. Search results were collected and summarized for review against set inclusion/exclusion criteria.

**Results and analysis:** A total of 13 KI interviews and 6 FG consultations (between 6-14 participants) were held. Results were analyzed and categorized into major themes: challenges in seeking and accessing information, gaps and challenges in improving VAU, and emerging issues in immunization. The environmental scan yielded a total of 793 resources with 553 resources meeting inclusion criteria. Review of resources highlighted several areas where further resource development is needed, including strategies and tools to support and operationalize evidence to action, evaluations for VAU interventions and campaigns, and engagement strategies.

**Conclusions and implications for policy, practice or additional research:** Findings from the consultation and environmental scan bring attention to resource gaps, complex challenges and varying needs of IPM. The results of these activities will be important in understanding areas where further focus and development are needed to support IPM towards achieving optimal VAU.

**ORAL PRESENTATION 15**

| Wednesday 1 May | 10:45-12:15 | Room 205 |
|---|---|---|

**Anti-racism initiatives in health care settings: A scoping review - Nadha Hassen**

**Co-authors:** Julia Rackal, Aisha Lofters, Andrew Pinto, Sinit Michael, Aine Workentin

**Introduction/background:** The Racism and Health Working Group at a Toronto Academic Family Health Team conducted a scoping review to identify anti-racism interventions in health care settings. An objective is to address racism, as a social determinant of health (SDOH), and improve the health and wellbeing of patients, trainees and staff.

**Methods:** Several databases were searched including MEDLINE, CINAHL, the Cochrane Daabases, EMBASE, Scopus, PsycINFO. We seek to answer: What are the policies, programs and quality improvement initiatives on addressing racism in health care organizations? Inclusion criteria: an anti-racism intervention, in a health care setting with a focus on outpatients or providers to outpatients. An anti-racism initiative is an "action-oriented, educational and political strategy for systemic and political change that addresses issues of racism and interlocking systems of social oppression." A grey literature search of relevant websites and consultation with experts ensured other relevant reports were included.

**Results and analysis:** 3587 citations were retrieved for title review and 843 were included for subsequent abstract review. Preliminary results identify a range of anti-racism initiatives and strategies in health care institutions including: organizational change (e.g. leadership buy-in), appropriate development and training for staff and students (e.g. educational workshops and curricula), policies and practices (e.g. racial equity hiring policies). The literature tends to use language such as 'cultural competency' and 'inclusivity' rather than 'anti-racism' which could be problematic. A key challenge identified was creating sustainable change. Additional analysis will include a more extensive mapping of the included articles.

**Conclusions and implications for policy, practice or additional research:** This research is critical to synthesize the existing literature on anti-racism interventions in health care settings and will inform next steps. By mapping existing interventions we can elicit lessons learned in other institutions to take evidence-informed action. These findings have practical implications for other health care and public health institutions interested in intervening on racism as a SDOH.

**Incorporating Indigenous Health, Cultural Safety Training and Anti-Racism Praxis into MPH Core Curricula - Alexandra Kent**

**Co-author:** Malcolm Steinberg

**Introduction/program need and objectives:** The Truth and Reconciliation Commission of Canada (TRC) Calls to Action include integrating Indigenous perspectives into higher education curricula and programming, and preparing culturally competent and culturally safe health practitioners through institutional and faculty-level commitments. Furthermore, these efforts respond to widely-supported Canadian public health core competencies that include interrracting effectively with individuals, groups and communities from diverse socio-cultural backgrounds. This oral presentation will share insights from our experience incorporating Indigenous health content, cultural safety training and anti-racism praxis into Simon Fraser University's (SFU) Faculty of Health Sciences Master of Public Health (MPH) core curriculum.

**Program methods, activities and evaluation:** This presentation will briefly describe the structure and approach of this training and situate it within developing theoretical considerations for anti-oppressive education. We will share insights from classroom observations spanning four cohorts of MPH students, complemented with thematic analsyis of students' reflections collected after their participation in the most recent 2018 adaptation of the training. Furthermore, we will discuss plans to extend evaluation of the learning objectives and outcomes

of this training in the context of students' MPH practicum placements. This forthcoming evaluation will employ interviews with practicum preceptors and focus group discussions with students following their practicum placements, as an early assessment of the value, relevance and potential contribution of this training towards students' future professional practice.

**Program results or outcomes:** Evaluation results of this training will serve to contextualize the uptake and implementation of TRC Calls to Action within MPH programming. Furthermore, results will inform the 2007 Canadian MPH core competencies that were developed prior to the TRC initiative, which lack focused statements concerning cultural safety and anti-racism praxis.

**Recommendations and implications for practice or additional research:** This presentation will conclude with recommendations to address the ongoing learning needs of public health trainees, and further extend future research and program evaluation of cultural safety and anti-racism training to assessments of patient experiences of public health services.

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**Unmet health needs and discrimination by healthcare providers among an Indigenous population in Toronto, Canada - George Kitching**

**Co-authors:** Michelle Firestone, Berit Schei, Sara Wolfe, Cheryllee Bourgeois, Patricia O'Campo, Michael Rotondi, Rosane Nisenbaum, Raglan Maddox, Janet Smylie

**Introduction/background:** Inequalities between Indigenous and non-Indigenous people in Canada persist. Despite the growth of the Indigenous population in urban settings, information on their health is scarce. The objective of this study is to assess the association between experience of discrimination by a healthcare provider and having unmet health needs within the Indigenous population of Toronto.

**Methods:** The Our Health Counts Toronto (OHCT) database was generated using respondent-driven sampling (RDS) to recruit 917 self-identified Indigenous adults to complete a comprehensive health assessment survey with assistance of a trained interviewer. This cross-sectional study draws on information from 836 OHCT participants with responses to study variables. Odds ratios and 95% confidence intervals were estimated to examine the relationship between lifetime experience of discrimination by a healthcare provider and having an unmet health need in the 12 months prior to the study. We also conducted stratified analysis to understand how information on access to primary care and sociodemographic factors, including: Indigenous identity; gender; age; education; employment; food security; mobility; income; and access to a regular healthcare provider; influenced this relationship.

**Results and analysis:** The RDS-adjusted prevalence estimates of unmet health needs and discrimination by a healthcare provider in the Indigenous population in Toronto were 27.3% (19.1-35.5 95% C.I.) and 28.5% (20.4-36.5 95%C.I.), respectively. Discrimination by a healthcare provider was positively associated with unmet health needs, OR 3.1 (1.3-7.3 95%C.I.).

**Conclusions and implications for policy, practice or additional research:** The strong community partnership integral to the Our Health Counts study, along with the use of RDS methodology, has contributed to generating important information on determinants of health care access for the Indigenous population living in Canada's largest city. Our results contribute to the knowledge of the impact of discrimination in healthcare settings among Indigenous people. This reinforces the need for healthcare providers to receive cultural safety training to address implicit bias affecting their provision of care.

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**Are health data co-operatives the next step for minority communities?: A scoping review - Iffat Naeem**

**Co-authors:** Tanvir Turin Chowdhury

**Introduction/background:** The Health data co-operative (HDC) model consists of a health data bank that enables its members to safely store, manage, and share their health-related data with stakeholders (e.g. research communities, commercial entities, and government bodies). Canada is facing a lack of immigrant health

data, that can benefit from a HDC structure. It is, then, imperative to scope the literature to understand the complexities of HDC at the national and international level. The objectives of this study is to understand: 1) the aspects of HDCs that are important to stakeholder; and 2) the factors that make HDCs either effective or in need of improvement. This scoping review will serve as an addition to an environmental scan of the HDC model to inform the next stages to develop a community based health data cooperative in immigrant communities.

**Methods:** We conducted a scoping review using the methodology outlined by Arksey and O'Malley to systematiclaly map the avilable literature on HDC models in Canada and abroad. Along with an academic database and grey literature search, an internet search was conducted.

**Results and analysis:** The database and grey literature search found 24 records and the internet search found 17. HDC was found to be a releltively new topic that is unexplored in Canada, where the majority of the studies stemmed from the US and Europe. The three major themes to consider in an HDC model include: 1) data flow infrastructure; 2) control over the data; 3) data security.

**Conclusions and implications for policy, practice or additional research:** This review provides a comprehensive mapping of the key aspects of the HDC model. The results of the study can contribute to the organizational efforts of less empowered or historically underserved communities in order to take control of their data to voice their motivations and needs.

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**Social disparities in the availability of school-based health promoting interventions in Québec - Teodora Riglea**

**Co-authors:** Hartley Dutczak, Jodi Kalubi, Nancy Hanusaik, Marie-Pierre Sylvestre, Geetanjali Datta, Jennifer O'Loughlin

**Introduction/background:** Reducing social disparities in risk behaviors in youth is a public health priority. Schools can influence health behaviors in all youth, regardless of socioeconomic status (SES), but it is not known if there are disparities in school-based health promoting interventions (HPI) or extra-curricular activities (ECA) across schools serving students of differing SES. Our objective is to determine if there are social disparities in the presence and/or types of HPI and ECA in Québec elementary and high schools.

**Methods:** We conducted a cross-sectional survey of school principals in 65 elementary and 42 high schools in Québec. Principals completed structured telephone interviews on the availability of HPI, ECA, and the adoption/ implementation process of HPI in their schools. HPI are supplementary to the Ministry-mandated curricula, but require student participation. ECA contribute to school life and student well-being, but are voluntary. Schools were classified according to Québec Ministry of Education deprivation indicators.

**Results and analysis:** Lower SES schools have fewer students and smaller student-to-teacher ratios. Compared to higher SES schools, relatively fewer lower and moderate SES schools offered mental health HPI (35%, 26% vs 57% in low, moderate and high SES schools, respectively) , but the difference was not statistically significant. Among statistically significant findings, compared to moderate and high SES schools, fewer lower SES schools reported availability of special interest clubs, competitive sports teams and free gym time. Finally, 32% of low SES offered tobacco control interventions, compared to 21% of moderate and 4% of high SES schools (p=0.043).

**Conclusions and implications for policy, practice or additional research:** Similar proportions of schools, regardless of SES, offer HPI and ECA. Overall a low proportion of schools offer tobacco control interventions. Our data document the current landscape of HPI and ECA in Québec public schools.

## ORAL PRESENTATION 16

| Wednesday 1 May | 10:45-12:15 | Room 206 |
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**Understanding inpatient participants in an incentive-based quit smoking program: Who persists in smoking? - Shireen Noble**

**Co-authors:** Kate Walker, Kerri Anne Mullen

**Introduction/program need and objectives:** The Ottawa Model for Smoking Cessation (OMSC) is an evidence-based program, implemented in hospitals across the country, to systematically identify, document, treat and follow-up with patients who smoke. In 2017, Ontario in-patients who received the OMSC were offered "Quit Cards", gift cards worth $300 to purchase nicotine replacement therapy. A follow-up survey was conducted by phone, 6 months after Quit Card receipt, to evaluate program outcomes.

**Program methods, activities and evaluation:** A random subsample of 150 inpatients from the Champlain Local Health Integration Network completed the 6-month follow-up survey. Responses of quitters and non-quitters were compared using a Pearson Chi-Square and independent samples t-tests.

**Program results or outcomes:** At six months post Quit Card receipt, the 7-day point prevalence quit rate was 47.7%. Of those not quit, 54 (40.9%) had attempted to quit but relapsed, with an average reduction of 6.8 cigarettes per day. A small group of participants (n=15) did not attempt to quit smoking at all. Compared to relapsers, the patients who had not attempted to quit were more likely to be male (p=0.028), and drink alcohol (p=0.017), while being less likely to rate quitting as important to them (p=0.003), to use quit smoking medications (p=0.002), or to suffer from depression (p=0.031). Non-quitters and relapsers did not differ significantly on variables such as baseline smoking characteristics (e.g., cigarettes per day, years smoked) or socio-demographic factors including income, education, disability status, or amount of the card redeemed.

**Recommendations and implications for practice or additional research:** These results suggest that non-quitters have a unique profile compared to quitters and may need to be helped to quit in other ways, in addition to gift cards. Future evaluations should seek to understand the ways in which non-quitters differ, in order to better assist those who are currently not quitting with the help of OMSC programs and gift cards.

**The SMAT - An initial evaluation of Quebec's Text to Quit Service - Christine Stich**

**Co-author:** Benoit Lasnier

**Introduction/background:** Quebec has over 1.3 million smokers (Institut de la Statistique du Québec, 2016). To help them in their efforts to quit, Quebec's smoking cessation strategy offers different types of services. These existing cessation interventions, however, do not easily reach young adults between 18 and 24 years of age though, a population in which we typically find a high proportion of smokers. Interventions that use text messaging to support smoking cessation have been demonstrated to be effective for adults (Spohr et al., 2015) and seem to be particularly suitable for youth and young adults (Skov-Ettrup et al., 2014). In Quebec, the Canadian Cancer Society has adapted and implemented Ontario's Smokers Helpline Text Messaging Service. This study presents the first evaluation of Quebec's Text Messaging Service - the SMAT.

**Methods:** We collected survey data at three points: during user sign-up (N = 1 398), at 2 months (n = 397) and 8 months (n = 214) follow-up to assess service reach, user characteristics, to evaluate user satisfaction and effectiveness.

**Results and analysis:** Results show that in 2015-16, SMAT users were predominantly female (63.4 %), were on average 33.5 years old, and included a higher proportion of 18 to 34 year old individuals. During sign-up, the majority of SMAT users indicated being current smokers (84.1 %). At 2-months follow-up, users indicated high satisfaction with the service. At 8-months follow-up, 30-day point-prevalence rate was 30.8% (response rate = 54.9%); 6-month prolonged abstinence rate was 20 %.

**Conclusions and implications for policy, practice or additional research:** Results are comparable with those found in the scientific literature showing the effectiveness of smoking cessation interventions using text messaging (e.g., Whittaker et al., 2016). As intended, the SMAT reaches the young adult population, a population otherwise not reached by cessation services. However, continued reflection is needed on how to reach other difficult-to-reach populations with this intervention.

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**La ligne j'Arrête: Results of an evaluation of Quebec's smoking cessation quitline - Christine Stich**

**Co-author:** Benoit Lasnier

**Introduction/background:** Tobacco cessation quitlines have become a part of the tobacco control infrastructure in Canada, the United States and beyond and the scientific literature provides considerable evidence for their effectiveness (Stead et al., 2013). However, quitlines vary greatly in their treatment- and outreach-related practices. The purpose of the present study was to evaluate Quebec's quitline service for the first time since its implementation in 2002.

**Methods:** We used administrative data to investigate quitline demand. Intake and survey data were collected at three points in time between November 2014 and May 2016, namely during a user's first call (N = 1 292), at 1 month (n = 463) and at 7 months (n = 494) follow-up using the Minimal Data Set (NAQC, 2009) to assess caller characteristics, service reach and to evaluate user satisfaction and effectiveness.

**Results and analysis:** The total call volume was 16 317, treatment reach was 0.09%. The majority of quitline users who called for the first time and who wanted to quit smoking (N = 1 292) were daily smokers (65.8 %), women (56.7 %), individuals over 35 years of age (81.3%) and highly addicted to tobacco products. Thirty-day point prevalence rate at 7 months follow-up was 26.7 % (response rate = 59.09 %). The 6-month prolonged abstinence rate was 18.8 %. Clients also used various other cessation supports to help them quit.

**Conclusions and implications for policy, practice or additional research:** Results are consistent with findings for other quitlines in Canada and the United States. Quit rates indicate that Quebec`s quitline is an effective intervention to support smokers in their efforts to quit, particularly within a broader system of smoking cessation supports. However, quitline use is comparatively low, suggesting that additional investment in promotional efforts and research into ways of recruiting underserved populations into the service is necessary.

## ORAL PRESENTATION 17

| Wednesday 1 May | 10:45-12:15 | Room 209 |
|---|---|---|

**Implementing content-specific expertise at a provincial public health agency to support health promotion practice - Brent Moloughney**

**Co-authors:** Sarah Richmond, Sarah Carsley, Rachel Prowse

**Introduction/program need and objectives:** Public Health Ontario (PHO) is a provincial public health agency that provides scientific and technical advice and support to public health units (PHUs) and others to enable informed public health decisions and interventions. PHO identified the need for greater content-specific expertise and leadership in health promotion to fulfill its mandate by collaborating on research, synthesizing and translating evidence, providing access to data, and building capacity.

**Program methods, activities and evaluation:** PHO established Applied Public Health Science Specialist (APHSS) positions to support evidence-based practice bringing content expertise, scientific rigour, and an orientation to practice. Content areas (injury prevention; healthy growth and development; healthy eating and food environments) were prioritized based on provincial public health standards and organizational/system gaps. APHSS conducted system-wide situational assessments (SAs) to gather information on strengths, challenges, needs and supports for practice through key informant interviews and site visits with PHU staff and relevant stakeholders. Webinars were used to validate the findings and prioritize areas for capacity building with PHU staff. Work has commenced on the identified priorities collaborating with PHU staff and partners.

**Program results or outcomes:** There was a strong positive response from PHUs regarding the creation of the APHSS positions and substantial interest to participate in the SAs. The identified needs have shown considerable consistency across content areas including the need for data, evidence, and their application to planning, as well as mechanisms to collaborate between health units and external stakeholders. Webinars were a valuable and efficient approach to engage local staff from across the province to validate the findings and to collectively prioritize the focus for capacity building efforts.

**Recommendations and implications for practice or additional research:** The SAs have been an initial approach for the APHSSs to proactively engage PHU staff to identify and prioritize system capacity building needs. Actions addressing the initially prioritized needs will be assessed to inform on the preliminary impact of the APHSS positions.

**Accessing the NCCMT's capacity building resources remotely: Supporting the development of evidence-informed practice skills in a northern and rural/remote context - Kristin Read**

**Co-authors:** Claire Howarth, Kate Turner, Grace Thomas, Maureen Dobbins

**Introduction/program need and objectives:** Access to internet and internet connectivity in some rural and remote areas in Canada varies widely. In response to user-feedback highlighting limited internet capabilities as a barrier to accessing the NCCMT's online resources, the NCCMT worked to adapt our suite of online resources for offline use, allowing users with limited/no internet connectivity to access resources for evidence-informed public health (EIPH).

**Program methods, activities and evaluation:** The NCCMT consulted with community partners in Northern, rural, and remote areas in Canada to ensure product compatibility with existing operating systems and worked with web developers to adapt the website for offline use. A small pilot test of the offline website was conducted with key contacts and feedback was incorporated into the final product.

**Program results or outcomes:** The suite of NCCMT online resources is now available on a USB stick and most components of the website can be accessed offline. The USB includes access to the following resources, among others:

- The Learning Centre: A suite of 13 modules developed to support the process of EIPH.
- The Understanding Research Evidence videos: A series of short, plain-language videos explaining important terms that you are likely to encounter when looking at research evidence.
- The Registry of Methods and Tools: A searchable collection of evidence-informed methods and tools for knowledge in public health
- The Rapid Review Guidebook: A step-by-step guide on how to conduct a methodologically rigorous rapid review.
- The Skills Assessment Tool: A short multiple-choice quiz developed to test knowledge and skills required for EIDM.

The USBs will be available to individuals and organizations by request at no cost to the recipient.

**Recommendations and implications for practice or additional research:** Providing access to the NCCMT's resources in an offline format increases accessibility to training and capacity development opportunities for EIDM in public health in Northern and rural contexts with limited internet connectivity.

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**Working Towards a Coordinated Health System: The Region of Peel-Public Health and Regional Quality Table at the Central West Local Health Integration Network Partnership - Nicole Pieczyrak**

**Introduction/program need and objectives:** The Region of Peel – Public Health (RoP-PH) partnered with the Regional Quality Table at the Central West Local Health Integration Network (CW LHIN) to make evidence-based recommendations to the Health Quality Ontario (HQO) Chronic Obstructive Pulmonary Disease (COPD) Quality Standard. The aim was to provide public health input to the COPD Quality Standard to demonstrate the pertinence of population health practices in robust clinical guidelines. The overarching purpose was to build upon the existing partnership and find an avenue to effectively collaborate across the public health and healthcare sectors, as recommended in Ontario's Patients First Act, 2016.

**Program methods, activities and evaluation:** The Health Impact Pyramid and Three Levels of Prevention were used to demonstrate how population health interventions support healthcare sector efforts. This was necessary because stakeholders were positioned in diverse contexts throughout the health system, resulting in differing perspectives of prevention and varing levels of familiarity with the diverse interventions that are useful in responding to COPD.

**Program results or outcomes:** A comprehensive approach to COPD treatment and prevention including interventions within all five tiers of the Health Impact Pyramid and Three Levels of Prevention was produced, which showcased public health's potential contribution in the healthcare sector. Enthusiasm from public health and healthcare stakeholders signifies the importance of collaboration on clinical quality standards and holds promise for future collaboration on the development of HQO Quality Standards, regardless of the health topic.

**Recommendations and implications for practice or additional research:** This project demonstrates how population health interventions compliment clinical efforts in the creation of clinical best practices. In the future, public health will endeavor to contribute to the development/revision of every HQO Quality Standard by participating as a potential expert panelist or through feedback during open call. Ultimately, this process will help facilitate the adoption of population-based practices at the clinician/health organization level and allow us to create a more coordinated health system.

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**Healthy Communities Initiative (HCI): Activating partnerships to create healthier communities for all - Sharanjeet Kaur**

**Co-author:** Sanya Khan

**Introduction/program need and objectives:** The Central West LHIN has the highest prevalence of diabetes in the provice, significantly higher rates of physical inactivity, and the highest proportion of residents who self-report as overweight or obese. In response to this compelling call-to-action, the Central West LHIN, William Osler Health System and Peel Public Health came together in 2015 to co-create HCI. The initiative has received

significant leadership and in-kind support from major municipal and local partners including the City of Brampton, local school boards, elected officials, faith leaders and conservation authorities.

**Program methods, activities and evaluation:** HCI's vision is a healthy community in which all residents have the environments and opportunities to achieve better health. HCI recognizes that our daily health behaviours are shaped by our core and peripheral influences, including our schools, workplaces, community and faith settings, healthcare providers and built environments.

Recognizing that individual-level supports alone are insufficient to achieve population-level health behaviour change, HCI is guided by three strategic directions: demonstrating system leadership, creating supportive environments and supporting individuals to make healthy choices.

**Program results or outcomes:** Through our collaborations, HCI has identified 18 community initiatives in 2018/19 to advance our vision. These initiatives include: a menu-labelling initiative at a faith setting which serves over 1000 free meals (langar) a day, development of health-promotion supports for physicians, enhancement of food offerings at municipal recreation facilities, active transportation school travel planning, and, the undertaking of a Sustainable Neighbourhood Retrofit Action Plan (SNAP) in partnership with Toronto and Region Conservation Authority. Our partnerships also include 26 schools, with a combined enrollment of over 18,000 students.

**Recommendations and implications for practice or additional research:** HCI's 18 initiatives comprehensively address health promotion; however, our critical success factor has been the energized and diverse partnerships that drive this initiative. These partnerships include traditional and non-traditional stakeholders across the health care continuum with a broad spectrum of mandates that relate to health promotion.

**Using an Integrated Knowledge Translation approach in the context of a rapid review to engage stakeholders and inform policymaking on inclusive physical activity promotion - Keiko Shikako-Thomas**

**Co-authors:** Ebele Mogo, Icooquih Badillo, Annette Majnemer, Kellie Duckworth, Sheila Kennedy, Vivien Symington

**Introduction/problem definition that demonstrates the need for a policy change:** Physical activity is critical to the health of children. However, resources and policy interventions that facilitate participation are usually limited for children with disabilities. We detail the use of an integrated Knowledge Translation approach to conduct a rapid review to inform policy on physical activity promotion for children with disabilities

**Research Methods:** Based on priorities established by grassroots organizations in relation to a policy document, we identified evidence based practices regarding capacity building, inclusion and access and supportive environments. We then used a rapid review methodology to support a knowledge translation project around community-based interventions promoting physical activity participation for children with disabilities.

**Results and analysis:** We followed an analytical framework for evidence-informed public health, which involves translating the best available evidence along with other forms of knowledge that have been systematically collected, including articulating the practice-based public health challenge and adapting the evidence to the context (Evidence-Informed Public Health, 2018). We thematically analyzed the evidence from the rapid review and we transformed those findings into briefs for different targeted audiences: policy makers and community/grassroots organizations. We also involved stakeholders (community organizations, health and education professionals) to select, validate, and tailor the information through the review process. Structured evaluation through surveys and interviews indicated that participants gained information to support ongoing projects and fuel discussions with colleagues and appreciated the format and content of the policy brief as a reference tool for their work.

**Recommendations and implications for policy, practice or additional research:** This rapid review and active policy engagement process can serve as a reference for researchers to engage stakeholders and use evidence to inform practice at the policy levels and to create research evidence for real impact for populations.

## ORAL PRESENTATION 18

| Wednesday 1 May | 10:45-12:15 | Room 210 |
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**Developing an Alcohol Harm Reduction Social Marketing Campaign - Ingrid Tyler**

**Co-authors:** Kimberly Huhn, Meghan Martin, Carmen Ng, Deljit Bains, Sergio Pastrana, Judi Mussenden, Amrit Rai

**Introduction/program need and objectives:** A growing number of Canadians are consuming alcohol in excess of the low-risk drinking guidelines, putting themselves at risk of a variety of injuries and diseases. Within Fraser Health region, one quarter (24.5%) of adults aged 18 – 39 report binge drinking . Alcohol consumption is increasing among both men and women. Men still report higher levels of binge drinking (21.3% in Fraser region); however the rate of binge drinking among women (16.5% in Fraser region) is increasing and closing the gender gap This social marketing campaign seeks to increase awareness among Fraser region residents of the long-term health risks related to alcohol consumption. .

**Program methods, activities and evaluation:** Methods to develop the social marketing campaign included literature review, environmental scan, population panel survey (Health Chat), and focus groups. Evidence-based key messages and dissemination strategies were developed. Based on information provided by the health authority, creative was developed.

**Program results or outcomes:** Social marketing campaign focussing on cancer risk and moderation was developed based on evidecne and consume consultation for lauch in April 2019. increasing number of alcohol-free days per week was found to be one of the reduction strategies most likely to be accepted by the population. Additional Results of population consultation, focus groups and specific key messages and creative content will be shared in the session.

**Recommendations and implications for practice or additional research:** Research shows that people who are aware of the link between alcohol and cancer are more likely to self-report an intention to reduce their alcohol consumption. Knowledge of these risks may bring the population to a more advanced state of readiness to make behaviour change to moderate their alcohol consumption.

**Alcohol trajectories in adolescence and binge drinking in young adulthood - Marilyn Ahun**

**Co-authors:** Marie-Pierre Sylvestre, Robert Wellman, Ousmane Sy, Geetanjali Datta, Didier Jutras-Aswad, Jennifer O'Loughlin

**Introduction/background:** Binge drinking is a risk factor for developing alcohol use disorders. The objective of this study was to describe trajectories of alcohol use frequency in adolescence and to examine whether these trajectory patterns relate to frequency of binge drinking in young adults.

**Methods:** Data were drawn from a prospective investigation of 1293 students in Montreal. Frequency of alcohol use ('never', 'a bit to try', '1-2 times a month', '1-2 times a week', 'usually every day') was self-reported every 3 months from age 12-17. Trajectories of alcohol use were identified using group-based trajectory modeling. Past-year binge drinking frequency at 20 and 24 years was dichotomized to compare frequent bingers (weekly) to those who never binged, binged less than monthly or binged on a monthly basis. Sustained binge drinking was defined as weekly binge drinking at 20 and 24 years. Binge drinking frequency at 20 and 24 years and sustained binge drinking were regressed onto trajectory group membership in logistic regression models adjusted for covariates.

**Results and analysis:** We identified five trajectories: late-triers (17.6%), decreasers (10.7%), late-escalators (16.6%), early escalators (29.5%), and early sustained frequent drinkers (25.6%). Early-escalators and early sustained frequent drinkers engaged in binge drinking more often and across longer periods of time than late-

triers in young adulthood. Early sustained frequent drinkers were also more likely than decreasers to binge drink at age 20.

**Conclusions and implications for policy, practice or additional research:** Early sustained frequent drinking in adolescence may be an indicator of frequent binge drinking in young adulthood, which could be an indicator of problematic alcohol use. Monitoring alcohol use patterns in adolescents may be important in screening youth for alcohol misuse and implementing preventive interventions.

**Too little, too much or just right: Injury/illness sensitivity and intentions to drink as a basis for alcohol consumer segmentation - Mohammed Al-Hamdani**

**Co-authors:** Kayla Joyce, Megan Cowie, Steven Smith, Sherry Stewart

**Introduction/background:** Although alcohol is the most socially-accepted drug, little is known about the classification of alcohol consumers into clusters influencing drinking outcomes. The present study explored whether alcohol consumers can be classified based on injury/illness sensitivity and intentions to reduce drinking, and whether the identified clusters exhibit meaningful differences in negative affect and drinking levels.

**Methods:** Four-hundred-and-eighty-six participants (54.3% male; M[SD] age = 26.5 [7.2] years) completed online questionnaires between July and October of 2017. Questions were asked pertaining to injury/illness sensitivity, drinking intentions, negative affect, and heavy drinking behavior. A k-means cluster analysis was performed on illness/injury sensitivity and intentions to reduce drinking scores. We then examined whether clusters varied according to negative affect or drinking variables.

**Results and analysis:** The k-means cluster analysis identified four clusters: Insensitive non-internalizers (INI; 37.7%), Insensitive internalizers (II; 26.7%), , Sensitive non-internalizers (SNI; 21.6%), and Sensitive internalizers (SI; 14.0%). SIs reported the highest, whereas INIs reported the lowest negative affect. SIs also had the lowest percentage of heavy drinkers.

**Conclusions and implications for policy, practice or additional research:** Current findings indicate that high sensitivity to illnesses/injuries and the internalization of sensitivities via behavior change intentions may provide the best protection against high alcohol consumption levels. Findings provide preliminary evidence that alcohol segmentation based on illness/injury sensitivity and intentions to reduce drinking may help identify optimal cluster memberships. SI group membership provides the best protection against heavy drinking; sensitivity and intentions to reduce consumption are important. To test this assertion however, a longitudinal study examining the effect of cluster membership on problematic drinking is warranted. Further, the impact of interventions on drinking intentions need to be tested to determine whether individuals with higher injury/illness sensitivity respond better to such treatment. The current study also offers initial evidence of practical segmentation of alcohol consumers into four groups, that may be tested for its impact on other addictions.

**Examining variations in Income-related Inequalities in Alcohol Hospitalizations across Canada's Major Cities - Ezra Hart**

**Co-author:** Sara Grimwood

**Introduction/background:** Alcohol harm is a leading cause of injury and death in Canada. This study examines how income inequalities in CIHI's Hospitalizations Entirely Caused by Alcohol indicator vary across and within Canada's major cities to provide evidence to reduce income-related health inequalities and promote population health.

**Methods:** CIHI's Hospitalizations Entirely Caused by Alcohol indicator results were pooled across two years (FY2013–2014 to FY2014–2015) and linked with neighbourhood income quintile and geography data based on patient postal codes using Statistics Canada's Postal Code Conversion File Plus. Age-standardized rates were calculated and income-related health inequalities summarized using rate ratios and rate differences. Results

were reported at the Census Metropolitan Area (CMA) (e.g. Greater Toronto Area) and Census Subdivision (CSD) (e.g. City of Toronto) levels to enable comparisons across and within 18 of Canada's major cities.

**Results and analysis:** Rates by CMA range from 106 hospitalizations per 100,000 people in the Ottawa-Gatineau region to 304 hospitalizations per 100,000 people in Regina. Although Ottawa-Gatineau had the lowest overall hospitalization rate, income inequalities are observed. Ottawa's rate ratio was 4.1 (rate difference 193 per 100,000) compared to the lowest of 2.2 (rate difference 100 per 100,000) in Toronto and the highest of 7.5 (rate difference 826 per 100,000) in Regina. There is also wide variation at the CSD level, with rates within the Toronto CMA ranging from 42 hospitalizations per 100,000 people in Richmond Hill to 348 hospitalizations per 100,000 people in Mono.

**Conclusions and implications for policy, practice or additional research:** The results of this project show that large income-related inequalities exist in the rates of Hospitalizations Entirely Caused by Alcohol across Canada's major cities. Integrating these local level results with other local data such as alcohol outlet density may provide further insight for the prevention of alcohol harm and support evidence-informed decision-making and policy planning. These results also contribute to health inequality monitoring across Canada.

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**Increasing alcohol attributable ED visits in women and youth in Ontario, a retrospective cohort study from 2003-2016 - Daniel Myran**

**Co-authors:** Amy Hsu, Glenys Smith, Peter Tanuseputro

**Introduction/background:** Data from high-income countries suggest that alcohol related harms have been increasing. However, no studies have examined age- and sex-specific temporal patterns. In this study, we examined longitudinal trends in emergency department (ED) visits attributable to alcohol in Ontario by age and sex while considering age-cohort effects.

**Methods:** All individuals aged 10-105 living in Ontario between the fiscal years 2003 and 2016 were included in the study (N=15,121,639). The main outcome was visiting a ED for an alcohol attributable reason, defined using diagnostic codes from the Canadian Institute for Health Information indicator "Hospitalizations entirely due to alcohol". The population was stratified by sex and age-standardized rates of ED visits were calculated.

**Results and analysis:** There were 765,354 ED visits attributable to alcohol over 14 years. Men had more than double the rate of ED visits attributable to alcohol (6.32 per 1,000 individuals) compared to women (2.90 per 1,000 individuals). Over 14 years, the number of alcohol attributable ED visits increased by 110% in women and 77.6% in men; both of which were greater than the rate of increase in all-cause ED visits over the same period. Individuals aged 25-29 showed the largest increases in rates of alcohol-attributable ED visits (240% for women and 145% for men). There was evidence of age-cohort effects, where each subsequent generation of 18-20 year-olds had higher rates of ED visits due to alcohol than prior generations.

**Conclusions and implications for policy, practice or additional research:** The burden of alcohol-attributable ED visits has increased substantially in the past 14 years, with the largest increase in youth and women. The underlying cause of these changes remains relatively uninvestigated. However, there is evidence of concentrations of these harms in more recent generations. Further research focusing on potential causes in these groups is required. In the interim, policy interventions to reduce problematic alcohol use must be pursued.

**ORAL PRESENTATION 19**

| Wednesday 1 May | 10:45-12:15 | Room 213 |

**Examining social norms and behaviors of men who have sex with men (MSM) in Newfoundland and Labrador (NL) in relation to healthcare practices and experiences - Shianne Combden**

**Co-authors:** Andrea Doyle, Anita Forward, Sarah Halfyard

**Introduction/background:** In an effort to gain insight into the attitudes, social norms and behaviors contributing to a syphilis outbreak in local MSM population, Eastern Health's Public Health team developed an online Men's Sexual Health Survey. The survey results were used to develop a report with recommendations intended to guide the development of a comprehensive plan to address increasing rates of syphilis and other Sexually-Transmitted and Blood-Borne Infections (STBBIs) in the Eastern Health region.

**Methods:** The survey was distributed through the online MSM social networking site Grindr, which averages 9,000-14,000 active users in the province of NL. Advertisements with links to the survey aired on Grindr for a one month period from March 15-April 15, 2018. Additionally, community partners were engaged to distribute the survey through their social media sites.

**Results and analysis:** Findings from the survey revealed three emerging themes:
– Experiences of stigma and discrimination with health care providers.
– Gaps in current service delivery which resulted in barriers for accessing sexual health services.
– High risk behaviors behaviours such as multiple anonymous partnering, inconsistent condom use and lack of STBBI testing.

**Conclusions and implications for policy, practice or additional research:** From the survey analysis, recommendations were developed to guide future policy and programming. Recommendations include:
– Provide sensitivity and inclusivity education for health care providers.
– Implement new STBBI testing guidelines.
– Collaborate with partners on social marketing strategies.
– Enhance accessibility to sexual health services.

**Ikajurniq: An Inuit Cascade of Care Framework for Sexually Transmitted and Blood Borne Infections -Sipporah Enuaraq**

**Co-authors:** Savanah Ashton

**Introduction/problem definition that demonstrates the need for a policy change:** Inuit in Canada are experiencing high rates of sexually transmitted and blood-borne infections (STBBIs). While there is limited Inuit-specific statistical information, we know that chlamydia, gonorrhea and syphilis rates in Inuit regions are high. A central approach to reducing STBBIs among Inuit communities is the development of effective methods to increase the number of Inuit being tested, diagnosed and treated before they spread infection to others.

**Research Methods:** At its inaugural meeting in November 2017, the National Inuit Sexual Health Network, made up of sexual health experts and community representatives, developed an Inuit-specific STBBI Cascade of Care framework called Ikajurniq – meaning "the act of helping".

**Results and analysis:** Ikajurniq builds on best practices in prevention and treatment of STBBIs in Canada, while recognizing both the particular challenges and the known enablers in reaching, testing and treating Inuit with STBBIs in northern communities.

**Recommendations and implications for policy, practice or additional research:** Inuit experience high rates of STBBIs and face particular challenges in completing the testing and treatment journey. The enablers described in Ikajurniq can greatly increase the number of Inuit who successfully navigate the STBBI cascade of care.

**The Effectiveness of Brief Counselling for Chlamydia Case Management - Jessica Smith**

**Co-authors:** Damian Power, Andra Ashton

**Introduction/background:** There is a high incidence of chlamydia locally, provincially, and nationally. Public Health is mandated to ensure all chlamydia cases receive appropriate treatment and counselling by either a community healthcare provider or Public Health. A significant amount of limited resources is committed to conducting brief counselling for chlamydia cases, regardless of whether treatment and counselling have been provided by the healthcare provider. The Region of Peel – Public Health completed a rapid review to examine the effectiveness of brief counselling on preventing repeat STIs and promoting safer sexual behaviour among individuals who test positive for chlamydia.

**Methods:** A search of published and grey literature was conducted. Studies were included if they were synthesized, populations included adults who tested positive for chlamydia, and interventions assessed brief, single session one-to-one counselling to reduce repeat STIs and increase safer sex behaviours. Two reviewers independently screened the literature and appraised included studies for quality. Data extraction was completed by one reviewer and independently verified by a second.

**Results and analysis:** After screening 601 citations and 13 full text articles, three guidelines (two moderate and one strong quality) and one strong quality systematic review were included. Evidence from synthesized sources indicates brief-duration counselling (<30 minutes) is ineffective at reducing STI incidence and increasing condom use. Moderate-duration counselling (30 to 120 minutes) has mixed effects. Longer-duration counselling (>2 hours) is effective at reducing STI incidence and increasing condom use in the short-term. Longer-duration counselling is more effective when conducted in-person or administered to ethnic minority clients.

**Conclusions and implications for policy, practice or additional research:** Findings may be applicable for case management of chlamydia or other STIs. Recommendations include discontinuing brief counselling for chlamydia cases who have received healthcare provider treatment and follow-up. Further exploration of the evidence is needed to determine the most effective and feasible interventions to increase safer sex behaviours and reduce STI incidence.

**HIV and STI Testing Barriers and Preferences among Alberta GBTQ Men – a Representative Strategy via Community-Based Research - Michael Taylor**

**Co-authors:** Brook Biggin, Derek Fehr

**Introduction/background:** The province of Alberta is developing a new STBBI (Sexually Transmitted and Bloodborne Infections) Strategy, led by Alberta Health Services (AHS) with the participation of a broad range of community stakeholders. In order to more effectively address the specific health determinants, needs, and outcomes of gay, bisexual, trans, and queer (GBTQ) men, AHS has engaged the Edmonton Men's Health Collective (EMHC) to provide expertise, and to conduct community consultation.

**Methods:** An online survey of GBTQ men (n=368) in Alberta, Canada was conducted using social media as the primary means of promotion. Frequencies were calculated using SAS programming. Survey topics included: sexual health knowledge and education, condom usage, substance use, injection drug use, partner notification, HIV and STI testing and treatment, post-exposure prophylaxis (PEP), and HIV care. Responses from females (cisgender and transgender, n=5) were excluded.

**Results and analysis:** 45.4% (n=167) indicated 'testing hours' as the most important factor relative to STI and HIV testing access, with 'inconvenient testing hours' being selected most as a barrier to accessing both STI testing (55.4%, n=204) and HIV testing (52.4%, n=193); 'weekday evenings' (79.3%, n=292) and 'weekend afternoons' (74.2%, n=273) were most preferred to access testing. 83.4% (n=307) expressed likelihood to access rapid HIV testing if made available; 79.3% (n=292%) also selected standard HIV and STI testing. If made available, STI clinics (90.2%, n=332) and LGBTQ specialized clinics (85.3%, n=314) were most frequently chosen to access

testing. Among those who have a family doctor (n=224), 81.7% (n=183) indicated that they had come out to their provider.

**Conclusions and implications for policy, practice or additional research:** Alberta's current HIV and STI testing framework is not responsive to the preferences and primary barriers experienced by GBTQ men; continued consultation and collaboration with the community must persist in order to address gaps in care and improve access to HIV and STI testing.

**A Qualitative Exploration of Sexually Transmitted and Blood Borne Infections (STBBIs) in a Canadian Province: The Utility of the Social Ecologic Model in Understanding the Spread of STBBIs in Nova Scotia - Tamer Wahba**

**Co-authors:** Jacqueline Gahagan, Robin Urquhart, Todd Hatchette, Audrey Steenbeek, Sarah Fleming

**Introduction/background:** Rates of sexually transmitted and blood borne infections (STBBIs) have been on the rise in Canada over the last two decades. Efforts to prevent or mitigate the increasing burden of STBBIs have been largely unsuccessful. Lack of access to medical services, wait times to obtain STBBI test requisitions and results, geographic distances between patients' locations and testing sites, and ongoing social stigma, all contribute to the rising rates of STBBIs. In addition, some infections, such as chlamydia, HIV and hepatitis C, are often asymptomatic in their early stages, making diagnosis difficult, if untested, resulting in greater spread of these infections. To achieve the goal of reducing rising rates of STBBIs, these contributing factors must be addressed simultaneously. The goal of this research was to better understand the factors contributing to spread of STBBIs to develop potential strategies for prevention.

**Methods:** A series of semi-structured, one on one, interviews were conducted with senior Nova Scotian public health officials to explore their understanding of the current burden of STBBIs in the province. The Social Ecological Model was used to help frame the thematic analysis of the data.

**Results and analysis:** Our study's participants expressed their opinions on the contributing factors to the problem, actions done by the government, and the strategies needed to increase access to testing such as the use of POCT which was seen as a useful tool in preventing the spread of certain STBBIs, such as HIV, if associated with patient's counselling and other intervention programs. Key themes to emerge from the data included individual, interpersonal, organizational, community, and public policy.

**Conclusions and implications for policy, practice or additional research:** STBBIs are an ongoing public health issue provincially, nationally, and globally. The Social Ecological Model offers a useful framework to help understand and address individual, interpersonal, organizational, community, and policy-level factors in relation to the prevention of STBBIs.

## ORAL PRESENTATION 20

| Thursday 2 May | 10:30-12:00 | Room 204 |

**Developing an online education course on health impact assessment (HIA) for increasing HIA practice in Canada - Thierno Diallo**

**Introduction/program need and objectives:** Health impact assessment (HIA) has been used for more than two decades as a tool to advance health promotion. In Canada, although HIA is recognized as a tool to develop healthy public policies, there is a need for training opportunities for the practice of HIA to realize its full potential throughout the country. The objective of this project is to provide participants with an online education course on HIA to assist them in developing and enhancing the competencies required to properly conduct an HIA of public policies. The purpose is to improve capacity-building for HIA practice in Canada.

**Program methods, activities and evaluation:** After reviewing few accredited HIA training available around the world, a 4-hour online self-directed learning course on HIA of public policies was developed. This course is intended for practitioners in public health and in other related sectors, as well as for decision makers, from governmental or non-governmental organizations, or for any person interested in public policies and their impacts on population health. This continuing education course has been designed using a competency-based approach.

**Program results or outcomes:** The learning outcomes include 1) know the fundamentals of HIA of public policies 2) Understand the HIA principles and values, process and methods 3) gain valuable skills in applying HIA to public policies 4) Know the favourable conditions that promote a successful implementation of the practice of HIA.

**Recommendations and implications for practice or additional research:** The availability of training on HIA contributes to foster the HIA application to public policies and to promote the development of healthy public policies. It is one way to catalyze the practice of HIA in Canada. It offers the opportunity for capacity building to ensure that HIAs are carried out properly.

**Free online-learning tools to support the development of health equity champions - Faith Layden**

**Co-author:** Dianne Oickle

**Introduction/program need and objectives:** Health equity (HE) champions must be developed among public health (PH) staff and management to promote HE action. To build the competencies PH staff and managers need to champion HE, the National Collaborating Centre for Determinants of Health developed two online learning tools – Learning Pathways for PH Middle Managers and the Introduction to HE online course.

**Program methods, activities and evaluation:** The Learning Pathways cultivate middle management competency to facilitate and support PH HE action. Literature scans informed the selection of competencies and pathways' design. Pathways' each support competency development in one of these domains: 1) create vision and strategy, 2) mobilize people and achieve results, 3) uphold integrity and respect, 4) collaborate with partners and stakeholders and 5) promote innovation and guide change. Resources that supported the achievement of each competency were identified and corresponding activities developed to help learners identify practical applications from each resource. Self-assessments were created to help learners assess their knowledge before and after each pathway. The online course was developed for PH professionals, leaders and decision makers as an accessible Canadian introductory level course on HE in response to a comprehensive scan of online HE and the social determinants of health courses. The course introduces core HE concepts, PH roles, approaches, and organizational capacity for equity action, worldviews and reflexive practice. The 5-module course was developed in collaboration with Public Health Ontario and a pan-Canadian advisory group supported the development of the content and the instructional approach. The course was developed for online use by an instructional design firm and pilot tested by PH professionals.

**Program results or outcomes:** The learning tools will be launched for free online in 2018 and 2019, respectively.

**Recommendations and implications for practice or additional research:** Managers and staff can use these online tools to build the competencies needed to act to improve HE.

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**Assessing the Impact of a Guide to Share Local Data with Community Partners to Improve Health Equity - Cassandra Ogunniyi**

**Co-authors:** Karen Graham, M. Mustafa Hirji

**Introduction/background:** There continues to be a significant gap between health outcomes of the most and least deprived residents of Ontario. Local Public Health Agencies (LPHAs) have potential to enhance community agencies' efforts regarding the social determinants of health by sharing data that helps to direct and support their work. This presentation provides an overview of an impact assessment of a 2017 Public Health Ontario Locally Driven Collaborative Project (LDCP) that aimed to identify best practices to select, analyze, and distribute key behavioural and health outcome data to enable community partners to better advance health equity for the populations they serve.

**Methods:** A guide was developed in the initial project to support LPHAs in sharing data with community partners. The impact assessment involved an online survey, followed, six months later, by interviews conducted to determine participants' assessment of the guide. Simultaneously, interviews were conducted with three organizations from the pilot component of the study, evaluating the process of data sharing outlined in the guide. After sharing the data, these organizations were interviewed at six and twelve months to identify how the data was used and its impact on their health equity work.

**Results and analysis:** The impact assessment revealed that local community organizations are diverse in their ability and capacity to utilize data provided by public health. Participating organizations used the data to better understand their communities, leverage funding, advocate for new programs, and educate staff about health outcomes in their communities. The community organizations provided recommendations to improve the data sharing process, while LPHA staff suggested recommendations to improve the guide.

**Conclusions and implications for policy, practice or additional research:** Public health has an essential role in addressing inequities through sharing data with their community partners. Successful data sharing enhances partnerships between public health and community partners which can be used in multiple ways to advance health equity at the local level.

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**How should we measure area income when we do health inequalities analysis? - Charles Plante**

**Introduction/background:** It is common practice to measure area-based income inequalities in health throughout Canada using the income quintile or decile variables that are included in the latest version of Statistics Canada's Postal Code Conversion File Plus (PCCF+). But the latest version now includes a new suite of income variables based on after-tax income as opposed to total income. This paper considers the decisions that are involved in choosing among different constructions of income quintiles and makes recommendations.

**Methods:** This study draws on two sources of information to consider the advantages and disadvantages of different constructions of area-based income quintiles for health inequality analysis: 1) the conceptual bases in the social epidemiology, capability and development, and poverty literatures and; and, 2) the empirical consequences of different choices in a variety of health outcomes in 15 years of Canadian Community Health Survey (CCHS).

**Results and analysis:** The construction of the income measure affects estimated health inequalities. Leading income-based measures of poverty are defined in terms of household "adjusted" after-tax income. Income is adjusted for household size to account for economies of scale at the household level. After-tax is used because it more accurately reflects people's power to afford the goods and services they need to realize health and well-being.

**Conclusions and implications for policy, practice or additional research:** Measuring health inequalities using household adjusted after-tax income ensures that health inequalities analysis aligns more closely with work in other fields without undermining its utility in the health domain.

**Reducing Health Inequities Through Intersectoral Action: Balancing Equity in Health With Equity for Other Social Goods - Maxwell Smith**

**Introduction/background:** Significant attention has been devoted to developing intersectoral strategies to reduce health inequities; however, these strategies have largely neglected to consider how equity in health ought to be weighted and balanced with the pursuit of equity for other social goods (e.g., education equity) in other government sectors. Research on this proper balancing is crucial, as the health sector's pursuit of health equity may be at odds with policies in other sectors, which may consider the reduction of health inequities to be peripheral to, if not incompatible with, their own equity-related aims.

**Methods:** This presentation will report findings from an empirical ethics study that sought to identify and understand areas of value consonance and dissonance between sectors that may manifest within existing intersectoral strategies to reduce health inequities. This study involved qualitative interviews with provincial (Ontario) policy-makers from both the health and education sectors, which were analyzed and interpreted in light of theoretical accounts of health justice, educational justice, and social justice.

**Results and analysis:** The following themes were generated from interviews: (1) equity work in different policy sectors is not coordinated or organized according to an intersectoral framework; (2) equity 'lenses' in different sectors differ and compete with one another, leading to 'lens fatigue'; (3) intersectoral strategies to achieve equity in health largely fail to address structural barriers that lead to inequities.

**Conclusions and implications for policy, practice or additional research:** By situating these findings and the intersectoral pursuit of health equity within accounts of justice that carefully weigh justice in health with equity for other social goods, this research will enhance the theoretical and practical coherence of prominent initiatives designed to reorient social policy toward health equity goals (e.g., 'health in all policies' initiatives) and assess and improve the equity impacts of public health interventions (e.g., health equity impact assessments).

**ORAL PRESENTATION 21**

| Thursday 2 May | 10:30-12:00 | Room 205 |
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**Identifying barriers of access and retention in opioid agonist treatment in British Columbia – Brittany Graham**

**Co-authors:** Margot Kuo, Kristi Papamihali, Alexis Crabtree, Christopher Mill, Mohammad Karamouzian, Sara Young, Jane A. Buxton

**Background:** Opioid use disorder (OUD) has been one of the key drivers of the ongoing opioid crisis in Canada. Opioid agonist treatment (OAT) for OUD has been associated with a reduction in overdose deaths and risks associated with injection drug use. In British Columbia (BC), expansion of OAT for OUD has included scale-up of primary care training programs; development of evidence-based guidelines recommending buprenorphine/naloxone as preferred first-line treatment; and removing prescribing restrictions. However, initiation and retention in OAT remains low, while overdose events and deaths continue to rise. We aim to recognize barriers in OAT access and retention in OAT identified by clients of harm reduction sites across BC.

**Methods:** Harm reduction site clients were surveyed over two months in 2018. Quantitative survey data was analyzed using descriptive statistics. Qualitative survey data was summarized using thematic analysis.

**Results:** Of 486 participating harm reduction site clients , 35% had taken methadone treatment in the past 6 months, 14% buprenorphine/naloxone, 10% hydromorphone (any form), and 4% slow-release oral morphine. Of 245 respondents that tried to access OAT, 24% reported difficulties including: unable to find a prescribing physician (38%); prescription stopped due to positive urine test (19%); and worry about being stigmatized at the clinic (19%). 24% of respondents had discontinued OAT in the past 6 months. Thematic analysis identified the primary reason for OAT discontinuation was difficulty adhering to strict prescription pick-up and appointment times, commonly associated with subsequent use of illegal drugs. Additional themes included challenges with transportation/travel, relapse out of necessity/convenience, and finding OAT ineffective.

**Conclusions and implications for policy, practice or additional research:** Structural barriers and stigma towards people who use substances continue to limit OAT initiation and retention. Client-informed low-barrier, accessible treatment is necessary to improve accessibility of OUD care and services.

**Experiences of stigma and access to harm reduction services among women who use opioids: Implications for action - Rose Schmidt**

**Co-authors:** Nancy Poole, Lorraine Greaves, Natalie Hemsing

**Introduction/background:** Women who use opioids experience stigma, particularly in the context of pregnancy, parenting and child welfare interactions. This impacts access, retention and response to harm reduction services.

**Methods:** Evidence on mothers, opioids, stigma and child welfare interactions, and on sex, gender and equity-informed harm reduction approaches was gathered through: a) a scoping review of literature; and b) interviews with women with these experiences. A working group with representatives from child welfare and addictions service systems reviewed this evidence, and created a set of Mothering Centered Policy Values. Based on these activities, a multi-component Toolkit for practitioners and policy makers in both systems is being co-developed.

**Results and analysis:** Results from the scoping review and interviews will be presented, including: 1) how stigma is experienced by women who use opioids, 2) how this impacts access and retention in harm reduction services, and 3) needed responses. Gender- and trauma-informed harm reduction responses that address the specific health, safety and social needs of pregnant and parenting women, such as low-threshold and gender-sensitive services, the integration of sexual and reproductive health care in harm reduction services, and links with domestic and sexual violence prevention services will be discussed.

**Conclusions and implications for policy, practice or additional research:** The experiences of stigma associated with opioid use by pregnant women and mothers, differential access and response to harm reduction services, as well as challenges in interactions with child welfare authorities are important public health concerns to be addressed, in the context of larger responses to the opioid crisis. The evidence presented will help practitioners and policy makers identify and critique existing approaches, and will suggest changes to addiction and child welfare systems.

**Best Practices across the Continuum of Care for the Treatment of Opioid Use Disorder - Sheena Taha**

**Introduction/background:** It is estimated that over 4000 lives were lost due to opioid overdose or poisoning in Canada in 2017. Efforts to end the opioid crisis include advancing comprehensive treatment. Preventing and minimizing the experience of harms requires a combination of both available services and quality implementation. This session will review the evidence and identify best practices across the continuum of care for opioid use disorder from screening to recovery; addressing harm reduction throughout. This presetation will also outline the overarching principles that should guide the way in which these services are delivered.

**Methods:** Best practices for care and treatment of opioid use disorder among the general population were identified from peer-reviewed and grey literature. To focus on best practices, as opposed to emerging ideas, only review papers, systematic reviews, meta-analysis and grey literature produced between 2007 and 2018 were included. External partners with expertise in addiction medicine, harm reduction, substance use, psychology and psychiatry reviewed and provided input to the inventory.

**Results and analysis:** There are seven overarching principles that should guide the way all services in the continuum are delivered (i.e., in a patient-centred manner). There are evidence-based best practices for various components of the continuum of care including harm reduction, screening, assessment, brief intervention, withdrawal management, pharmacological and psychosocial interventions, as well as recovery.

**Conclusions and implications for policy, practice or additional research:** Identification of best practices across the continuum of care provide a benchmark to ensure effective services are available in Canada. Many knowledge gaps also exist which needs to be addressed to prevent and minimize the experience of harms. An understanding of these principles and practices can drive policy development to improve quality care across the country.

**The Cedar Project: Experiences of interpersonal racism among young Indigenous people who have used drugs in Prince George and Vancouver, BC - Richa Sharma**

**Co-authors:** Sherri Pooyak, April Mazzuca, David Zamar, Margo Pearce, Kate Jongbloed, Martin Schechter, Patricia Spittal

**Introduction/background:** Indigenous scholars have highlighted the role of racism as a social determinant of health in understanding the alarming disparities between Indigenous and non-Indigenous peoples in Canada. Few studies have addressed experiences of racism among young Indigenous people who have used drugs in British Columbia (BC).

**Methods:** Cedar Project is a community-driven cohort study involving young Indigenous people who have used drugs in Vancouver and Prince George, BC. This cross-sectional study included data collected between August 2015-October 2016. Measure of Indigenous Racism Experiences (MIRE) interpersonal scale asked participants about their experiences of 'being treated unfairly' because they are Indigenous across nine settings on a 5-point likert scale (Never/Hardly Ever/Sometimes/Often/Very Often). Experiences of interpersonal racism were collapsed into three categories: none, low ('hardly ever'), or high ('sometimes', 'often', or 'very often'). Responses are reported as univariate proportions. Multinomial logistic regression models examined unadjusted and adjusted associations between variables of interest and interpersonal racism.

**Results and analysis:** Among 321 participants, 79% (n=255) experienced interpersonal racism in at least one setting. 32% (n=102) experienced high interpersonal racism, most commonly from police, staff from government agencies including child welfare, health personnel and in public settings. Experiencing high interpersonal racism was more likely if participants were women (UOR:2.68; 95%CI:1.33-5.41), lived in Prince George (UOR:3.30;95%CI:1.63-6.71), had their child apprehended (UOR:3.14;95%CI:1.43-6.88), were denied access to shelter (UOR:2.15;95%CI:1.08-4.31), had ever attempted suicide (UOR:2.69; 95%CI:1.27-5.71) and had traditional language spoken at home while growing up (UOR:2.67;95%CI:1.23-5.80). In adjusted analysis, child apprehension remained significantly associated with high interpersonal racism (OR: 3.58;95% CI:1.40-9.15).

**Conclusion and implications for policy, practice or additional research:** Young Indigenous people who have used drugs experience high levels of racism from staff across key government bodies and in public settings in BC. Implementation of structural reforms rooted in cultural safety, as recommended by the Truth and Reconciliation Commission, are urgently required to address racial discrimination against Indigenous peoples across Canada.

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**Increasing Access to Take Home Naloxone in Response to British Columbia's Opioid Overdose Crisis - Sierra Williams**

**Co-authors:** Sara Young, Emily Ogborne-Hill, Margot Kuo, Mieke Fraser, Jane Buxton

**Introduction:** A public health emergency was declared in British Columbia (BC) in April, 2016 in response to the overdose crisis. The BC Centre for Disease Control started the Take Home Naloxone (THN) program in 2012 to support overdose prevention, recognition and response. Naloxone is available at no cost to persons at-risk of experiencing or witnessing an overdose. To continue to meet community needs, the program examined THN accessibility and expanded naloxone distribution through partnerships.

**Program methods, activities and evaluation:** A survey was administered to harm reduction distribution sites and analyzed using descriptive methods. Further, a geographic analysis was completed to identify THN gaps by examining the at-risk population who had poor access to a THN-site.

In December 2017, no cost THN kits were introduced to community pharmacies for distribution in partnership with BC Pharmacy Association; pharmacists do not receive fees for training or dispensing. Across BC, THN kits are now available for distribution by designated Coroners. BC Ambulance Services launched a naloxone kit replacement pilot project across Vancouver Island and is expanding province-wide. The THN program also collaborated with St. John's Ambulance in developing training and providing kits for free overdose training.

**Program Results:** As of October 15 2018, a total of 118,829 kits have been distributed through >1,400 sites including: 87 hospital/emergency departments, 140 First Nations sites, 17 corrections facilities and 599 community pharmacies. Over 29,000 kits have been reported to reverse an overdose. A survey of harm reduction clients (n=508) found 67% of respondents reported having a naloxone kit compared to 17% in 2015.

**Implications:** The ongoing community uptake of the program and high usage demonstrates the importance of collaboration and innovation to expand program reach, facilitate community-wide training, and to provide naloxone to those who need it most to save lives. Program evaluation remains crucial to ensuring the program is responsive to local needs across BC.

## ORAL PRESENTATION 22

| Thursday 2 May | 10:30-12:00 | Room 202 |

**Disaster Recovery Triple P - Supporting children's mental health after an emergency - Peggy Govers**

**Co-author:** Catherine M. Lee

**Introduction/program need and objectives:** Children's mental health is at risk after experiencing an emergency event, such as a wildfire or flood, due to impacts on the family, both physically and emotionally. Disaster Recovery Triple P was developed in response to flooding in Queensland, Australia in 2011 and used by the Child and Youth Recovery and Resilience Team to support families. This presentation will provide an overview of the program and its use to date in Canada. Familiarity with this support is intended to increase awareness of the need for and outcomes of parent supports in emergency events.

**Program methods, activities and evaluation:** The program is designed as a 90 minute facilitated session that helps parents learn to deal with their child's reactions to an emergency, addressing why some children have greater difficulty than others and what to do if problems persist. It is based on Triple P - Positive Parenting Program which is used around the globe. This program was used in Calgary after flooding emergencies and in Fort McMurray after the wildfires experienced in 2016.

**Program results or outcomes:** Parental emotional distress and a variety of family environment variables are determinants of to children's mental health after a disaster event (Cobham et. al., 2016). Results from implementation in Queensland, AU, indicated that parents reduced screen time and implemented strategies to decrease stress for themselves and their children. Professionals found the program helpful for their own families and they felt more prepared to support families.

**Recommendations and implications for practice or additional research:** This program provides a valuable tool for organizations supporting families in the wake of emergency situations.

**Interventions to improve household disaster preparedness in the general public: A scoping review - Karen Paik**

**Co-author:** Tracey O'Sullivan

**Introduction/background:** The devastating consequences of disasters have made their significance increasingly apparent in recent years. Disasters include events such as hurricanes, disease outbreaks, or industrial accidents, and can arise from hazards of a natural, anthropogenic, or technological nature [1]. To reduce the adverse impacts of disasters on communities, enhancing preparedness for these events in the general public is crucial. Moreover, the assessment of evidence concerning the efficacy of interventions to improve public preparedness for disasters is essential to facilitate evidence-based practices in disaster risk reduction. In this study, we conducted a scoping review investigating a wide range of interventions designed to improve household or personal preparedness for disasters among members of the general public.

**Methods:** To conduct the scoping review, we followed the 6-stage framework described by Arksey and O'Malley [2]. We designed a literature search strategy to identify relevant publications from the following databases: Medline, EMBASE, PsycINFO, and Scopus. After screening these publications (n=3021) using predetermined inclusion and exclusion criteria, 55 articles were identified for analysis. These articles were charted in a descriptive manner, and quantitative descriptive analyses were performed.

**Results and analysis:** The following categories of interventions were identified: In-person training or education sessions, software or web-based educational tools, awareness campaigns, provision of material preparedness aids, interventions that build economic assets, and interventions that build social assets. Most of the evaluated interventions were found to be effective in improving such measures as risk awareness, knowledge of disaster management procedures, and preparedness-related behavior changes. This implies that, in most cases, engaging in interventions is more beneficial for the participant than not engaging at all.

**Conclusions and implications for policy, practice or additional research:** Synthesized findings suggest future interventions should focus on improving awareness, as well as self-efficacy and community engagement. Further research should focus on the long-term impacts of interventions, as well as the rigor of intervention evaluation.

**Syndromic surveillance of asylum seekers in temporary housing in Montreal - Anna Urbanek**

**Co-authors:** Lavanya Narasiah, Jessika Huard, Isabelle Rouleau, Marie-Pierre Bah, Noémie Savard, Catherine Habel

**Introduction/program need and objectives:** Since 2017, Canada has seen a 4-fold increase of asylum seekers (compared to 2016) resulting from the substantial increase in crossings of the United States-Canada border by foot. Over 90% (18 836 in 2017) cross near Lacolle, Québec, and are re-directed to Montréal overwhelming capacity of housing and health care. The demographics of this population have changed significantly in the past year to include many people with short transit times in the US, arriving mainly from West Africa. Since April 1st 2018, Montréal Public Health (DRSP) has dealt with cases of measles, tuberculosis and varicella among asylum seekers in temporary housing centers. This prompted the implementation of a syndromic surveillance system to rapidly detect and respond to infectious threats and outbreaks.

**Program methods, activities and evaluation:** Different models of syndromic surveillance in refugee and migrant care were consulted. Initially, 14 syndromes were identified as priorities based on the probability of infectious diseases in that population, their severity and the potential for spread in the context of temporary housing. Nurses working at points of care were mandated to collect data and report to the DRSP. Initial training sessions were offered and all the temporary housing facilities were visited to provide recommendations for baseline preparedness and materials.

**Program results or outcomes:** This surveillance at points of care did not generate the desired data and a field epidemiologist was enlisted to critically appraise the system deployed. A new surveillance system was created using existing logs at the temporary housing facilities and data from ambulance transports and the provincial health help line. We will present the results obtained and discuss the challenges encountered.

**Recommendations and implications for practice or additional research:** Syndromic surveillance aims at timely detection and response to infectious threats of public health importance. Other potential benefits include better access to care and improved communication between health care workers and public health professionals.

**Enhancing health systems performance by learning from best practice models of public health and care for refugee population in Canada using an opportunity identification matrix - Sheikh Muhammad Zeeshan Qadar**

**Introduction:** Canada has welcomed more than 40,000 Syrian refugees so far. With the arrival of asylum seekers as well, public health systems must find new ways to respond. The purpose of this presentation is to illustrate the value of an opportunity identification matrix designed as a student project while attending academic health sciences leadership program at Centre for Health Care Innovation (University of Manitoba). This matrix will highlight the range of approaches on screening of infectious diseases, mental health and refugee-centered methodologies adopted across Canada to learn from others.

**Program methods, activities and evaluation:** Activities included a literature scan and consultation with refugee health clinics (stakeholders) to identify different models of care adopted for similar populations. We use the matrix to discuss refugee- centered approaches and screening (e.g. for TB, HIV, Hepatitis, STBBI, Strongyloides & Schistosomiasis) and mental health in these clinics across Canada. This project will target decision makers in various capacities i.e. primary care providers, frontline workers, medical officers of health, program managers, program and policy analysts, health researchers, epidemiologists.

**Program Results:** An opportunity identification matrix is part of broader knowledge translation framework designed to understand differences between jurisdictions and to develop a range of products to translate the

current state of refugee health care. A variety of formats are planned to disseminate knowledge across regions and provinces such as static documents, webcasts and presentations.

**Recommendations:** Identification of refugee-centered models adopted across jurisdictions can act as a key practice driver for future public health models. This framework can offer mutual knowledge exchange opportunities for jurisdictions, which can inform future policy and research in refugee public health.

**Rapid qualitative analyses: bringing community feedback to decision-making in real time during an Ebola outbreak response - Vivienne Walz**

**Co-authors:** Ombretta Baggio, Giulia Earle-Richardson, Christine Prue

**Introduction/program need and objectives:** In August 2018, many partners, including the US Centers for Disease Control and Prevention (CDC) and the International Federation of Red Cross and Red Crescent Societies (IFRC), convened to coordinate and support the response to the Ebola virus disease outbreak in North Kivu, Democratic Republic of the Congo (DRC). IFRC holds an important role at the community level for social mobilization, risk communication and community engagement (RCCE) and safe and dignified burials. CDC provides analytic and strategic support for RCCE efforts in the field. For the first time in an Ebola response, WHO, UNICEF, CDC, and IFRC deployed RCCE leaders to Geneva to optimize early collaboration. This co-location fostered innovation, including a unique partnership between IFRC and CDC, bringing to bear the strengths of each organization. By gathering and analyzing community beliefs, observations, questions and suggestions using an interdisciplinary approach and novel tools, field teams and decision-makers were provided with useful insights.

**Program methods, activities and evaluation:** In mid-August, Red Cross volunteers began to capture community sentiments they encountered during health promotion activities. CDC collaborated with IFRC to rapidly thematically analyze and report results. IFRC and CDC iteratively refined these processes, balancing methodological rigor, clear and interpretable presentation of main messages, and a 24-hour turnaround time.

**Program results or outcomes:** Through this new partnership, nine rapid feedback cycles were completed using tools for more accurate rapid qualitative analysis (standard operating procedures, reporting forms, codebook, dataset and dashboard) to inform the work of the frontline volunteers and support leadership to define the strategic focus and adjust response activities.

**Recommendations and implications for practice or additional research:** Our process for rapidly developing situational awareness using qualitative community feedback data in an outbreak could be adapted for other organizations and future epidemics. This method is one way in which social and behavioural sciences can be rapidly deployed to provide valuable community intelligence in a response and build trust with communities.

## ORAL PRESENTATION 23

| Thursday 2 May | 10:30-12:00 | Room 209 |
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**The Global Governance of Antimicrobial Resistance: A Scoping Review  - Ronald Labonte**

**Co-author:** Arne Ruckert

**Introduction/background:** Antimicrobial resistance (AMR) has been identified as a key health challenge of the 21st century, with an expcted 950,000 global annual deaths from AMR by 2050. Unique to this challenge is that addressing AMR will require a globally coordinated response that employs effective governance meachnisms, while little is currently known about what such mechanims would look like.

**Methods:** We conducted a scoping review of the literature on the global governance of AMR. We followed the scoping review protocol established by Arksey and O'Malley which entails 6 stages including: identifying the research question; searching for relevant studies; selecting studies; charting data; collating, summarizing, and reporting the results; and conducting consultation exercises.

**Results and analysis:** Our findings are organized alongside a deductively derived coding structure, and distinguish between proposed structures for global governance of AMR, and how such structures intersect with competing policy solutions. We aslo identify barriers of effective governance mechanism, inlcuding weak health systems, lack of compliance by actors, weakly regulated drug markets, and competing interests from different sectors. Our findings suggest that effective global governance for AMR will require a clear mandate and binding global commtments for actions (such as a global multi-stakeholder agreement) across human and animal health, agriculture, food, and the environment, building whenever possible on existing governance structures that facilitate inclusion and provide policy flexibility.

**Conclusions and implications for policy, practice or additional research:** Our scoping review will inform health practitioners and policy makers when devising a global governance strategy for how to effectively address antimicrobial resistance through global cooperation.

**An Analysis of Patient and Visit Characteristics Affecting Length of Stay in the Emergency Department - Iwona Bielska**

**Co-authors:** Kelly Cimek, Jean-Eric Tarride

**Introduction/background:** Increasing emergency department (ED) patient wait times represent a substantial challenge for health care systems. Longer ED wait times are related to a greater risk of adverse outcomes, patient dissatisfaction, ambulance offload delays, and stress levels among health professionals. ED wait time performance in Ontario is measured as the 90th percentile length of stay from triage to discharge disposition. For complex patients (high acuity and admitted patients), the provincial target is 8 hours. The objective of this study was to identify the patient and visit characteristics related to ED visit target status among complex patients.

**Methods:** A secondary analysis of 2014-15 fiscal year data on ED visits within the Hamilton Niagara Haldimand Brant Local Health Integration Network (HNHB LHIN) in southern Ontario (population: 1.4 million) was undertaken. Information on patient and visit characterctics was obtained from the National Ambulatory Care Reporting System. Visits were classified as within target (≤8 hours) or above target (>8 hours). Logistic regression analyses were carried out to determine the association between the charactertistics and visit status.

**Results and analysis:** There were 551,394 ED visits of which 405,490 were among complex patients. 81% of the complex patient visits were within target. The odds of not meeting the target significantly increased with age, triage level, ambulance arrival, registration in ED between the hours of 21:00-5:59, receiving home care services, and hospital admission. Compared to patients who met the target, patients who did not meet the target were

more likely to be diagnosed with blood diseases (OR: 13.2, 95% CI: 11.9-14.8), endocrine/metabolic diseases (OR: 4.2, 95% CI: 3.9-4.6), and neoplasms (OR: 3.2, 95% CI: 2.8-3.7).

**Conclusions and implications for policy, practice or additional research:** This study evaluated factors related to long ED wait times among complex patients. Further research should investigate possible hospital flow issues that impact ED length of stay, as well as provide evidence-based recommendations to addressing the situation.

## A citizen science approach to decrease residence-based fall-related injuries - James Chauvin

**Co-author:** Nancy Edwards

**Introduction/program need and objectives:** Residence-based falls are the leading cause of injury-related hospitalizations, especially among seniors, and contribute substantially to health care costs. Indoor and outdoor stairs are locations of particular concern, accounting for a higher proportion of injurious falls than falls that occur in other locations. Advocacy efforts to strengthen related national building code recommendations in Canada (e.g. improved stair design, installing handrails on stairs) have met with limited success, in part due to epidemiological data gaps, directly linking step geometry to the incidence of falls. It is our contention that a citizen science approach may be an effective means to address data gaps and improve consumer demand for safer residential environments and influence the Canadian building code decision-making process. We will present a collaborative citizen science approach that is intended to yield additional data on residence-based falls hazards (stairs) while also increasing public demand for safer home environments and improved regulations.

**Program methods, activities and evaluation:** The progress-to-date of the development of a citizen science initiative will be presented. Partnerships with injury prevention organizations and industry, an easy-to-use checklist for consumers to assess the safety of indoor and outdoor stairs and development of an app will be discussed. The checklist and app provide tips on improving stair safety and suggestions for consumers to advocate for safer stairs. Participating consumers will be asked to provide anonymized data (to be housed at CPHA) with the results of their stair and falls-related injury assessment and will be prompted to become involved in advocacy strategies to prevent residence-based falls-related injuries (e.g. provide input during the public consultation process for building codes, request home builders to offer options for safer stairs for new homes etc.).

**Program results or outcomes:** This citizen science initiative is in the developmental phase. The purpose of the presentation is to discuss the results-to-date and to solicit audience input on this approach.

**Recommendations and implications for practice or additional research:** A citizen science approach may be an important means to (1) improve residence-based falls-related injury data collection, and (2) create/strengthen consumer demand for safer home environments and for improved residential building codes.

## Clinical Public Health - Bernard Choi

**Co-authors:** Barry Pakes, Rose Bilotta, Kathryn Graham, Neeru Gupta, Arlene S. King, Helen Dimaras, Ann L. Fox, Beth Rachlis, Xiaolin Wei, Shaun K, Morris, Peter Selby, Bart Harvey, Brian Gibson, Donna L. Reynolds, Shafi Bhuiyan, Natasha Crwocroft, Onye Nnorom, Ross Upshur

**Introduction / Background:** To reduce health inequities in populations a collaborative, innovative, and multi-disciplinary framework is necessary. Most universities have separate faculties with minimal collaboration to address these complex problems. The Clinical Public Health (CPH) Division was established at the Dalla Lana School of Public Health, University of Toronto, Canada to foster integration of primary care, preventive medicine and public health in education, practice and research. We surveyed the clinicians, researchers and public health professionals in the CPH Division to assess their understanding of this concept and its utility in fostering collaboration to address current public health problems and population health inequities.

**Methods:** We conducted a two-wave anonymous survey of the active faculty of the CPH Division. Wave 1 participants were asked to define CPH, the need for a common definition, and the potential positive and

negative aspects of affiliation under CPH. Wave 2 participants were provided a synthesis of Wave 1 results and asked to rank each proposed definition.

**Results and analysis:** The response rates for the first and second waves were 25% (47 of 187) and 22% (42 of 192), respectively. Definitions of CPH from Wave 1 were grouped into six common themes. Positive perceptions included associating CPH with interdisciplinary collaboration, new fields and insights, forward thinking and innovation. Negative perceptions included CPH being a confusing term, too narrow in scope or too clinical. Most interpretations of CPH included collaboration among clinical, public health and other professionals, with "the intersection of clinical practice and public health" most highly ranked by the participants.

**Conclusions and implications for policy, practice, or additional research:** To develop capacity to address complex problems in public health, more needs to be done to engage members of an interdisciplinary division in Clinical Public Health and reach consensus regarding the definition. In a modern society, Public Health must deal with real-world complex problems, including "wicked problems" and "megatrends". These problems cannot be solved by any single discipline and we must use an interdisciplinary approach. This study describes a promising structure for collaboration of clinical professionals and public health professionals to tackle complex health and public health problems.

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**Building organizational evidence-informed decision making capacity: Expansion of the online Evidence-Informed Decision Making Skills Assessment Tool - Claire Howarth**

**Co-authors:** Emily Clark, Heather Husson, Maureen Dobbins

**Introduction/background:** In 2017, the National Collaborating Centre for Methods and Tools (NCCMT) launched a 20 question Online Evidence-Informed Decision Making (EIDM) Skills Assessment to identify strengths and gaps in EIDM knowledge and skills. The NCCMT is developing an enhancement to this tool to allow organizations to customize the assessment to their needs.

**Methods:** There were four phases in the development of the customized functionality of the Online EIDM Skills Assessment: 1) consultation with NCCMT staff members as well as the NCCMT's web developer to brainstorm the customization options and to review the web development feasibility; 2) key informant interviews with five Canadian public health professionals; 3) a second consultation with the workgroup from the first phase on the key informant feedback to determine the final customizable options; 4) testing 10 scenarios involving different customizations of the Skills Assessment tool.

**Results and analysis:** All key informants were interested in the custom functionality and could see its usefulness. The interviewees also provided suggestions for the report, questions, and how to access this tool. For example, interviewees noted it was important to have both individual and group scores in the final report and that this enhancement could be used to measure a change in EIDM knowledge and skills.

The final customizable options include: a choice between randomized or non-randomized questions; an option to choose a subset of questions; receive an anonymous report or one with identifying information.

**Conclusions and implications for policy, practice or additional research:** The custom assessment functionality of the Online EIDM Skills Assessment Tool will be made available to public health organizations from across Canada. It can be used to identify the EIDM professional development needs of a group of people as well as for orientation of new staff. This enhancement will be useful for public health organizations across Canada considering the increasing emphasis on incorporating EIDM into public health practice.

**ORAL PRESENTATION 24**

| Thursday 2 May | 10:30-12:00 | Room 210 |

**"Community helps contribute to our mental health": Development of a health resiliency intervention for Métis children - Elizabeth Cooper**

**Co-author:** Cindy Jardine

**Introduction/background:** Health disparities and experiences of trauma among Métis peoples are disproportionately high compared with the general population, yet they remain under-represented within health research. With the knowledge that early health interventions have the potential to create meaningful change, members of the Fraser Valley Métis Association, British Columbia, approached researchers at the University of the Fraser Valley to co-develop an intervention that would explore ways to improve health resiliency among children in the region.

**Methods:** An innovative community-led development approach was used to plan a health resiliency intervention, piloted in August, 2018, based on Métis ways of knowing. Métis participants were recruited through posters and targeted emails to community organizations. Adult participants (n=15) were involved in the design, facilitation, and evaluation of the intervention, a health and culture day camp. Children, ages 8-12 (n=10) participated in the week-long day camp. Arts-based, sports-based and discussion activities allowed participants to explore health and wellness in a culturally responsive way. Transcribed audio files, photographs, and field notes were analyzed thematically.

**Results and analysis:** A key research finding was the need for health education activities to simultaneously provide: 1) an opportunity to apply skills; 2) contemporary/relevant examples; and 3) a concrete link to Métis cultural values. Often health information for Indigenous peoples is not Métis specific and experiences/examples are historic or abstract. When these three aspects are included in health education, adults and children noted increased confidence in their capacity to follow through with positive health decisions.

**Conclusions and implications for policy, practice or additional research:** gramming conducted within communities needs to employ a community-led development approach. This approach improves leads to the development of sustainable public health interventions within community contexts. It also allows for confidence in the identification of culturally responsive health resiliency interventions designed to improve health and wellbeing.

**Promoting healthy urban environments for young Indigenous peoples: The case of M'Wikwedong Indigenous Friendship Centre - Carlos E. Sanchez-Pimienta**

**Co-author:** Jeff Masuda

**Introduction/background:** Ethical tensions in Canadian health promotion regarding Indigenous health have received limited attention. Indeed, settler assumptions about the circumstances of Indigenous peoples living in urban centres have tended to shape policy responses rather than the expertise of Indigenous peoples themselves. This paper aims to critically examine health promotion in the context of the city by bringing attention to the place of an urban Indigenous service provider in the self-perceived health of Indigenous youth.

**Methods:** I partnered with M'Wikwedong Indigenous Friendship Centre in Owen Sound, ON. In May 2017, I started volunteer work at M'Wikwedong to develop relationships and establish a research team. From January to August 2018, I worked with five Indigenous youth co-researchers through a digital storytelling process. We inquired youth co-researcher's experiences with M'Wikwedong and created four videos (1-4 minutes). There were 13 team meetings and 17 individual video-coaching sessions. We used interviews and note-taking to document data. I performed thematic analysis on interview transcripts, notes, and video scripts followed by discussions of emergent interpretations with youth co-researchers.

**Results and analysis:** Four thematic categories emerged regarding M'Wikwedong's work in Owen Sound as perceived by youth co-researchers. The first highlights the connection with places for Indigenous youth to go. The second focuses on the promotion of safety in urban environments. The third tackles the access of Indigenous ways of knowing and living in the city. The fourth emphasizes the supports youth received to identify their own health priorities and to carry on their own projects.

**Conclusions and implications for policy, practice or additional research:** Using environmental repossession as a conceptual lens, this project brings attention to the work of M'Wikwedong in reclaiming Indigenous lands and ways of life for youth living in a Canadian city. M'Wikwedong's health promotion work illustrates a distinctive epistemic approach: from an onus on 'increasing control over health' to an onus on 'fostering connection' as inherently health promoting.

## Is Participation in Out-of-School Programs Linked to Students' Health, Social and Educational Outcomes? - Jennifer Enns

**Co-authors:** Marni Brownell, Nathan Nickel, Alan Katz, Joykrishna Sarkar

**Introduction/background:** Out-of-school programs for grade K-12 students support healthy behaviours, boost academic achievement, and strengthen social skills. The Boys and Girls Clubs of Winnipeg (BGCW) have been offering out-of-school programs to children and youth for 40+ years; however, little is known about how participation influences their health, social, and educational outcomes.

**Methods:** We linked BGCW data to the individual-level, population-based Data Repository at the Manitoba Centre for Health Policy. BGCW participation records for children born 1987-2010 were linked with administrative data from the healthcare system, education system, and social services. The comparison group of non-participants was matched on school year and 5-digit postal code. Outcomes of interest include rates of health services use, teen pregnancy, grade repetition, high school graduation, enrollment in post-secondary institutions, involvement with the justice system, and receipt of income assistance.

**Results and analysis:** We first examined students attending the Community Schools Investigator (CSI) summer enrichment program, an academic and recreational program that aims to combat learning loss for children in low-income neighbourhoods. After one summer of CSI, participants (n=970) were significantly more likely to repeat a grade than the matched comparison group (n=783) (5.4% CSI students repeated a grade [95% CI 3.9, 6.8] vs 2.76% comparison students [95% CI 2.20, 3.32]). However, the likelihood of CSI students repeating a grade dropped to the level of the comparison group after two or more years of participation in CSI (2.91% CSI students repeated a grade [95% CI 1.26, 4.56]). Ongoing analyses are examining how participating in CSI and other BGCW programs is linked to health, social and other educational outcomes.

**Conclusions and implications for policy, practice or additional research:** Our findings suggest that engagement in a BGCW out-of-school summer program contributes to better educational outcomes for low-income students. Using the Data Repository, we can examine additional outcomes across multiple sectors to demonstrate how out-of-school programs help young people achieve their full potential.

## Evaluating sustainability of the Healthy Kids Community Challenge: Findings from a survey with community stakeholders across Ontario - Rachel Laxer

**Co-authors:** Michelle Vine, Daniel Harrington, Heather Manson

**Introduction/background:** The Healthy Kids Community Challenge (HKCC) was a 4-year community-based health promotion intervention to improve child health behaviours. Local Project Managers led the HKCC in each community with support of a convened Local Steering Committee (LSC), comprised of cross-sectoral partners. As part of the HKCC process evaluation, an LSC survey was distributed to learn about HKCC implementation and sustainability. The objective was to identify sustainability beyond HKCC's end (September 2018).

**Methods:** LPMs from 39 municipally-funded HKCC communities were invited via email request to complete an online survey (surveys@PHO), and to forward to all members of their LSC (September/October 2018). Surveys measured knowledge of program implementation, community characteristics, structures and partnerships, LSC functioning, and program sustainability.

**Results and analysis:** There were 88 responses from 27 communities (27 LPMs, 61 LSCs). Both quantitative and qualitative data analysis are currently underway. Preliminary results suggest that most respondents felt that trust among partners and collaboration on spin-off projects increased, coordination among partners improved, effective communication channels among partners formed and that those partnerships are likely to continue, and that there was a shared HKCC-related vision and goals among partners. Responses to measures of sustainability (nine questions) suggest that although only 50% of respondents indicated having a sustainability plan, potential for sustainability was demonstrated by the integration of HKCC activities into partner organizations' operations, increased community awareness of the HKCC, strong public support of the HKCC, and high community member engagement with the HKCC. Successes and challenges to implementation and sustainability will also be presented.

**Conclusions and implications for policy, practice or additional research:** The HKCC was well-received by community stakeholders, and there is potential for sustaining some HKCC initiatives beyond program funding. Community-based public health interventions are costly; understanding factors related to implementation, partnerships, and sustainability are important for recommendations for policy and practice to improve child health behaviours and outcomes.

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**"We saw the most success when there was true collaboration": A process evaluation to evaluate implementation of the Ontario Healthy Kids Community Challenge program using key stakeholder interviews - Michelle M Vine**

**Co-authors:** Rachel E Laxer, Daniel W Harrington, Heather Manson

**Introduction/background:** The Healthy Kids Community Challenge (HKCC) was a community-based, multi-level EPODE intervention to improve obesity-related health behaviours of children aged 0-12 in Ontario. HKCC themes were related to physical activity, water consumption, fruit and vegetable consumption, and reducing screen time. The objective of the process evaluation was to explore factors contributing to implementation of the HKCC program, drawing on a social ecological framework.

**Methods:** Seventeen in-depth, semi-structured telephone interviews were undertaken with key stakeholders involved in HKCC program implementation from 9 HKCC communities between September and October 2018 (time two). Interviews were transcribed for thematic analysis using NVivo 10 (QSR) software. Analysis is ongoing; results will be examined for comparison with interview data collected during Winter 2016-2017.

**Results and analysis:** Integral components of successful HKCC implementation included a dedicated local project manager and a lead agency, continued funding, collaboration and partnerships across sectors, and consistency in messaging. Preliminary results indicate that: schools were a valuable setting in which to reach kids with programming; and, social marketing strategies included radio and bus advertisements, Facebook, Twitter and HKCC webpages. Results provide evidence that Indigenous populations were often hard to reach, transportation was a barrier to accessing programs in rural communities, program sustainability beyond the end of the program was in question, and few communities were successful in forming private partnerships.

**Conclusions and implications for policy, practice or additional research:** Overall, key stakeholders felt that the HKCC program was successfully implemented across Ontario. Despite this, some notable challenges experienced at the local level deserve further exploration. Facilitators and barriers to program implementation were identified and can help inform the development of future community-based, multi-level interventions to support health behaviour change in children.

**ORAL PRESENTATION 25**

| Thursday 2 May | 10:30-12:00 | Room 213 |

**Operationalizing the Canadian Suicide Surveillance Indicator Framework - Melissa Baker**

**Introduction/background:** In 2019, the Public Health Agency of Canada will launch the Canadian Suicide Surveillance Indicator Framework (CSSIF) Data Tool.

**Methods:** The CSSIF Data Tool is a set of indicators for suicide-related outcomes, risk and protective factors grouped across four domains (individual, family, community and society). Each indicator has a corresponding measure and may be explored by key demographic and socio-economic variables. Data sources include the Canadian Community Health Survey, Canadian Vital Statistics- Death Database, and the National Ambulatory Care Reporting System.

**Results and analysis:** In Canada, every year there are approximately 17.4 suicide deaths per 100,000 males, compared to 5.7 suicide deaths per 100,000 females. The annual hospitalization rate for self-inflicted injury (approximately 50.2 per 100,000 population overall) is lower among males (35.7 per 100,000) compared to females (65.1 per 100,000). From the population aged 15 years and older, 12.3% reported ever having serious thoughts of suicide. 3.3% reported ever having attempted suicide (2.4% of males and 4.1% of females), with the largest proportion (5.5%) in the 15-19 age group, and the lowest (1.2%) in the 65 and older age group. The Data Tool also includes key risk and protective factors such as self-rated mental health, with breakdowns for sub-populations at higher risk. The lower the income quintile, the higher proportion of Canadians aged 15 years and older who perceive their mental health to be only fair or poor (10.7% of those in the lowest income quintile compared to 2.9% in the highest income quintile); this trend is also found with education level (10.5% of those in the lowest education level compared to 2.7% in the highest education level).

**Conclusions and implications for policy, practice or additional research:** The CSSIF will make the most current statistics publicly available in order to inform decision-making and support the development and evaluation of effective prevention programs and interventions.

**The Application of sex and gender-based analysis in support of mental health and psychological well-being in the workplace - Ivy Bourgeault**

**Co-authors:** Vivien Runnels, Mary Bartram, Jelena Atanackovic

**Introduction/program need and objectives:** Building and sustaining healthy, safe, inclusive and productive workplaces is an emerging legal duty and major policy thrust of the Government of Canada. Guidelines have been developed to help accomplish this, such as the *National Standard of Canada for Psychological Health and Safety in the Workplace.* While the literature has shown that there are sex/gender-based differences in contexts, employees, workplace experiences, and health outcomes, the application of sex/gender-based analysis (SGBA) to inform approaches to promote mental health and psychological well-being in the workplace is lacking. The objectives of this project are to develop capacity to apply SGBA to mental health and psychological well-being in the workplace.

**Program methods, activities and evaluation:** A number of approaches are being utilized to ensure a well-informed approach to the application of SGBA. These include searches and reviews of the academic and grey literature, including professional practice and occupational health and safety; presentations and in-depth discussions with workplace wellness teams; development of a SGBA lens to one program area; and knowledge dissemination activities including webinars, workshops and conferences.

**Program results or outcomes:** The project is raising awareness of sex and gender and the usefulness of SGBA as a critical tool in the workplace. These are first steps towards building workplace capacity. The project is providing evidence for change: why women, men and gender-diverse people are more or less vulnerable, or face

greater risk of being exposed to workplace stress and illness; and how sex and gender intersect with other identities (intersectionality). Some populations respond differently, for example, in help-seeking.

**Recommendations and implications for practice or additional research:** Workers will have improved access to gender-sensitive training and education, and knowledge, skills and tools (capacity) to design SGBA+ training and education programs. Employee acceptance, utilization and satisfaction with the means and tools being developed will be carried out through interviews and focus groups.

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**YMCA Mindfulness Programs: early intervention for youth experiencing anxiety - Samantha Hartley-Folz**

**Co-authors:** Sarah Blackmore, Anuschka Naidoo

**Introduction/program need and objectives:** The YMCA Mindfulness Programs aim to fill a gap in mental health services by offering prevention and early-intervention programs for youth experiencing mild-moderate symptoms of anxiety. These mental wellness programs increase social connectedness through the group-based model while helping youth to change their relationship to anxiety - reducing symptoms and increasing coping strategies.

**Program methods, activities and evaluation:** YMCA Mindfulness Programs are being delivered across BC with the aim to support up to 2,000 youth in 20 communities by late 2020. The delivery model includes program implementation at the 5 YMCA's across BC as well as partnerships with other community-based organizations in smaller communities. There are 3 versions of the program: (1) Teen Mindfulness Group supports teens 13-17; (2) Youth Mindfulness Group supports young adults 18-30; and (3) Y Mind Medicine, which will be piloted in 5-7 BC Indigenous communities in 2019 for 18-30. The YMCA Mindfulness Programs are grounded in the principles of Acceptance & Commitment Therapy (ACT) and mindfulness. The program is delivered weekly over 6-10 weeks depending on the age of participants. The Mindfulness Programs are being evaluated by the McCreary Centre Society through pre- and post- evaluations that measure the impact of the program on reducing anxiety, increasing well-being, increasing mindfulness, and increasing psychological flexibility.

**Program results or outcomes:** Results from the pilot programs delivered from 2015 to 2017, demonstrate that program participants experience reduced anxiety from the moderate to the mild range, increase their overall well-being and social connectedness, and increased psychological flexibility.

**Recommendations and implications for practice or additional research:** Early results from the YMCA Mindfulness Programs indicate that early intervention mental health programming is beneficial for youth struggling with mild-moderate anxiety. It is recommended that funding be allocated to prevention and early-intervention mental health programming through community-based organizations to address existing gaps and move beyond crisis response to mental health.

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**The Status of Mental Health in Ottawa Report: How Ottawa Public Health developed their first local mental health surveillance report - Benjamin Leikin**

**Co-author:** Katherine Russell

**Introduction/background:** One of the priorities within Ottawa Public Health's strategic direction was to develop a local mental health surveillance report. Working with mental health and community experts, OPH worked to produce their first local surveillance report describing the mental health and well-being of Ottawa residents. Using the findings from the report, OPH then engaged the community to identify opportunities for policy and programs to improve the mental health of residents and foster a resilient community.

**Methods:** With advice from 15 expert partner organiztions, OPH used the Public Health Agency of Canada's (PHAC) Positive Mental Health Surveillance Indicator Framework (PMHSIF) as a basis to guide and organize their selection of indicators for a mental health report. OPH is currently conducting community engagement sessions with workplaces, community groups, health professionals and individuals with lived and living experience to assess gaps and oppurtunities for policy and practice.

**Results and analysis:** Important themes that emerged from the data as factors that could have impact on Ottawa residents' mental health included the need to build resilience, family relationships, and social connectedness, and to address health equity and stigma in our community. Indicators that address the burden of mental health illness and substance use were also included and provided oppurtunities for practice change.

**Conclusions and implications for policy, practice or additional research:** This Report demonstrates how local health units across Canada can apply the PMHSIF for mental health surveillance at the local level, and how the data from this surveillance report can influence policy and program development for mental health promotion. The results from the community consultations will be shared, and coupled with the data we will show how policies and programs have been influenced and shaped at OPH and across the region.

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**Measuring positive mental health in Canada: A process for measure selection - Heather Orpana**

**Co-authors:** Emily Wolfe Phillips, Kim Yurkowski, Justin Lang

**Introduction/background:** The Public Health Agency of Canada is responsble to promote the health and well-being of Canadians of all ages, which includes improving physical and mental health. In order to monitor progress, a valid, reliable and feasible measure of the positive mental health status of Canadians is needed. The aim of this study was to describe our measure selection process.

**Methods:** We used an operational definition of positive mental health, which includes emotional, psychological, and social well-being. Because population surveys already include emotional and social well-being measures, our focus was to identify a measure that included, at minimum, the concept of psychological well-being. We conducted an environmental scan of positive mental health measures used in 8 countries, reviewed 3 recent systematic reviews of positive mental health and/or well-being measures, and conducted an electronic search of PsychTests. Exclusion criteria included: more than 14 items, only 1 item, visual scales, focus on quality of life and/or negative states (e.g., depression), deficit-based items, focus on a specific population or domain, and/or did not measure psychological well-being. We engaged with the end-users of these data throughout the measure selection process.

**Results and analysis:** Four measures met our inclusion criteria: the Flourishing Scale; the Warwick Edinburgh Mental Well-being Scale [WEMWBS]; the Short Warwick Edinburgh Mental Well-being Scale [SWEMWBS]; and the ICEpop CAPability measure for Adults [ICECAP-A]. These four measures were discussed with policy and program stakeholders, and a consensus on a measure to pilot was achieved.

**Conclusions and implications for policy, practice or additional research:** The WEMWBS was chosen based on its successful national implementation in several countries, feasibility for implementation, and well-documented measurement properties. Integrating the WEMWBS into population surveys will enhance the surveillance of positive mental health in Canada.