



UNIVERSITY OF TORONTO  
DALLA LANA SCHOOL OF PUBLIC HEALTH

# Research and Practice Day 2019

## PhD 3-Minute Theis Competition

Friday November 15, 2019 | 12:30-1:30pm | MSB 2172

**Jessica Wong - PhD Epidemiology**

“Non-pharmacological Management of Soft Tissue Disorders of the Shoulder: A Clinical Practice Guideline from the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration”

**Karima Joy - PhD Social and Behavioural Health Sciences**

“Bereavement accommodation for workers in precarious employment”

**Madison Giles - PhD Social and Behavioural Health Sciences**

“Let's talk about sex ed: Ontario students' experiences of, and needs for, sexual health education.”

**Michelle Amri - PhD Social and Behavioural Health Sciences**

“An investigation of health equity discourses of the World Health Organization and translation to policy and practice in the global south”

**Nakia Lee-Foon - PhD Social and Behavioural Health Sciences**

“In Google We Trust: Exploring Young African, Caribbean & Black Men Gay, Bisexual+ Men's Evaluation of Sexual Health Information Sources”

**Samantha White - PhD Epidemiology**

“Heroin Abuse among IDU and Local PO Dispensing Levels in Ontario Cities”

**Tiffany Fitzpatrick - PhD Epidemiology**

Community-based antibiotic prescribing attributable to respiratory syncytial virus and other common respiratory viruses: a population-based study of Scottish children, 2009-2017

## **Jessica Wong - PhD Epidemiology**

### **“Non-pharmacological Management of Soft Tissue Disorders of the Shoulder: A Clinical Practice Guideline from the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration”**

**Objective:** To assess the effect of self-reported low back pain (LBP) on health care utilization and costs among adults in Ontario, and assess whether this effect differs between those with and without self-reported mental health symptoms.

**Methods:** A dynamic population-based cohort study was designed using linkages of survey and administrative data housed at ICES. The Ontario sample of the Canadian Community Health Survey (5 cycles from 2003-2012; ~130,000 eligible respondents) will be used to define the cohort of adults with self-reported LBP with and without mental health symptoms. Health care utilization and costs will be assessed by linking health administrative databases. Follow-up ranges from 6-15 years, until March 31, 2018. Socio-demographic (e.g., age, sex, education) and health behaviour (e.g., comorbidities, physical activity) factors will be considered as potential confounders. Poisson and linear (log-transformed) regression models will be used to assess the association between LBP and health care utilization and costs. Effect modification will be assessed with mental health symptoms on the additive and multiplicative scales. Sensitivity analyses will be conducted to assess the impact of misclassification and residual confounding.

**Public health impact/implications:** LBP is a high prevalence, high burden condition that we know very little about from a Canadian health system perspective. Health programs could target high-risk groups to reduce the burden of chronic conditions, but these priority groups for LBP have not been defined. Studying the joint effects between LBP and mental health symptoms will allow us to determine the burden of these two prevalent conditions on health care utilization and costs. Study results will guide future work in targeting potentially modifiable factors for priority groups, while tailoring resources and health services to improve population health and quality of care for LBP. This project guides future research to assess trajectories of health care use in high-risk groups for LBP.

## **Karima Joy - PhD Social and Behavioural Health Sciences**

### **“Bereavement accommodation for workers in precarious employment”**

The current Canadian social context offers minimal space to honour bereavement as a part of the human condition, compelling some workers to suppress their grief and prematurely resume former levels of productivity. As previous efforts to conceptualize a bereavement care agenda have not considered precarious employment, I intend to address this gap in the literature by doing formative work that focuses on the intersection of bereavement and precarious employment for Canadian workers. The focus on workers in precarious employment is important because such workers are vulnerable to loss of employment, financial security, and/or the exacerbation of mental distress. The objective of my research is to generate multi-scalar knowledge on the everyday experiences of bereavement in precarious employment in Canada, accounting for larger socio-political forces. I propose using a multi-scalar approach employing critical qualitative research in conjunction with feminist ethics, interviews, and policy analysis to address the following questions: 1) How is bereavement constructed in Canadian systems and labour policies for bereaved workers in precarious employment?; and 2) What are the implications for how workers in precarious employment experience bereavement? Given the persistence of precarious employment, Canada's aging population, and the impending death boom, generating knowledge on bereavement experiences in the context of precarious employment can aid in the development of bereavement legislation and public health strategies that reflect the experiences and needs of bereaved workers in Canada's changing socio-economic landscape. Preliminary findings will be discussed.

### **Madison Giles - PhD Social and Behavioural Health Sciences**

“Let's talk about sex ed: Ontario students' experiences of, and needs for, sexual health education.”

Ontario's elementary sexual health education ('sex ed') curriculum has changed once again, this time to a version that mixes elements of the 1998 version with the 2015 version. It is unknown whether this new version addresses student needs because students have yet to be consulted. As a result, there have been numerous social and political responses, including student protests and human rights tribunals. These responses accompany a growing body of literature that indicate significant gaps in student's basic sexual health knowledge and dissatisfaction with 'sex ed' programming. To address this unfolding health issue, I am to work with students to explore their experiences of, and needs for 'sex ed'. Of paramount importance are subgroups of youth that are at the greatest risk of adverse sexual outcomes due to systemic inequities, such as youth who identify as LGBTQ+. My research questions are: 1) What are student's experiences with Ontario's 'sex ed' curriculum? 2) What are students' needs and preferences for 'sex ed'? 4) How does the 'sex ed' curriculum differentially impact sub-groups of students? The theoretical approach of the Sociology of Childhood will be used as it centres on the agency and capacity of youth. I will use arts-based methodologies as they offer a way to catalyze meaningful dialogue with youth around sensitive topics. I will form a Youth Advisory Group to help inform each stage of the project and the knowledge mobilization strategy will employ innovative forms of dissemination (i.e., art galleries, social media, etc.). Novel research findings on youth's needs may help inform future curriculum revisions and will create a visual record of student's experiences with 'sex ed'. Ontarian youth deserve 'sex ed' that reflects their unique needs and experiences, and as such, deserve to be heard in relation to the 'sex ed' curriculum.

### **Michelle Amri - PhD Social and Behavioural Health Sciences**

“An investigation of health equity discourses of the World Health Organization and translation to policy and practice in the global south”

Achieving equity in the context of health has become a central objective for the WHO since the start of their “health for all” agenda, exemplified through the Declaration of Alma-Ata (WHO, 1978). Given the WHO's central focus on “health for all”, a Commission on the Social Determinants of Health (CSDH) convened from 2005 to 2008 (CSDH, 2008) to dramatically shift the understanding of inequitable and avoidable health differences to being a result of socioeconomic, political, and historical causes (Plamondon, Bottorff, Caxaj, & Graham, 2018). However, there is little consensus on the definition of “health equity”, “health inequalities”, or “health disparities” (e.g. Paula Braveman, 2006; P Braveman & Gruskin, 2003). In 1992, Margaret Whitehead provided a seminal definition for equity in health, as “differences which are unnecessary and avoidable, but in addition are considered unfair and unjust” (Whitehead, 1992). Despite this definition, substantial differences in how health equity is defined remain (Lucyk & McLaren, 2017; Solomon & Orridge, 2014), and these varying underlying discourses are problematic for policy. Post-CSDH, stakeholders may be approaching equity in health from various discourses and with limited consideration of the global south, which may lead to ill-informed policy decisions and misdirected action. In fact, despite a heightened awareness and focus on equity at the global stage, Plamondon et al. (2018) found that half of post-CSDH empirical research articles contradict the CSDH's principles for action. Therefore, more work is needed to better understand the WHO's underlying discourses of equity within the last decade to potentially eliminate misunderstandings and move towards a shared understanding to bridge action (e.g. in measurement and accountability (P Braveman & Gruskin, 2003)). Therefore, my research examines both the WHO's conceptualization of equity and how this translates into health policy in cities of the global south through examination of the Urban HEART initiative.

### **Nakia Lee-Foon - PhD Social and Behavioural Health Sciences**

“In Google We Trust: Exploring Young African, Caribbean & Black Men Gay, Bisexual+ Men's Evaluation of Sexual Health Information Sources”

Literature exists around how, where, and when youth seek sexual health information. However, minimal research has investigated how young African, Caribbean and Black-Canadian gay, bisexual and other men who have sex with men (YBgbMSM) identify and evaluate information gathered from these information sources. As adolescence marks a critical period in health-related skill development, and HIV-positive rates among Black gbMSM continue to rise in Ontario, addressing this research gap is imperative. This study highlights data from a constructivist grounded theory study that explored the state of YBgbMSM's sexual health literacy (SHL) in Toronto. Sexual health literacy refers to individuals' sexual health knowledge and its application within sexual and social contexts. The study was informed by a blended intersectional-socioecological model in order to explore the interplay between participants' interconnected identities (e.g. race, sexual orientation, etc.) and the socio-structural (e.g. socioeconomic status, etc.) factors that impact their SHL. Participants underwent one-on-one semi-structured interviews. Twenty-two young (15-31 years), gay (n=16), queer (n=2), heterosexual (n=1), pansexual (n=2), non-identified (n=1) YBgbMSM were recruited. Interviews were recorded, transcribed verbatim and inputted into NVivo12, a qualitative data analysis software. As per the grounded theory methodological approach, the transcripts were analyzed in tandem with data collection. Findings revealed participants primarily sought sexual health information from friends, the internet and service providers. Participants used distinct, yet consistent strategies to evaluate the accuracy of these information sources. For instance, strategies included a multilayered and 'real world' verification for information from the internet. These young men are actively engaged in enhancing their SHL and have unique strategies to evaluating sexual health information sources. This study highlights a need for research that moves from the identification to the evaluation of these sources. It is one step towards identifying ways to further enhance sexual healthcare services and online resources for YBgbMSM.

## Samantha White - PhD Epidemiology

### “Heroin Abuse among IDU and Local PO Dispensing Levels in Ontario Cities”

**Background:** Amid Ontario’s growing opioid crisis, heroin abuse remains widespread in select urban areas and contributes to a large proportion of opioid overdoses provincially. Compared to prescription opioids (POs), heroin is especially hazardous to abuse since it is illicitly manufactured and frequently consumed by injection. PO abuse can also transition to heroin if access to preferred POs is impacted via diversion, dispensing or prescribing. However, the dynamics between preferences for heroin and local PO saturation (in this case, dispensing) are not well understood. **Methods:** Heroin abuse data were gathered from PHAC’s I-Track surveillance system while PO dispensing data were from the Ontario Drug Benefit (ODB) claims database. Using an unmatched repeated cross-sectional design, datasets spanning 2003 to 2011 were merged. The hierarchical structure consisted of individual-level I-Track responses nested within year and again within five city-level (Kingston, London, Sudbury, Thunder Bay and Toronto) dispensing rates. Mixed-effects multilevel logistic regressions were used to examine relationships. **Results:** Almost one third (30.5%) of I-Track respondents abused heroin in the previous six months with marked variation by city, from roughly half of Toronto participants (51.0%) to about one in twenty (5.2%) in Thunder Bay. The final multivariate model for heroin abuse contained morphine dispensing (OR=1.04, p=0.011), present age (OR=0.99, p=0.045) and age of first injection (OR=0.97, p≤0.001). That is, considering age and age of first injection, heroin abuse was 4.4% more likely among IDU with each increase in annual morphine dispensing rates in their respective cities. **Implications:** The connection between heroin abuse and dispensing rates of chemically similar morphine, but not other POs, reflects a substitution effect for specific opioid types regardless of whether illicit or prescription. Precautions should be taken to prevent heroin abuse and establish harm reduction strategies before expected interference to local dispensing levels of any chemically analogous POs (particularly morphine).

## Tiffany Fitzpatrick - PhD Epidemiology

### “Community-based antibiotic prescribing attributable to respiratory syncytial virus and other common respiratory viruses: a population-based study of Scottish children, 2009-2017”

**Background:** Recent research suggests inappropriate antibiotic prescribing, such as that for viral illness, is common in primary care. This is of growing interest given concerns around antimicrobial resistance and harms associated with unnecessary treatment. The objective of this study was to estimate the proportion of antibiotics prescribed in the community to children (under five years) attributable to common respiratory viruses, including respiratory syncytial virus (RSV), influenza, human metapneumovirus (HuMPV) and parainfluenza. **Methods:** We fitted time series negative binomial models to predict weekly antibiotic prescribing rates from positive viral pathogen tests rates for the period April 1st, 2009 through Dec 27th, 2017 using comprehensive, population-based administrative health data for all Scottish children (<5 years). We used these models to estimate the proportion of antibiotics prescriptions explained by virus circulation according to type of virus (RSV, influenza, HuMPV and parainfluenza). We further stratified our analysis to investigate potential differences according to age group, presence of high-risk chronic medical conditions, and antibiotic class. **Results:** We included data on over 6 million antibiotic prescriptions among nearly 800,000 children. An estimated 6.92% (95% CI 5.59, 8.25), 2.38% (1.67, 3.09), and 2.34% (0.77, 3.91) of prescribed antibiotics were attributable to RSV, influenza and HuMPV, respectively. RSV was consistently associated with the highest proportion of antibiotics prescribed across all analyses, but particularly among children without chronic conditions and for amoxicillin and macrolide prescriptions. **Conclusions:** Nearly 14% of antibiotics prescribed to Scottish children in this study were estimated to be attributable to common viral pathogens for which antibiotics are not recommended, such as RSV. **Impact:** This work highlights readable targets for antibiotic stewardship programs which could substantially reduce inappropriate and unnecessary antibiotic prescribing. Further, these findings suggest that antibiotic prescribing could be considerably reduced among young children once an RSV vaccine is introduced in the coming years.