

testing, a JDIN Scale including ten 6-item subscales and a JRIN Scale including seven 6-item subscales were developed based on an extensive literature review and an iterative process involving a 16-member Research Team and a 19-member Advisory Team of experts in rural and remote nursing. Cronbach's alpha coefficients were used to evaluate the internal consistency reliability of each subscale. **Results:** A total of 89 nurses were involved in the pilot testing. Following item analyses, a total of six 4-item subscales were retained for both scales, resulting in a 24-item JDIN Scale and 24-item JRIN Scale. The final JDIN Scale dimensions included Work-related Travel, Extended Scope of Practice, Equipment and Supplies, Isolation, Workload, and Safety, with an overall Cronbach's alpha of 0.86. The final JRIN Scale dimensions included Supervision, Collegial Support, Staffing, Technology, Professional Development, and Autonomy, with an overall Cronbach's alpha of 0.91. **Conclusions:** The JDIN Scale and JRIN Scale capture important aspects of nursing practice that are applicable to a broad range of occupational settings, nursing designations, and scopes of practice. These scales have the potential to be used to inform policy supporting nursing practice, and future research exploring the professional quality of life of rural/remote and urban nurses nationally and internationally.

TUESDAY, OCTOBER 21, 2014

I) Built Environment and First Nation Health I	Centre Rm, Sheraton	0935 – 1135
Chair: Sylvia Abonyi/Jo-Ann Episkenew		

5571 - Chronic Bronchitis in First Nations People– Prevalence and Associated Risk Factors

Punam Pahwa¹, Chandima Karunanayake², Donna Rennie², Josh Lawson², Kathleen McMullin², Jeremy Seesequasis³, Arnold Naytowhow⁴, Louise Hage², Sylvia Abonyi¹, Jo-Ann Episkenew⁵, James Dosman¹ and the First Nations Lung Health Project Research Team

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Purpose: Inadequate housing, low family income, household smoking, personal smoking status, and poor schooling are some of the conditions that have been significantly associated with the prevalence and incidence of chronic bronchitis. The aim of the current study was to determine the prevalence of chronic bronchitis (CB) and associated risk factors among First Nations People. **Methods:** We conducted an interviewer-administered survey study in 2012 and 2013 with 874 individuals from 406 households in two First Nations communities located in the province of Saskatchewan, Canada. The questionnaire collected information on individual and contextual determinants of health and a history of ever diagnosed with CB (outcome variable) from the two communities participating in the First Nations Lung Health Project. Clustering effect within households was adjusted using Generalized Estimating Equations. **Results:** The prevalence of CB was 8.6% and 6.7% among residents (18 years and older) of community A and community B respectively and was not significantly different. CB prevalence was positively associated with odour or musty smell of mildew/mould in the house [ORadj (95% CI)=2.38 (1.14, 4.96)], allergy to house dust [4.57 (2.08, 10.04)], difficulty in getting to the routine or ongoing health care [2.13 (1.07, 4.24)], and increasing age [7.28 (2.36,22.40), 5.66 (1.77,18.12), 1.40 (0.36,5.39)]. An interaction exposure to household smoke*body mass index showed that exposure to household smoke increased the risk of CB for overweight (borderline) and obese participants (obese). Some of the variables of interest were not significantly associated with the prevalence of CB in multivariable analysis, possibly due to small numbers. However, the crosstabs analysis showed that house damaged by dampness and allergic reaction to tobacco smoke moulds and grasses increased the risk of CB. **Conclusions:** Our results suggest that significant determinants of CB are: increasing age, odour or musty smell of mildew/mould in the house, difficulty in accessing routine health care. Modifiable risk factors identified were: (i) community level-housing conditions (such as mould or mildew in home, damage caused by dampness, household smoking), and (ii) policy level-remediation of mould, and difficulty in getting to the routine or ongoing health care.

5628 - Housing Factors and Relationships to Lung Health in two Saskatchewan First Nations Communities: Addressing through Community Engagement

Shelley Kirychuk¹, Donna Rennie¹, Chandima Karunanayake¹, Joshua Lawson¹, Eric Russell¹, Jeremy Seesequasis², Everett Gamble², Daisy Bird³, Arnold Naytowhow³, Punam Pahwa^{1,4}, Sylvia Abonyi⁴, Jo-Ann Episkenew⁵, James A Dosman¹ and the First Nations Lung Health Project Research Team

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Housing factors such as over-crowding, environmental tobacco smoke, humidity, endotoxin, and mould are risk factors for development of respiratory conditions such as respiratory infections, bronchitis and asthma. Crowding and housing in need of major repairs are common in dwellings on First Nations reserves in Saskatchewan. An assessment of the relationships between housing factors and respiratory health in two rural First Nations communities in Saskatchewan was undertaken. Members of the communities including health leaders, elders,

housing managers and residents were active in the process and integral to the outcomes. **Methods:** Adults and children from households in two rural Saskatchewan First Nations communities completed respiratory questionnaires, lung function studies and skin prick testing. Adult participants were asked if they were willing to have environmental assessments of their homes. Of the positive responses, 200 homes had environmental assessments. Environmental assessments included a housing survey, floor dust collection, and a sub-sample of airborne dust sampling. Floor and air samples were assessed gravimetrically and for endotoxin and beta 1-3 glucans. **Results:** 874 adults and 351 children completed the respiratory questionnaire with 676 (77.3 %) adults and 307 (87%) children completing clinical assessments. 51% of adult participants were female and 49% male. 78% of the adult population were current smokers. 39.3% of respondents indicated their home was in need of major repairs while 31.1% indicated their home was in need of minor repairs. 60% indicated they had water or dampness in their home with 52.4% indicating a mildew/moldy odor or musty smell. 51.2% indicated they had signs of mold or mildew in their home. Those who indicated their home had a mildew/moldy odor indicated a greater prevalence of cough (58.5% vs 41.5%), phlegm (57.9% vs 42.1%) and wheeze (58.0% vs 42.0 %) as compared to those with no mildew/moldy smell. **Conclusions:** Respiratory health issues are common in these populations. Smoking rates and the built environment are areas being addressed within the community.

5486 - The Respiratory Health Awareness Community Outreach and Engagement Model in First Nations, Inuit and Métis Communities: the potential of pilots and the problems of scaling up

Wayne Warry¹, Oxana Latycheva² and Jennifer Walker³

¹Centre for Rural and Northern Health Research, Laurentian University; ²Clinical Health Systems Initiatives, Ontario Lung Association; ³School of Human and Social Development, Nipissing University

This presentation outlines the development and evaluation of a cultural appropriate health promotion and disease prevention model involving the Asthma Society of Canada, key Aboriginal partners and six Inuit, Métis and First Nations communities across Canada. The project aimed to increase awareness of social and environmental risk factors for chronic respiratory disease (i.e. outdoor and indoor air quality, mould, second and third-hand smoke). The main purpose of this project was to empower communities to create better awareness of lung health, to improve their knowledge about the risk factors for chronic respiratory conditions, to develop prevention strategies and to enable First Nations, Inuit and Métis communities to engage in capacity building and establish community-based resources on respiratory health. The project evaluation showed a high degree of satisfaction with the community engagement model and with the tool kit of resources that were developed. The presentation will provide examples of various elements of the Toolkit which are available via a web-based portal. Despite the success of the pilot intervention, the uptake of these materials in other communities has been limited. The paper concludes by examining the challenges of sustaining and expanding health interventions that are developed locally, including the organizational and funding requirements of projects as they transition from research and evaluation to more sustainable programmatic interventions.

5570 - Prevalence of Ear Infection in First Nations and Rural School-Aged Children

William Albritton¹, Chandima Karunanayake², Donna Rennie², Joshua Lawson², Jeremy Seesequasis³, Arnold Naytowhow⁴, Sylvia Abonyi⁵, Jo-Ann Episkenew⁶, James A. Dosman², Punam Pahwa^{2,5} and the First Nations Lung Health Project Research Team²

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Background: Ear infections in children are a major health problem and may be associated with hearing impairment and delayed language development. It is estimated that almost all children will have had an ear infection by age 5 years. Current recommendations are to observe and treat with antibiotics only if the condition does not resolve in a few days, thus clinical assessment is important in managing the condition. Objective: To determine prevalence and associated risk factors of ear infections in children 6-18 years old residing in reserves and rural areas of Saskatchewan province. **Methodology:** The First Nations Lung Health Project was conducted in 2012 and 2013 and data via questionnaire were collected on 351 students (165 boys and 186 girls) participating from two reserves in the province of Saskatchewan. The Saskatchewan Rural Health Study was conducted in 2011 and data via questionnaire were collected on 2371 students (1168 boys and 1203 girls) participating from the four quadrants of the province of Saskatchewan. All students who participated in these studies were 6-18 years old. Logistic regression analysis was conducted to examine the relationship between ear infection and other covariates. **Results:** The prevalence of ear infection was 43.6% for First Nations (FN) children and 55.3% for rural children. Ear infection prevalence was positively associated with younger age [ORadj (95% CI): FN =1.72 (1.05, 2.82); Rural= 1.43(1.20, 1.70)], difficulty in getting to the routine or ongoing health care [FN=7.04 (1.88, 26.28); Rural=1.42 (1.01, 2.00)], self-reported physician-diagnosed tonsillitis [FN=6.09(3.22, 11.52); Rural=4.71(3.82, 5.82)]. Protective effect of breast-feeding on the prevalence of ear infection was observed in First Nations children [FN=0.59 (0.37, 0.94)] but not in rural children [Rural=1.02 (0.83, 1.25)]. **Conclusions:** Our results suggest that significant determinants of ear infection are: younger age, difficulty in accessing routine health care, and self-reported physician-diagnosed tonsillitis. There was discrepancy in the associations observed between breastfeeding and ear infections for First Nations and rural children.

5505 - First Nation Seniors: Social Determinants of Health and Health Outcomes

Sylvia Abonyi¹, Chandima Karunanayake², Donna Rennie², Kathleen McMullin², Jeremy Seesequasis³, Arnold Naytowhow⁴, Josh Lawson², Akwasi Owusu-Kyem², Louise Hagel², Punam Pahwa^{1,2}, Jo-Ann Episkenew⁵, James Dosman² and the First Nations Lung Health Research Team²

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Purpose: The Health Council of Canada recently referred to Aboriginal seniors as among Canada's most vulnerable citizens. In this paper we report on the health status and life circumstances of Aboriginal seniors living in two Saskatchewan reserve communities, comparing our community level findings to their younger counterparts living in the same community, and to national information on Aboriginal seniors. **Methods:** Interviewer-administered surveys were conducted in 2012 and 2013 with 874 individuals from 406 households in two First Nation communities located in the province of Saskatchewan, Canada. The questionnaire collected information on individual and contextual determinants, self-reported health (excellent and good/fair), and specific health conditions. Statistical analysis for this report is based on n=770 adults (aged 17-54), and 104 seniors (age 55+). We completed descriptive analysis with chi-square to test for differences by age group. **Results:** About 39% of First Nation seniors in the two communities reported three or more chronic conditions, and 26% reported two chronic conditions compared to 14.4% and 15.2% respectively of younger adults (17-54) (p<0.0001). About 66% of seniors reported excellent/very good/good health. Seniors in this study reported numbers of chronic conditions and self-reported health status comparable to information from national data (CCHS & APS). Never or only occasionally consumed alcohol was reported by a majority (84.6%), and 64.4% reported that they exercise. However, 60.6% were current smokers, while 13.5% had never smoked and 82.3% reported being overweight or obese. Nearly 40% reported that they have struggled to meet their basic needs in the past 12 months, with 63.4% reporting an income under \$19,999. Residential school attendance or impact is common, with 44.2% having attended residential school, and 76.9% of their parents or grandparents having done so. Community cultural events were important to seniors, with 75% reporting attendance sometimes or always/almost always and the majority (83.7%) report speaking both Cree and English. **Conclusions:** A majority of First Nation seniors in this study are experiencing two or more chronic conditions. At the same time over half self-report high overall health. Many are experiencing difficulty meeting their basic needs. Most attend community events and speak both Cree and English.

TUESDAY, OCTOBER 21, 2014

A) Rural Health: Health Services Delivery

Adam Ballroom, Bessborough

1400 – 1520

**Chair: Dimitra Panagiotoglou
(Simultaneous Interpretation)**

5662 – The Space-Time Continuum: how regionalization changed the delivery of hospital services and its effects on British Columbians' health

Dimitra Panagiotoglou¹, Kimberlyn McGrail¹, Michael Law¹ and Stirling Bryan²

¹Centre for Health Services and Policy Research, University of British Columbia; ²School of Population and Public Health, University of British Columbia

Background: In 2001, British Columbia began regionalizing its health services. A majority of changes occurring in rural communities where existing facilities closed, were downsized or specialized. The centralization of the health authorities and subsequent regionalization of services, along with safety concerns regarding small units, difficulties recruiting and retaining staff, and policy changes are all considered reasons for the changes. At the same time, innovations in service delivery (such as inter-hospital transfer practices and telehealth initiatives e.g. telestroke) modified how health care is provided. To date, no work has explored how both access to and availability of quality services influence patient outcomes. **Objective:** To examine how hospital service redistribution since 2001 and compensating innovations have affected BC residents' health outcomes. Three time sensitive medical events and their outcomes are used: trauma, acute myocardial infarctions (AMIs), and stroke. **Hypothesis:** (1) Reductions in accessibility of acute care services in BC were offset with improvements in quality of care, resulting in no change in health outcomes after service distribution changes. (2) Compensating mechanisms alter the relationship between the availability and accessibility of services such that access to care is not as strongly predictive of health outcomes. **Data:** The discharge abstract database, consolidation file, medical services plan, and vital statistics' mortality data from 1999 to 2013 and ambulance data from 2009 to 2013 are used. **Methods:** (1) A set of interrupted time-series (1999–2013) will compare the outcomes of patients who have experienced a change in service distribution with those that have not for each of the three conditions (AMI, stroke, trauma). (2) Similarly, propensity score matched survival analyses (2009–2013) will examine the probabilities of adverse outcomes given non-random exposure to health innovations prior to (e.g. telehealth) or enroute (e.g. thrombolytics, inter-hospital transfers) to definitive care. **Significance:** There is Canadian and international interest in the topic of acute care service distribution particularly for communities in rural and remote regions. The Canadian Rural Health Society, BC ministries of health services and planning, the Trauma Association of Canada, the British Columbia Emergency Health Services, and Doctors of BC have all expressed interest in the topic.

TUESDAY, OCTOBER 21, 2014

Centre Rm, Sheraton

I) Built Environment and First Nation Health II

1400 – 1520

Chair: Sylvia Abonyi/Jo-Ann Episkenew

5645 - Integrated Knowledge Translation to De-adopt Ineffective Policies and Practices: A Model to Address and Redress the Obesity-Obstructive Sleep Apnea Nexus in First Nations

Tarun Katapally¹, Jo-Ann Episkenew¹, Chandima Karunanayake², Sylvia Abonyi³, James Dosman², Punam Pahwa² and the First Nations Lung Health Project Research Team

¹Indigenous Peoples' Health Research Centre; ²Canadian Centre for Health and Safety in Agriculture; ³Saskatchewan Population Health and Evaluation Research Unit

Background: The First Nations Lung Health Project is a community-based participatory research initiative incorporating multi-stage interventions in two First Nations communities involving Problem Identification, Baseline Assessment, Community Level Intervention (Address), Policy Level Intervention (Redress) and Evaluation. This project includes community partners at each stage of the intervention to facilitate integrated knowledge exchange, build capacity, and encourage sustainability. Of the four key problems identified by the participating communities as being important to their health, this study specifically focuses on the obesity-obstructive sleep apnea nexus.

Methods: The connection established between obesity and risk of obstructive sleep apnea (OSA) based on baseline analyses laid the foundation for integrated knowledge transfer. Obesity and OSA would be targeted by a two-step action – address and redress. A two-tiered intervention will address obesity and increase long-term physical activity and promote consumption of nutritious food, incorporating culturally safe and meaningful practices that focus on building community capacity. With our community partners, we will develop an educational program to raise awareness about the long-term impact of OSA and provide skills in self-administration of a validated questionnaire that highlights the symptoms of OSA. This ability to recognize the symptoms of OSA is a critical step in its diagnosis because evidence strongly suggests that an overwhelming majority of the population suffering from OSA lack awareness and, therefore, do not utilize diagnostic services. To redress obesity, our focus is on food security and opportunities to encourage engagement in physical activity. To redress OSA, it is imperative to appreciate the jurisdictional complexity of healthcare for First Nations. Healthcare for Status Indians is complex. The provinces deliver services that the federal government funds; however, policies and practices differ, particularly for OSA. Thus, we are reviewing healthcare coverage, clinical practices and healthcare utilization and interviewing key stakeholders to identify key gaps in policies and practices that effect First Nations' ability to utilize medical services for OSA. **Conclusions:** At each stage of this study, integrated knowledge translation will facilitate de-adoption of ineffective upstream policies and downstream practices, and in turn, identify solutions that are specific to First Nations.

5460 - Provision of Obstructive Sleep Apnea Care in Saskatchewan: Policy Complexities Related to Registered Indian Status

Gregory P. Marchildon¹, Caroline Beck¹, Jo-Ann Episkenew², James Dosman³, Punam Pahwa³, Sylvia Abonyi⁴, Tarun Katapally^{2,3} and the First Nations Lung Health Project Research Team

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Obstructive sleep apnea (OSA) is a pervasive and largely undiagnosed chronic condition in Canada. Though a highly effective, gold-standard treatment for OSA – the continuous positive airway pressure (CPAP) machine – is available in Saskatchewan, eligibility and coverage for the treatment differs significantly for Saskatchewan residents who have Registered Indian status. For historical and constitutional reasons, Registered Indian patients access OSA treatment through federal Non-Insured Health Benefits (NIHB) rather than the provincial program for non-Registered Indian Saskatchewan residents, Saskatchewan Aids to Independent Living (SAIL). Coverage and eligibility requirements have profound implications on access to diagnostic and treatment services. This research identifies the variations in coverage between these programs to highlight challenges in accessing care and obtaining timely health services in order to inform provincial and federal policy. Effective diagnosis of OSA can occur through sophisticated, laboratory-based Level 1 tests as well as through lower-level, home-based Level 3 tests. In Saskatchewan, two public sleep laboratories conduct publicly-funded Level 1 testing, one of which also offers Level 3 tests. Multiple private providers also offer Level 3 for a fee. Registered Indians Saskatchewan residents, by virtue of eligibility requirements of the NIHB program, must undergo a Level 1 public test in order to obtain CPAP coverage. However, high demand and low availability for Level 1 testing results in significantly longer wait periods than Level 3 testing through public or private clinics, and in turn even longer waits to begin treatment. Saskatchewan residents may qualify for access to a CPAP machine on the basis of a respirologist's prescription based on a lower level of evidence. Registered Indian patients have no choice but to wait for a Level 1 test opening before they can obtain treatment. In contrast, non-Registered Indian patients have the option of utilizing private clinics to avoid lengthy wait-times and obtain more timely treatment. These findings suggest areas for significant policy redress to remedy issues of access and to improve Indigenous population health outcomes.

5476 - Utilizing Indigenous Knowledge to Intervene and Inform Respiratory Health Policy and Practice in First Nations Communities

Cassandra Opikokew-Wajuntah¹, Tarun Katapally², Jo-Ann Episkenew³, Chandima Karunanayake², Sylvia Abonyi⁴, James Dosman², Punam Pahwa² and the First Nations Lung Health Project Research Team

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Using a community-based participatory research approach, a First Nations Respiratory Health Initiative involving two First Nations communities in Saskatchewan is being implemented by grounding Western research expertise with Indigenous knowledge (IK). Ultimately, the goal of integrating IK is to develop culturally safe and meaningful practices that build community capacity, and to develop policies that appreciate the historical and jurisdictional complexity of healthcare provision to First Nations in Canada. This multi-stage intervention study is being implemented in the following stages: Problem Identification, Baseline Assessment, Community Level Intervention (Address), Policy Level Intervention (Redress) and Evaluation. This comprehensive approach to tackle health inequities ensures involvement of the participating communities at each stage of the intervention to facilitate integrated IK transfer that builds capacity and ensures long-term sustainability. For example, from the very outset, the participating communities played an active role by identifying four key problems that they deem to be of importance to their respiratory health – physical household conditions, smoking, overcrowding and obesity. Thereafter, at the baseline assessment stage, knowledge specific to the key problems was generated using a community approved questionnaire. This baseline knowledge will lay the foundation for integrated IK transfer, where individualized interventions will tackle the key problems by a two-step action – address and redress. This poster will portray the project's research model that emphasizes combining IK with Western expertise to eliminate ineffective upstream policies and downstream practices, and in turn identify solutions that are specific to and created by Indigenous Peoples.

5491 - The Green Light Program: A Community Chosen Health Intervention

Vivian Ramsden^{1,2}, Kathleen McMullin¹, Jeremy Seesequasis³, Arnold Naytowhow⁴, Chandima Karunanayake¹, Sylvia Abonyi⁵, Jo-Ann Episkenew⁶, James Dosman¹, Punam Pahwa^{1,5} and the First Nations Lung Health Project Research Team

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Background: In partnership with two Saskatchewan First Nations communities, the study entitled Assess, Redress, Re-assess: Addressing Disparities in Respiratory Health among First Nations People aims to improve respiratory health outcomes with community members. The Green Light Program, celebrating smoke-free homes, is the first of many community chosen, evidence-informed activities to be undertaken. Objectives This Round Table Discussion will illustrate the process of engagement with communities with academic researchers to meet the following objectives: To increase the number of Elders and community members that are role-modeling behaviour that is free from the misuse of tobacco by 10% per year. To engage Elders/mentors/role models/community members in supporting policy and community change. To celebrate the number of smoke-free homes and increase the number by 10% per year. To decrease the rate of tobacco misuse by 10% per year among all age groups and particularly in youth, pregnant women and seniors. To increase cessation strategies by 10% a year among individuals who misuse tobacco. **Methods:** The communities will be engaged in implementing the Green Light Program (community-based participatory research) integrated with transformative action research. **Results:** Number of homes in Community A that participated in the research study=173/321=53.9%. Number of homes that were smoke-free at Baseline in Community A= 73/173=42.2%. However, all 321 households in Community A will be invited to participate in the Green Light Program. Number of homes in Community B that participated in the study=233/259=90%. Number of homes that were smoke free at Baseline in Community B=117/233=50.2%. However, all 259 households in Community B will be invited to participate in the Green Light Program. **Conclusions:** Since this is the second year of a five year program, updated results will be reported to September 30, 2014. Session Method/Process Engagement will be encouraged through the telling of stories and the sharing of lived experiences related to the implementation of the Green Light Program in and with two First Nations communities in Saskatchewan.

5569 - Consequences of Colonization on Lifestyle Risk Factors

Jo-Ann Episkenew¹, Sylvia Abonyi², Bonnie Janzen², Chandima Karunanayake³, Jeremy Seesequasis⁴, Arnold Naytowhow⁵, James A. Dosman³, Punam Pahwa^{2,3} and the First Nations Lung Health Project Research Team

¹Indigenous Peoples' Health Research Centre, University of Regina; ²Community Health and Epidemiology, University of Saskatchewan; ³Canadian Centre for Health and Safety in Agriculture, University of Saskatchewan; ⁴Health, Community A; ⁵Health, Community B

Background: Colonization and ensuing historical and intergenerational trauma are contextual factors that may cause Aboriginal people to adopt unhealthy behaviours, resulting in poorer health status than other Canadians. Research has shown that there is a link between oppressive public policies, specifically forced Indian Residential School attendance, and smoking and obesity in residential school attendees and their descendants. Objective: To evaluate associations between colonization and lifestyle risk factors among First Nations people in Saskatchewan. **Methodology:** The First Nations Lung Health Project used interviewer-administered surveys in 2012 and 2013. Participants included 874 individuals living in 406 households from two communities located in the Province of Saskatchewan, Canada. The

questionnaire collected information on individual and contextual determinants and life-style factors. Each study participant was asked whether she/he attended a residential school and also whether either of his/her parents or grandparents attended a residential school. Clustering effect within households was adjusted using Generalized Estimating Equations. **Results:** Approximately 41% percent attended a residential school and 83.2% said that one/both of their parents or grandparents attended a residential school. Among the study participants, 90% were "ever" smokers (i.e. current smokers and ex-smokers) and 65% were classified as either overweight or obese. Multivariable analysis showed that participants were significantly ($p=0.10$) more likely to be a current smoker or ex-smoker ($OR_{adj}=1.58$, 90% CI: 1.02-2.47), and more likely to be overweight ($OR_{adj}=1.46$, 90% CI: 1.04, 2.04) if his/her parents or grandparents attended a residential school. Although residential school attendance was not significantly associated with smoking status or being overweight, we observed a positive association based on bivariate crosstabs analysis between residential school attendance and smoking status and overweight. **Conclusions:** Our results suggest that colonization had an effect on lifestyle factors that could lead to poor physical and mental health for Aboriginal people.

TUESDAY, OCTOBER 21, 2014		
A) Chemical Exposures: Pesticides and Beyond	Adam Ballroom, Bessborough Chair: David Schneberger (Simultaneous Interpretation)	1535 – 1655

5605 - Is it necessary? Going for the prevention gusto with green chemistry

Dorothy Wigmore

Worksafe, Inc.

Occupational health and safety (OHS) is supposed to be about prevention of hazards and their effects. Yet practitioners and researchers often talk of "controls" and "risks" or "risk factors", not "hazards" or "prevention". The public health approach is to get rid of a problem's cause, making green chemistry (GC) a key approach to tackle workplace chemical hazards. It involves asking if the chemical is necessary and what are its inherent properties, using new recipes for products and processes, or just not using a toxic chemical with little or no hazard data. It's about alternatives analysis to avoid regrettable substitution (e.g., hexane as a brake cleaner instead of chlorinated solvents). And it's about thinking big -- about hazards and their solutions, not risks and controls. A key tool in toxics use reduction (TUR), GC is gaining traction in American and European OHS circles. The picture is less rosy in Canada. A 2010 environmental scan of Canadian TUR activities found few organisations or governments have GC on their radar. What should happen in Canadian workplaces? What lessons can we take from the US and Europe about using GC to take on toxics? How can we increase the number of unions, employers, researchers, organisations and governments paying attention to GC for workplace hazards? What do Canadian researchers, workers, their unions, and their employers need to incorporate GC in prevention efforts, inside and outside workplaces? Where do purchasing staff and policies fit, especially when it comes to "greenwashing"? How could workers, unions, employers, governments and researchers use the list of chemicals in California's GC regulation, the European SIN list, the Toxics Use Reduction Institute's work, and similar resources? What about tools like the Green Screen and SubSPORT? Using a GC lens, could the Globally Harmonised System for the Classification and Labelling of Chemicals (GHS) help to reduce occupational illnesses and diseases? The presentation will describe GC efforts in Canada and other jurisdictions, and provide some answers to the questions posed. It also will describe proposed Canadian workplace projects that use GC as the approach to preventing and reducing occupational illnesses, diseases and deaths.

5506 - Personal Protective Equipment against pesticides in agriculture: A comparison of recommendations

Ludovic Tuduri¹, Jennifer Landry², Michèle Bouchard², Danièle Champoux³ and Caroline Jolly³

¹*Chemical and Biological Hazards Prevention Research, Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST);* ²*Occupational and Environmental Health, University of Montréal;* ³*Sustainable prevention and work environment, Institut de recherche Robert-Sauvé en santé et en sécurité du travail*

Introduction: Farmers might be exposed to pesticides during mixing-loading and spraying pesticides, as well as when cleaning equipment or re-entering sprayed areas. Although administrative measures and collective protection are preferable, personal protective equipment (PPE) is often necessary to reduce exposure. Yet, use of PPE by agricultural populations does not seem to be spread enough. The objective of this work was therefore to review information on PPE available to farmers and to identify ways of improving recommendations. **Methods:** A survey on available recommendations for PPE use and choice to farmers was then made. First, legal environment regarding pesticides use and Occupational Health and Safety in Europe, US and Canada were studied. Then, standards dealing with PPE used against pesticides, published by ISO, ANSI, ASTM, CEN and CSA were also compiled. In order to identify ways of improving prevention, scientific literature was reviewed for data on protective clothing and their field efficacy. **Results:** Even though registration processes are quite similar in US, Canada and Europe, toxicological reviews can lead to different recommendations for PPE, especially for gloves and protective clothing. This is of utmost importance as dermal exposure is the primary exposure pathways in most agricultural activities. A close look at available data on chemical resistance of gloves leads us to think that test methods could be improved and that the recommendations might be updated. Regarding protective clothing, some international standards do exist for chemical protective clothing and protective clothing specific to