

TUESDAY, OCTOBER 21, 2014

Salon Batoche, Bessborough

D) Agricultural Health: Migrant and Vulnerable Workforces II

1400 – 1520

Chair: Arcadio Viveros-Guzman

5609 - Beverage Consumption & Health of Immigrant and Refugee Children in Canada

Gena Ingold and Hassan Vatanparast

Nutrition, College of Pharmacy & Nutrition, University of Saskatchewan

Background: Beverage consumption trends in North America have changed in recent decades, particularly in children. The change is mainly characterized by replacement of milk by sugar-sweetened beverages. Associations between children's beverage consumption patterns and overweight/obesity, bone health, and cardiovascular risk factors have been reported. The growing immigrant and refugee population in Canada is known as a vulnerable group to risk of nutrition related chronic diseases, but beverage consumption research in this subpopulation is lacking. **Objective:** To determine patterns of beverage consumption in newcomer children and its association with overweight/obesity, bone mineral content, and lipid profile. **Methods:** Data were obtained from the Healthy Immigrant Children study; a cross-sectional nutritional study (n=299) with newcomer children 3-13 years who had been in Canada no more than 5 years and lived in Saskatchewan. The Saskatoon subsample (n=147) was used in this study. Average daily beverage consumption was characterized by volume and caloric content into four categories: Sugar-Sweetened Beverages (SSB), Milk-Based Beverages (MBB), 100% Juice (Juice), and No/Low Calorie Beverages (NLC). Pearson correlation, independent t-tests, ANOVA, Chi-square, multiple regression, and logistic regression were used for statistical analysis. **Results:** Mean age of all participants was 7.9 years, mean length of stay in Canada was 2.1 years, and 24.1% of participants were overweight or obese. Mean intakes of NLC, MBB, SSB, and Juice were 491 mL, 255 mL, 138 mL, and 132 mL, respectively. Immigrants consumed significantly more SSB and NLC than refugees (p<0.05). Significant correlations between beverage consumption and sociodemographic characteristics were found. Juice intake was a significant predictor of overweight/obesity (OR=1.004; 95%CI=1.00-1.01; p=0.028). Length of stay in Canada was positively correlated with Juice and MBB intake and was a significant predictor of overweight/obesity. **Conclusion:** Beverage intake patterns differ among newcomer children by immigration status and duration of stay in Canada. Thus, education and other interventions not long after initial arrival could be crucial to establishing healthy habits among immigrant and refugee children.

5604 - Medical Repatriation of Migrant Farm Workers in Canada

Aaron Orkin¹, Morgan Lay¹, Janet McLaughlin², Michael Schwandt and Donald Cole¹

¹Dalla Lana School of Public Health, University of Toronto; ²Health Studies, Wilfrid Laurier University; ³Department of Community Health and Epidemiology, University of Saskatchewan

Objectives: Approximately 40,000 migrant farm workers (MFWs) are employed annually in Canada through temporary foreign worker programs. MFWs face elevated risks of adverse health outcomes. Access to health services and reporting of occupational illness are limited for this group. Conditions preventing ongoing work normally result in repatriation to MFWs' home countries, a process not examined in existing literature. We sought to describe the diagnostic reasons for MFW medical repatriations. **Methods:** We examined medical repatriation data from Foreign Agricultural Resource Management Services, a non-profit corporation managing over 15,000 MFW contracts annually. Repatriation data from 2001-2011 were extracted, including demographic data. Medical reason for repatriation was coded by physician volunteers using a validated coding system based on ICD-10 classifications. **Results:** During 2001-2011, 787 repatriations occurred among 170,315 MFWs arriving in Ontario (4.62 repatriations per 1000 workers). More than two thirds of repatriated workers were aged 30-49 years. MFWs were most frequently repatriated for medical or surgical reasons (41.3%) and external injuries including poisoning (25.5%). **Conclusions:** This study provides quantitative health data related to a unique and vulnerable occupational category. Findings reinforce existing knowledge regarding occupational hazards and health conditions among MFWs, and suggest that enhanced reporting and access to health services for MFWs are required. Medical repatriation of MFW merits further examination as a global health equity concern.

5541 - Occupational and Environmental Stress in Latino Agricultural Workers

Diane Rohlman¹, Meagan Shaw² and Silvia Huszar²

¹Occupational and Environmental Health, University of Iowa; ²Oregon Institute of Occupational Health Sciences, Oregon Health & Science University;

The health of agricultural workers is impacted by many factors, including both workplace and lifestyle factors. Approximately thirty percent of all agricultural workers in the US are Mexican immigrants, although this number is significantly higher in some states. Agriculture is considered one of the most hazardous occupations, and agricultural workers are at increased risk for both fatal and non-fatal injuries. Migrant and seasonal farmworkers report high levels of stress related to mobility, language barriers, job security, financial concerns, and long work days. Due to the seasonal nature of agriculture, workers often experience periods of unemployment or job insecurity. Self-reports of poor physical health are associated with physical job demands requiring awkward postures; self-reports of better health are

associated with increased job control. Latino agricultural workers (N=17) participated in open-ended interviews to identify psychosocial and occupational stressors which were used to develop a questionnaire. Questionnaire items included occupational experience, job stress, health status, childcare, socioeconomic variables and social support. The items were selected from standardized questionnaires, translated into Spanish and response options were adapted for this population. To examine the relationship between job demands, stress and health, Latino couples were interviewed at a low work demand time; follow up questionnaires were administered during harvest in the fall, a high work demand time. Thirty-one couples (N=62) were interviewed in May at the end of pruning, a low work demand time. In addition to the questionnaire data, biometric data (weight, BMI and blood pressure) were collected. The couples were contacted in September, during harvest, and 29 couples returned for interviews and collection of biometric data. There was an increase in perceived stress from low to high work demand times and increase in systolic BP from low to high work demand times, particularly in men. Older women had higher depression scores, showed greater work-to-family conflict and had greater stress associated with immigration. These results provide evidence of increased stress associated with work demands. This project allows us to characterize risk factors and basic health parameters in agricultural families and to examine changes in these due to workplace activities.

5433 - Sex Work Practice and Health Seeking Behavior among HIV Positive Female Sex Workers in Rural Karnataka, India

Rajeshwari Biradar¹, Shiva Halli², Shajy Isac², Reynold Washington³, R.Satyanarayan³, James Blanchard², Stephen Moses², T Raghavendra³ and Parinita Bhattacharjee²

¹International Institute for Population Sciences, Deonar, Mumbai, India; ² Department of Community Health Sciences, Centre for Global Public Health, University of Manitoba; ³ Karnataka Health Promotion Trust, Rajajinagar, Bangalore, India

Background: The anecdotal evidences indicate that utilization of HIV services especially in Government facilities is affected by stigma and discrimination among HIV positive female sex workers (FSWs) in Karnataka. To our knowledge, there is no quantitative study on this issue. In this study an attempt is made to examine these aspects among positive FSWs exposed to prevention programs. **Methods:** This is a cross-sectional quantitative survey of HIV positive FSWs in the 3 districts of northern Karnataka using a structured questionnaire. The list of HIV Positive FSWs was organized by stratification, and 607 positive FSWs were selected using a systematic random selection. The data were analyzed using both bivariate and multivariate statistical techniques. **Results:** Half of the sex workers (52%) are traditional (devadasi, dedicated to the temple), 22% are widowed and the mean age is 33 years. The FSWs practice sex work on an average 13 days a month with 2.3 clients per day and was in sex work for about 13 years. Almost all of them (97%) used condom with the clients they had on the last day of sex work. About 74% were ever registered in the ART center and 47% of them reported being ever on ART, of which 6% dropped out. Multivariate results support the hypothesis that the interventions addressing stigma and discrimination enabled accessing health services in the government facilities (AOR=1.37; p=0.17). **Conclusions:** Based on the results of the study, programs addressing stigma, discrimination and positive prevention can be implemented in places where government health services are not utilized by HIV positive FSWs. However, the study may be limited by the fact that majority of the FSWs entered into sex work through the traditional devadasi system, which may not be the case in other parts of India.

TUESDAY, OCTOBER 21, 2014		
D) Agricultural Health: Cancer	William Pascoe, Bessborough	1400 - 1520
	Chair: Anne-Marie Nicol	

5478 - The North American Pooled Project (NAPP): A new resource of pooled case-control studies of pesticides and agricultural exposures, lymphatic and hematopoietic cancers, and soft tissue sarcoma

Manisha Pahwa¹, Laura Beane Freeman², John Spinelli³, Aaron Blair², Punam Pahwa⁴, James Dosman⁴, John McLaughlin⁵, Paul Demers¹, Shelia Hoar Zahm², Kenneth Cantor², Dennis Weisenburger⁶, and Shelley Harris¹

¹Occupational Cancer Research Centre, Cancer Care Ontario; ²Division of Cancer Epidemiology and Genetics, U.S. National Cancer Institute; ³BC Cancer Agency Research Centre; ⁴Canadian Centre for Health & Safety in Agriculture, University of Saskatchewan; ⁵Samuel Lunenfeld Research Institute, Mount Sinai Hospital; ⁶University of Nebraska Medical Centre, University of Nebraska

Objectives: Pesticide exposures have been associated with excesses of certain cancer types in agricultural populations. However, assessment of cancer risks arising from exposures to individual pesticides has been limited by small numbers of exposed cases. Therefore, we established the North American Pooled Project (NAPP) to evaluate relationships between pesticide and agricultural exposures with risks of lymphatic and hematopoietic cancers and sarcoma. Here, we present the preliminary descriptive analyses of NAPP data. **Methods:** We harmonized data from three population-based case-control studies previously conducted in four American states with a similar study conducted in six Canadian provinces. Descriptive analyses of pesticide exposures, personal protective equipment (PPE) use, and demographic data were conducted. The prevalence of self-reported pesticide use among cases and controls was determined for individual agents and chemical classes. **Results:** The NAPP includes 5131 controls and 3274 cases consisting of non-Hodgkin lymphoma [NHL] (N=1690); Hodgkin lymphoma [HL] (N=507); multiple myeloma [MM] (N=587); and soft tissue sarcoma [STS] (N=490). Data are available for