



3rd International Meeting on Indigenous Child Health: Many Voices Into One Song

March 6-8, 2009 / Albuquerque, NM



ORAL ABSTRACT PRESENTATIONS

#1 Capacity building in Community Based Participatory Research *Lola Baydala, MD*, Kathleen Alexis*

Background: Community-based participatory research (CBPR) is an approach to research that has been shown to effectively address health inequities and provide opportunities for the evaluation and implementation of culturally appropriate prevention programs. In response to the need for measures that document progress and success in CBPR projects, the Public Health Agency of Canada (PHAC) developed the Community Capacity Building Tool (CCBT). The “tool” includes 9 features that together describe community capacity. Although field tests of the PHAC-CCBT have been published, its effectiveness in Aboriginal communities and its use as a longitudinal measure of growth in community capacity has not documented.

Objective: We used the PHAC-CCBT to document longitudinal changes in community capacity, within the context of a CBPR project at Alexis Nakota Sioux Nation.

Method: Five community and 4 non-community research team members participated in 2 focus group discussions. Consensus on each of the 9 PHAC-CCBT features was obtained. Three data points were collected representing community capacity at the beginning of the CBPR project and at one and two years after the project began.

Results: All nine features measured on the PHAC-CCBT showed growth in community capacity over a two year period. Three of these features, “leadership”, “skills, knowledge and learning”, and “sense of community” were especially informative and critical to the success of the CBPR project.

#2 Update on Fetal Alcohol Spectrum Disorders and Community-based Care *Christina Vining*, Piyadasa Kodituwakku*, Stephanie L. Blenner**

Purpose: When concerns are raised about Fetal Alcohol Spectrum Disorders (FASD), it critical that service providers are familiar with accurate diagnosis and effective management for the range of challenges that fall within the spectrum of potential effects. This knowledge needs to be translated into a family-centered, community-based and culturally-sensitive system of care. The purpose of this presentation is to (1) describe current collaborative processes between Native American communities and the NM Indian Children’s Program to improve care for children with FASD and (2) discuss key findings from a needs assessment to improve services.

Methods: A focus group approach and a brief questionnaire were implemented to assess the needs of children with FASD with regard to services. The focus groups were held in 3 communities representing Apache, Pueblo, and Zuni tribes. A coordinator helped organized the participants by inviting appropriate informants from his or her tribe including parents and teachers. A series of questions were used to facilitate discussion, while two individuals took notes.

Results/Outcomes: Preliminary findings on barriers to service delivery such as how children are identified, types of services available for children and adults, and prevention activities will be discussed.

Conclusions: The next steps of how the data will be shared with stakeholders and communities, and how the findings will be integrated into existing service delivery for children with FASD, including the New Mexico, Indian Children’s Program will be discussed.

#3 Immunizing Adolescents: Uptake of new vaccines among American Indian and Alaska Native Adolescents
Amy Groom*, Greg Welch

Purpose: To describe the uptake of tetanus, diphtheria and acellular pertussis vaccine (Tdap), meningococcal conjugate vaccine (MCV), and human papillomavirus vaccine (HPV) among American Indian and Alaska Native (AI/AN) adolescents seen at Indian Health Service, tribal and urban Indian (I/T/U) facilities in the U.S.

Methods: The Indian Health Service (IHS) collects immunization reports on approximately 55,000 adolescents each quarter. Using data from Jan 1st – Dec. 31st, 2008 we report the uptake of each vaccine.

Results/Outcomes: From Jan 1st – December 31st 2008 coverage with Tdap vaccine among 13 year olds seen at I/T/U facilities in all IHS regions increased from 57% to 73%; coverage with MCV vaccine increased from 39% to 61%. Among adolescents females 13 – 17 years old, coverage with the first dose of HPV (HPV1) increased from 33% to 55%; 2nd dose HPV coverage (HPV2) increased from 17% to 36%; and 3rd dose HPV coverage (HPV3) increased from 6% to 18%. There was considerable variation in coverage by IHS region. As of December 31st, 2008, regional Tdap coverage ranged from 49% to 85%, and regional MCV coverage ranged from 31% to 80%. For HPV, coverage varied by region from 44% to 82% for HPV1, 28% to 57% for HPV2, and 14% to 33% for HPV3.

Conclusions: Immunization coverage with the recommended adolescent vaccines appears to be relatively high among AI/AN adolescents who receive care at I/T/U facilities, though continued efforts to reach adolescents are needed. Regional variation in coverage suggests that some regions have been more successful than others in vaccinating AI/AN adolescents.

#9 Understanding Birth Weight-specific and Cause-specific Infant Mortality Among First Nations in Quebec
S Wassimi*, R Wilkins, M Heaman, P Martens, J Smylie, WD Fraser, N Gros-Louis, ZC Luo

Objective: Recent studies indicate that First Nations (FNs) in Canada had significantly higher infant mortality mostly due to the higher post-neonatal mortality. We assessed birth weight- and cause-specific infant mortality among FNs in Quebec.

Method: In a retrospective birth cohort study of all births in Quebec based on Statistics Canada's linked vital data for the period of 1991-2000, we calculated birth weight- and cause-specific infant (0-364 days), neonatal (0-27 days) and post-neonatal (28-364 days) mortality.

Result: As compared to French mother tongue infants, FNs infants had a higher average birth weight, a much lower low birth weight (LBW ≤ 2500 g) rate and much higher high birth weight (HBW) rate. FN infants had a similar neonatal death (Relative Risk=1.03). However, for LBW infants, neonatal mortality was 72.5 per 1000 for First Nations, doubled the rate of 33.8 per 1000 for French mother tongue infants (RR=2.14). There were no neonatal deaths for HBW infants among FNs. Postneonatal mortality among First Nations babies was similar for LBW babies, but 5.6 times higher for HBW or normal birth weight (NBW) babies as compared to French mother tongue infants. Cause-specific mortality analysis revealed almost 5-fold higher risk of sudden infant death syndrome (SIDS) and 10-fold higher risk of infant death due to infections among First Nations babies. Furthermore, the risk of infants death due to congenital anomalies were non-significantly higher among FN babies (RR=1.5).

Conclusion: Our findings suggest that the overall no difference in neonatal mortality among FNs versus French mother tongue infants has masked the large disparity in neonatal mortality for high-risk babies. The higher birth weights among FNs seem to be "protective" during the neonatal period. Further, risk factors of preventable causes of infant mortality (SIDS, Infections) should be targeted to reduce infant mortality among First Nations.

#10 Improving Aboriginal Children's Oral Health with a Community-based Approach
Gregory W. Jones, Phyllis John, Andrea Doiron, Dawn Walker**

Purpose: Children's oral health is known to be poor in many aboriginal communities and presents a major problem with impacts on children's health and general well being. This presentation will describe Health Canada's programs intended to address poor oral health and access to care issues for Indian and Inuit communities especially as it pertains to children. It will discuss the approach taken under two initiatives – the Children's Oral Health Initiative and the Dental Therapy Program. After a combined time of over 30 years for these two activities data is available to describe the level of services achieved, location specific outcomes and continuing challenges around this key area of children's health.

Methods: A descriptive quantitative and qualitative approach using program aggregate data will be used.

Results/Outcomes: Results point to an increased level of access, and specific examples of reduced need for care. Also community capacity and aboriginal employment is enhanced through this approach. Challenges remain.

Conclusions: After many years of programming it can be demonstrated that this approach helps to raise the access to care, provide community development and employment while helping to addressing the need for children's oral health care in communities. Challenges still remain.

#11 Filling the Data Gap. . . Child Maltreatment in the Montana-Wyoming Indian Nations, 2008
Folorunso O. Akintan, Bethany G. Hemlock, Jennifer A. Giroux*

Purpose: Child maltreatment documentation and surveillance is the first step in implementing successful preventive services. However, documenting the incidence of child maltreatment (CM) using culturally specific forms has been a challenge. The Rocky Mountain Tribal Epidemiology Center (RMTEC), was chosen by Bureau of Indian Affairs to identify specific RF related to CM among the A.I and develop a more specific surveillance tool (database) including research RF.

Methods: RMTEC conducted a literature search to find out the common RF associated with CM. A multidisciplinary child maltreatment work group (CMW) was formed. The CMW members range from local Tribal social workers; Epidemiologists; Mental health clinicians; Medical directors; maternal and child health nurse (child death review board); Indian Health Services representatives; BIA officers; Information technology personnel; Federal Bureau of Investigation (FBI); to U.S Attorney. The CMW members reviewed the potential questions formulated from the literature search and brainstormed on feasible data sharing strategies for the multidisciplinary CM case management teams to use.

Results/Outcomes: The CM tool was created from the questions chosen by the CMW and a database was developed that comprised of the information from the previous BIA child services log, RF from literature search and various suggestions from the multidisciplinary CMW members.

Conclusions: An improved CM database that allows for identification of RF related to CM was created and is being piloted on two reservations in the Montana-Wyoming region. Research based strategic Tribal intervention and program planning can now be implemented, improving services offered to CM victims and potential victims.

#15 Early Obesity Intervention to Prevent Diabetes in Urban Native American Children
Jasmyn Walker, Nancy O'Banion, Su An Phipps*

Purpose: The number of overweight Native American children in the United States is rapidly growing. Health Professionals often fail to recognize that environmental factors, family history and resources that can affect BMI (body mass index) of a child. The significance of identifying and managing at risk and overweight children is increasingly important because obesity is often associated with hyperlipidemia, hyperinsulinemia and diabetes.

Methods: Indian Health Care Resource Center (IHCRC) screens youth with a BMI > 85th percentile (approximately 42% of children seen) into the Child and Youth Program. Participants'

parents/guardians complete an assessment reviewing birth weight, food introduction, family history and structure, environment and lifestyle information. Participants' fasting lab for lipids, blood sugar, and C-peptide is obtained. Once enrolled, patients are educated about nutrition and physical activity is promoted.

Results/Outcomes: Of 139 participants, representing 12 tribes, 53% had a BMI >95th percentile. Significant group differences ($p<.01$) were found between amount of TV/Video game use and laboratory values, and the BMI category, TV/Video game use, HDL, and C-Peptide values. Significant group differences ($p<.05$) were found between breastfeeding duration and certain lab values.

Conclusions: Data suggest that both genetic and environmental factors are related the BMI of Native American youth. The increasing prevalence of childhood obesity justifies the need for in-depth assessments at each well-child exam, including lab tests. Nutrition referrals should be routinely made after screenings.

#17 A Simple Pediatric Health Assessment Tool for First Nations Communities
Sabina P. Ijaz*, Lori Chartier-Courchene*

Purpose: A Manitoba First Nation community (Island Lake) initiated a school-based chronic disease screening program in 2006, in response to high rates of chronic disease in the adults. They found that of the 6-year-olds, already 33% had hypertension (high blood pressure), 15% had kidney disease and 80% had obesity. In response, this Pediatric Health Assessment tool for First Nations was developed out of concerns: (1) That similar results might be found in other communities, and (2) That there is limited health system support and health resources currently available to First Nations.

Methods: (1) Assembly of First Nations-endorsed principles of community Ownership, Control, Access and Possession (OCAP) were followed, to guarantee that process and results would be COMMUNITY-DRIVEN and COMMUNITY-OWNED. (2) Community members from two pilot communities were engaged through several meetings with the Elders' Council, Chief & Council, Health Centers, School Boards, Principals, Teachers and Youth. (3) Specialist discussion/consensus was sought with pediatric endocrinologists, nephrologists and generalists. (4) A literature review was done including a review of pediatric guidelines. (5) Meetings were held with government health and regional health authority representatives.

Results/Outcomes: This simple Pediatric Health Assessment Tool evaluates youth aged 4 to 18 for: hypertension, diabetes/prediabetes, renal disease, anemia, and sexually transmitted infections. Using simple tests that laypeople can be trained to do: BP check, height and weight check, fingerprick test, skin check test, and venipuncture. Some planning and primary prevention strategies are required to use this tool. The exciting part of this process is the community engagement that occurs, when the tool is community-initiated.

Conclusions: A simple Pediatric Health Assessment Tool for First Nations communities was developed in consultation with First Nations, which includes screening, diagnostic and primary prevention elements. Community ownership of process and results is an important component. Already this tool has been successful in engaging two pilot communities in their own health.

#18 The Adolescent Care Unit: An Innovative Holistic Model of Inpatient Psychiatric Treatment on the Navajo Nation
Amit Rajparia*, Harrison Jim

Purpose: The Adolescent Care Unit at the Fort Defiance Indian Hospital opened as "first-of-its-kind" inpatient adolescent psychiatric unit within the Indian Health Service in 2006. The program is also unique in that it has aimed to integrate traditional native healing modalities and cultural identity with psychiatric and psychotherapeutic approaches in its design and components. Daily programming reflects a holistic approach including traditional components of daily Beauty Way Circle, weekly individual and group sweat-lodge, tobacco ceremonies, cultural teachings, Medicine Wheel-based behavioral modification system, Navajo language, and traditional arts of beadwork, drumming, storytelling, and cooking alongside individual and group psychotherapy, education, art therapy, health and wellness. In our oral presentation, we would aim to share some of our early data (outlined below) as well as our qualitative analysis of challenges and successes

as we develop the program further using this integrative model. We will discuss how particular DSM psychiatric diagnostic categories correlate with traditional diagnoses along with treatment approaches. We will try to highlight the strengths of this integrated approach not only in stabilizing acute symptoms but in working at the deeper levels of building identity, ego strength along with familial/clan (K'e) relationships in native adolescents.

Methods: (1) We have administered anonymous satisfaction surveys to both our patients and parents'/guardians that involve rating scales for multiple areas of the program. An "aftercare program" for continued follow-up care provides a feedback loop for patients who have previously been in the program. (2) Data collected on the number attending the program: n=153 (97 in 60 day cycle format and 56 in open-ended format), the range of Axis I diagnoses and co-morbid substance abusers. (3) Data collected on the rate of completion of the 60 day program. (4) Data collected on use of restraints and seclusion over 6 quarters with implementation of Therapeutic Crisis Intervention techniques.

Results/Outcomes: (1) Satisfaction surveys show average results in the 4.5/5 range though specific areas are identified as needing improvement, will explain in more detail and provide examples of comments given. Data of previous patients gained through the aftercare program will be shared. (2) Diagnoses: A range of Mood, Anxiety, Psychotic, Eating, and Disruptive Behavior Diagnoses. Co-morbid substance abuse rate = 70%. (3) 82% rate of completion for 60 day program. (4) 6 incidents of restraint/seclusion in over 1600 patient days; this is a comparatively low rate in comparison to similar inpatient units.

Conclusions: The Adolescent Care Unit at the Fort Defiance hospital showcases an innovative model for providing inpatient mental health care in a deeply integrative format that should be of interest to indigenous pediatric health providers. Initial data support success in multiple arenas and identify certain areas that require ongoing development.

#19 Lessons Learned from Implementation of Recent Programs in First Nations Communities
Heather McCormack*, Kelly McDonald

Purpose: To highlight lessons learned through the implementation of several recent Health Canada initiatives.

Methods: This presentation will analyse the implementation approaches for the Maternal Child Health Program (MCH), the Patient Wait Times Guarantees prenatal projects and the FASD Community Coordinator positions. It will highlight results from formative evaluations, using quantitative data from MCH surveys and qualitative information (key informant interviews, sharing circles) from all three processes.

Results: The analysis demonstrated the importance of partnerships and the need for a sound evidence base. Early meetings, bringing together National/Regional officials, partner organizations and community providers, were successful in all three processes as well as the development of "peer" support networks. Training for community-based workers, whether in the use of data collection tools or in content areas, was important. In the MCH evaluation, training was provided to over 80% of the staff, and over 90% indicated that the training was useful. A broad range of community members was engaged in both the development of the funding proposal and in the delivery of services.

Conclusions: Partnerships, networking, communication, and training are important. Implications for other initiatives will be discussed.

#24 The Development of a Comprehensive Maternal Child Health Surveillance System for Nunavut
Laura Arbour*, Gwen Healey, Cynthia Orlaw, Samantha Lauson, Sarah McIntosh, Geraldine Osborne

Short Description: Nunavut is the most northerly jurisdiction in Canada, inhabiting 31,000 people, of which 85% are Inuit. There are great challenges to delivering active and preventative health care throughout this land mass of 1.8 million km². Although most infants are born healthy, Nunavut leads the country for adverse early child health outcomes such as infant mortality, rates of birth defects, prematurity and low birth weight. Public health and community efforts are needed to understand and improve outcomes. To inform these issues and others, as a combined

Canadian Institutes for Health Research circumpolar health team grant/Nunavut public health strategy effort, the development of a comprehensive maternal-child health surveillance system (from 16 weeks gestation to 4 years of age) is underway. With the support of the Arctic Health Research Network, a diverse group of professional and lay stakeholders were brought together initially to determine local interest. To follow, a series of small working groups commenced to decide on the collection of potential prenatal, perinatal, and early child health variables. Over 50 local participants have now had some role in the development of the system which is planned to be launched by the summer of 2009. This paper will discuss in more detail the overall goals, utilization of public health structures as data sources, planned variables, data base development, privacy protection, planned research review process, and developing research questions. It is hoped this will be a straight forward, user-friendly system that can be utilized to increase understanding of aboriginal maternal child health.

#27 Coming of the Blessing: A Perinatal Education Tool for American Indian and Alaska Native Families

Carol M Arnold*, Denise Aragon, Marsha Berry, Angela Broncheau, Chrissie Castro, Joy Culbreath, Toni Garcia, Louise Shabi-Ashkie, Gloria Sly, Donna Smallwood, Pat Vavricka, Margaret Anne YellowKidney, Janet Shephard

Purpose: American Indian/Alaska Natives (AI/AN) have strong family and community bonds. There is a deep, profound respect for nature, life, ancestors, women and children. Despite healthy beliefs, and overall declines in morbidity and mortality, disparities in birth outcomes between AI/AN and non-Hispanic whites remain. A healthy lifestyle including early prenatal care, exercise, a healthy diet and avoiding exposure to smoking, alcohol and drugs are known to help improve birth outcomes. Known risk factors for AI/AN women and pregnancy include late and/or no prenatal care, poor nutrition, smoking, substance abuse, alcohol and domestic violence.

Methods: A new March of Dimes initiative is addressing disparities in birth outcomes for American Indian/Alaska Natives. A committee of primarily AI/AN women representing 10 tribes conducted focus groups with providers and patients. They concluded that one comprehensive perinatal educational tool addressing the needs of multiple tribes was needed and worked for more than a year to create "The Coming of the Blessing". This comprehensive booklet is now used as a teaching tool in 14 states to encourage and support AI/AN women to make healthy choices for better birth outcomes. Over 7,000 booklets were distributed on targeted reservations in 2008.

Results/Outcomes/Conclusions: Based on the evaluation replies to date, women from over 30 tribes in 10 states have read the booklet. Their responses have been overwhelmingly positive with 90% believing that the booklet was helpful to them. Changes AI/AN moms made included nutrition and stress reduction. Due to positive results, March of Dimes printed 20,000 more booklets for national distribution.

#29 Why Do Children Frown Like This? - Broken Education Promises in Attawapiskat. Jacqueline R. Hookimaw-Witt*, Norbert W. Witt

Purpose/Background: In 1979, a heating oil spill was detected in the interior footing trench of J.R. Nakogee Elementary School of the Attawapiskat First Nation, an isolated Omushkegowuk community in Northern Ontario. The cause was an aging heating oil pipeline system. 30,000 cm of soil under the school were polluted, exposing school children and staff to toxic Liquid Petroleum Hydrocarbon (LPH) fumes. In 2000 the education authority closed the school and 4 years later Health Canada condemned the building. Temporary portables were build beside the contaminated soil and a new school on clean soil was promised by the Minister of Indian Affairs in 2000. So far there has been no action taken.

Methods: In 2008 the Attawapiskat First Nation Education Authority contracted the two authors, both members of the community, to research and produce a short video on the issue in order to create awareness in the wider public. The video gives a short view into traditional life in the community (in Cree with subtitles) and then shows the school situation and coping practices by students and community (with English narration).

Results/Outcomes: The video was shown at a UN Youth Forum at the University in Toronto and is available on u-tube. The next step is a health study the two authors applied for, which will show connection between unusual health profiles and the oil spill.

Conclusions: The discussion will be about strategies for Indigenous communities for making the government take Indigenous health issues more serious.

#31 The Use of Expressive Arts as a Social Skills Building Tool for Youth with Fetal Alcohol Spectrum Disorder

Sabrina Agnihotri*, Michelle L. Keightley, Angela Colantonio, Helene Polatajko, Deborah, Cameron, Catherine Wiseman-Hakes, James Parker, Leslie Bridger

Purpose: A pilot study was conducted to evaluate the feasibility of an expressive arts program to facilitate social integration for youth with Fetal Alcohol Spectrum Disorder (FASD) and concurrent social difficulties.

Methods: Four participants, recruited from the Northwestern Ontario FASD Clinic and Lake of the Woods Child Development Centre, took part in a camp experience, facilitated by theatre artists and occupational therapists. They engaged in various projects, such as mask work, drumming and story-telling. At the end of the program, participants delivered a public presentation which reflected the group's progress over the course of the program. Qualitative data was obtained through focus groups that were conducted post-program with participants, caregivers and facilitators, as well as a Creative Tool Box created by the participant throughout the program. Quantitative measures included pre-post assessments designed to capture social and community integration for youth (CAPE, Bar-On EQ-i, ABAS-II, COPM).

Results/Outcomes: Analysis of the qualitative data reflects improved communication in the social and home setting for youth with FASD. Single-subject quantitative data analysis revealed improved performance and satisfaction with leisure activities as identified by the COPM and trends of improvement on the ABAS-II at 6 months post-program.

Conclusions: Preliminary results suggest that a combination of directed group activities and self-reflection within a creative learning context may improve social communication for youth with FASD. However, this study is a pilot project and further research needs to be conducted with a larger number of participants, more sensitive quantitative assessment measures of community integration and appropriate control conditions.

#40 Risk Factors for Lower Respiratory Tract Hospitalization in Alaska Native Children

Lisa Bulkow, Rosalyn Singleton*, Kim Boyd Hummel*, Karen Miernyk,Carolynn DeByle, Debra Parks, Greg Redding, Lori Pruitt, Thomas Hennessy

Purpose: Infants from Alaska's Yukon Kuskokwim Delta (YKD) have very high rates of lower respiratory tract infection hospitalization (LRTIH). The purpose of this study was to evaluate risk factors for LRTIH.

Methods: During a two year period (Oct. 2005 – Sept. 2007) we enrolled children <3 years old with LRTIH and non-hospitalized children with no onset of respiratory symptoms within 3 days. We interviewed parents and reviewed medical charts. We analyzed the association between putative risk factors and LRTIH.

Results: We evaluated 347 LRTIH episodes and 622 comparison children. After adjusting for study year, age, season, and subregion, increased risk of LRTIH ($P < 0.05$) was observed for medical high risk status, bottle feeding, bottle feeding at night, history of choking or vomiting during feeding, household crowding, family history of asthma, family history of coughing, and male caregiver with >12 years of education. History of breast feeding, breast feeding while not using oral tobacco, smokers in the home, and 2 or more sinks in the home were associated with decreased risk of LRTIH. In a multivariate analysis using backward stepwise selection, medical high risk status, bottle feeding at night, history of coughing or vomiting during feeding, family history of asthma, and male caregiver with >12 years of education were significantly associated with increased risk of LRTIH, while smoker in the home and 2 or more sinks were associated with decreased risk.

Conclusions: Multiple factors contribute to risk of LRTIH. Several factors highlight potential interventions, including activities targeted at improving feeding practices and living conditions.

#45 Select Prenatal Experiences and Postpartum Infant Health Practices, Results from a South Dakota Tribal PRAMS Project
Jennifer S. Irving, Christine Rinki, Ssu Weng**

Purpose: The South Dakota Tribal PRAMS (SDT PRAMS) was a collaboration between SD tribes, the Northern Plains Tribal Epidemiology Center, the SD Department of Health and the Indian Health Service to collect survey data to support public health planning for maternal-infant health issues identified by tribes.

Methods: The SDT PRAMS survey asked questions about mothers' experiences before, during and after pregnancy. The target population was all mothers who resided in SD or Sioux County, ND, and delivered a live-born infant (June-Nov 2007 births) to an AI mother or father. Data collection consisted of a multi-step mail phase, which included two hand delivery steps, and a telephone follow-up phase. The total sample for SDT PRAMS was 1299; the response rate was 72.9%. Data was analyzed with SUDAAN survey software.

Results: Top reported barriers to prenatal care (PNC) included "no transportation" (14.5%) and "didn't want anyone to know I was pregnant" (13.7%). Breastfeeding, smoking, and alcohol were the topics discussed most at PNC. During pregnancy 50% reported that they "knew they would breastfeed"; after delivery 37.9% breastfed for at least two months. Among the 52.5% of women who smoked before pregnancy, 59.9% reported continuing to smoke during pregnancy. Only 7.7% reported their infant was exposed to environmental tobacco smoke. 85.2% reported regularly placing infants on back for sleep. 51.2% reported that someone "always or often" co-sleeps with baby.

Conclusions: Understanding AI women's prenatal experiences and infant health practices can help improve service delivery and decrease risk factors associated with infant mortality.

#47 Factors Associated with Aspiration During Swallowing and Lower Respiratory Tract Infection in Children of Aboriginal Identity
Gina R. Rempel, Barb L. Borton**

Purpose: This retrospective review explores whether aspiration during swallowing is correlated with an increased incidence of lower respiratory tract infections (LRTI) in children of aboriginal identity.

Methods: A purpose-built data form was used to collate demographic and clinical information of 239 consecutive children undergoing a videofluoroscopic swallowing study (VFSS) in a tertiary care feeding clinic.

Results/Outcomes: Of the 239 children, 146 were males, median age 15 months and 40% had aboriginal identity. Of the children with aboriginal identity, 69% had a history of LRTI compared to 32% of children from other ethnic backgrounds. Ninety-six (40%) of 239 children aspirated during swallowing. Using Chi-Square analysis, aspiration during swallowing was significantly correlated with aboriginal identity, cough and congestion with feeding ($p < 0.05$). Male gender ($p < 0.05$) and aboriginal identity ($p < 0.0001$) were both significantly associated with lower respiratory tract infections. Aboriginal identity is correlated with both aspiration during swallowing and LRTI.

Conclusions: An association between LRTI and aspiration during swallowing is not demonstrated in this review. While aspiration during swallowing is common in children with aboriginal identity, it may not be of clinical significance in isolation from other factors related to LRTI (crowding, smoke exposure, dental cavities). These results lay the foundation for more detailed investigation regarding contributing factors to health and well being in children at risk for chronic lung disease. Practical suggestions for intervention for such as positioning during feeding, oral hygiene and texture modification of food and liquids will be discussed.

#48 Description of the Process Involved to Elaborate a Culturally Relevant Sexual Health Education Program for Grade 9 Students of Eeyou Istchee (James Bay Cree Territory)
Isabelle Duguay, Joanne Otis, Françoise Caron, Manon Dugas, Marlène Beaulieu, Sara Matthieu-Chartier, Mélanie Gagnon, Bertha Dixon, Emily Mianscun, Irene Otter, Daisy Moar, Thérèse Bouchez, Andrée-Anne Boudreau, Gaston Godin, Joseph Lévy*

Purpose: Describe the steps involved in the elaboration of a culturally relevant sexual health program called Chî kayeh, for grade 9 students of Eeyou Istchee, by the Cree Health Board and collaborators.

Methods: Firstly, a community needs assessment was done through a vast consultation with schools and communities. Two local advisory committees were formed to foster a strong partnership with community members. Secondly, educational tools were elaborated based on data collection, Cree culture, strong theoretical models as well as a validated peer education program. The new program was integrated into the school curriculum thanks to the partnership created between the Cree Health Board and the Cree School Board. Thirdly, during the implementation phase, the Chî kayeh program was given in two pilot communities by teachers. A partnership was created with the Canadian Chair in Health Education at University of Québec in Montréal to evaluate the implementation process in both communities. Ongoing data collection was done over a two year period. The program was modified in the light of the analysis of the data collected from students, teachers, administrators, parents, community members and with support and guidance from the advisory committees.

Outcomes: A compulsory, recurrent, culturally relevant sexual health education program for all secondary 3 students in the nine Cree communities.

Conclusion: All along this process, partnerships were essential to ensure a culturally relevant and durable program. These partnerships will also be necessary during the upcoming impact evaluation to measure short and medium effects of the program on youth and communities.

#55 Reducing Health Disparities in a Canadian Community
*Maryam Mehtar**

Purpose: In November 2006 a 'Health Disparity by Neighbourhood Income Study' was published by the Saskatoon health region, which showed the extent of disparities that exist within the city based on income. Saskatoon's low-income population is predominantly indigenous population, suffering the after-effects of residential school system and abuse.

Methods: The primary author of the study, and the Aboriginal health consultant for one of the school divisions in Saskatoon consulted the community and the Saskatoon Tribal Council. The Department of Paediatrics was then approached and consequently, two Paediatric clinics were established within Saskatoon's low-income community schools. The aim is to provide access to care, in a culturally competent manner; and to work collaboratively across sectors in order to reduce some of the inequities that currently exist. Advocacy particularly in regards to children and families (mostly Indigenous) dealing with the Justice System and the Ministry of Social Services is a huge part of the mandate of the health centre.

Results/Outcomes: 1. Increased utilization of services 2. Improved relationship between the community and the Healthcare Sector 3. Increased clinician services such as Mental Health and Fitness programs

Conclusions: Establishing a multidisciplinary Paediatric clinic that is accessible (as determined by the community); and providing health care to children in the community in a non-judgmental manner is proving to be successful. This can be measured by the increased numbers of children and families accessing our services.

#56 The Role of In-home Running Water and Infectious Disease Risk Among Rural Alaska Native Persons

Thomas W. Hennessy*, Jay Wenger, Lisa Bulkow, Dana Bruden, Debby Hurlburt, Michael Bruce, Ros Singleton, Troy Ritter

Purpose: Although improvements in water and wastewater services to rural Alaska villages have been ongoing since 1960, 1/3 of villages lack in-home water service. The health benefits of in-home sanitation services in Alaska are poorly understood. In one region, we compared infectious disease risks in children from villages with and without in-home water service.

Methods: A household survey determined village-level in-home water service. We obtained infant hospitalizations for 2000-2004 for lower respiratory tract infection, RSV and pneumonia. For the same period, we obtained skin/soft tissue infections due to *Staphylococcus aureus* for persons of all ages. Using laboratory surveillance from 1996-2007, we compared invasive pneumococcal disease rates (IPD) in <5 year olds over different time periods and controlled for socioeconomic and in-home water service status.

Results/Outcomes: Infants from villages where < 10% of homes had water service had 30% higher rates of pneumonia hospitalization and 20% higher RSV hospitalizations than infants from villages with >80% of homes served. Among persons of all ages, outpatient *S. aureus* infections (RR: 5.1) and skin infection hospitalizations (RR: 2.7) were higher in low-service than high-service villages. Rates of IPD were two times higher among children from low service villages than high-service villages.

Conclusions: Rural Alaska Native children living in villages where in-home running water and flush toilets are rare have much higher rates of serious infections than similar children where running water is common. This is likely explained by the availability of water for handwashing. This disparity should be addressed through sanitation infrastructure improvements.

#58 Moving EPSDT Well Child Exams Into Rural Native Communities in Southwest Alaska
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Purpose: To decentralize Early, Periodic, Screening, Diagnosis & Treatment (EPSDT) exams, moving them into the rural communities of Southwest Alaska and creating a "provider home" with the Community Health Aides/Practitioners (CHA/Ps) of those 45 communities.

Methods: Three measures were implemented in order to move EPSDT exams out of the hospital in Bethel, AK and put them in the hands of Community Health Aides in 45 villages throughout the Yukon-Kuskokwim Delta Region of Alaska, an area the size of Oregon with no connecting roads. First, data formerly collected via mail over weeks or months was moved to an online process allowing daily access to completed encounters. Second, training efforts were implemented to increase the percentage of eligible Community Health Aides trained to perform EPSDT exams to 99%, a total of approximately 105 CHA/Ps. Third, a promotion was designed for "Well Child Wednesdays" utilizing posters, fliers, magnets and Public Service Announcements over local radio to increase awareness of the importance and availability of local EPSDT exams.

Results/Outcomes: Over 6161 EPSDT exams were performed by Community Health Aides in 2008 amongst a total population of approximately 25,000, an increase of over 600% compared to 2007.

Conclusions: EPSDT exams which were largely the province of itinerant PHN nurses or providers at the one centrally-located hospital in Bethel, AK are now being conducted in over 45 native communities in rural Alaska by local Community Health Aides. By moving the locus of these exams from the center to the communities themselves and maintaining a "provider home" within the community, the number of children receiving exams and the number of consequent referrals to dental, optometry, audiology, behavioral health, WIC et al increased commensurately, improving the long-term health prospects for the youth of the Yukon-Kuskokwim Delta region.