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| **ISA ISPID  Abstract Submission  Nº: 269**   |  | | --- | | Topics: **SIDS/SUID** | | Type: **Thematic Panel** | | **SUDDEN INFANT DEATH SYNDROME IN ALBERTA: A GEOSPATIAL ANALYSIS OF KNOWN RISK FACTORS IN ABORIGINAL AND NON-ABORIGINAL COMMUNITIES** | | **Peiris, Delshani Yasodara**1; **Hansen, Chantal** 1; **Ruff, Monica**1; **Mitchell, Ian** 1 *1 - University of Calgary.* | | **Objectives of the session** **Overarching objective:** to combine the epidemiology of specific known SIDS risk factors with Geographic Information Systems (GIS) technologies to understand how the variation of risk factors by geographical area in Alberta has changed over time. Objectives: 1) to determine if SIDS events cluster in particular areas of Alberta and to identify the proportion of Aboriginal peoples residing in each cluster group; 2) to examine the proportion of SIDS events as a result of bed sharing, smoking, breastfeeding or prone position, related to age of infant, spatially and over time, in Aboriginal and non-Aboriginal populations; 3) to examine the proportion of SIDS events as a result of bed sharing, smoking, breastfeeding or prone position, related to age of mother, spatially and over time, in Aboriginal and non-Aboriginal populations; and 4) to describe the proportion of Aboriginal SIDS events on and off reserve spatially and over time.  **Content of the session** **Setting and Background:**Albertaisa province in Canada: population 4,146 m, live births in 2013, 56,078. All unexpected deaths, including infants, are reported to the medical examiner; investigation include scene visit. The rate of SIDS in Alberta has declined in the last 20 years. This decline has not occurred to the same extent in all populations. Specifically, the rate of SIDS in Aboriginal populations remains high; Aboriginal populations occupy specific geographical areas in Alberta. But despite the decline in rate, SIDS remains an important problem in all populations. Understanding geographic variations in SIDS incidence can help thus indicate where further educational and investigative efforts should be directed. Understanding changes over time can provide insight to variations in public understanding of safe sleep practices for infants.  **Method and extent of audience participation** **Methods:**2371 sudden and unexpected deaths in infancy were investigated by the Medical Examiner in Alberta, 1977-2013; 1955 (82.5%) cases were classified as SIDS, using a consistent definition. This data and specified risk factors and population characteristics were mapped to generate a visual spatial distribution pattern throughout Alberta. Exploratory spatial data analysis was performed using the Anselin Local Moran's I statistic. Data was analyzed using STATA 13 statistical package. Risk factors and/or population characteristics were compared using test of proportions (Chi-Squared). **Audience Participation:**none, lecture/information session.  **Proposed content area and why it is important to participants** **Results:**Maps displaying the spatial distribution of SIDS events in Alberta (1977-2013), specified risk factors and population characteristics were developed. SIDS collection points (postal codes) were aggregated to the community/neighbourhood level to explore spatial patterns of specified risk factors. There is noticeable geographical variation in SIDS incidence and specified risk factors within communities of Edmonton and Calgary, Alberta. A comparison of community level SIDS outcomes and specified risk factors to overall SIDS outcomes revealed statistically significant clustering. Differences between areas of high SIDS numbers and those with lower numbers was significant, p <0.01, Local Moran’s I; p<0.05, Chi-Squared). **Importance:**The use of GIS technologies provides a visual depiction of geospatial clusters of SIDS events at one point in time, and over time, and by integrating census information provides further analyses including socioeconomic status. Geospatial analysis of SIDS in Alberta permitted the identification of spatial clusters of SIDS events over time, which allowed for the exploration of several questions, specific to certain known SIDS risk factors of interest in Alberta. The use of GIS techniques provides insight to and allows for greater understanding of the epidemiology of specific known risk factors of SIDS within populations. | |  |  |  |  | | --- | --- | | **CONTACT** | | | Name: | **Delshani Yasodara** | | Lastname: | **Peiris** | | E-mail: | **delshani.peiris@ucalgary.ca** | | Country: | **Canada** | | Institution | **University of Calgary** | | Cellphone: | **+1 (587)-227-8029** | | City: | **Calgary** | |