

**P2-542** POPULATION LEVEL INVESTIGATION OF HOSPITAL DENTAL ADMISSIONS FOR CHILDREN UNDER 5 YEARS WITH INTELLECTUAL DISABILITY

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**Introduction** Population level detailed data describing hospital admissions for dental reasons in children with intellectual disability (ID) is lacking. This paper describes dental hospitalisations in children under five years of age identified with ID and compares with children without ID.

**Methods** Data were extracted from population databases in Western Australia linking midwives' data collected on all births with population data regarding birth defects, ID, hospitalisations and deaths. Children born 1983–1992 (n=243 031; ID=3522) were studied as these were the birth years where ID data were available; dental hospitalisations (DH) up to the fifth birthday were utilised.

**Results** Linked data were examined for those who had had a DH including 214 children with ID (DH=246) and for 6119 children without ID (DH=6713). Children with ID were more likely to have a dental hospitalisation (OR 2.47; 95% CI 2.14 to 2.84). For those with ID, having a dental hospitalisation was associated with factors including being privately insured (1.41; 1.06 to 1.87), having a birth defect (2.24; 1.69 to 2.96) and living in an area without fluoridated water supply (2.09; 1.16 to 3.75).

**Conclusion** Linkage of population databases can provide valuable information on dental hospitalisations for children with intellectual disability and assist in planning appropriate services.

**P2-543** MORTALITY FROM ROAD TRAFFIC INJURIES IN CAMEROON: THE NEGLECTED EPIDEMIC

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**Objective** Developing countries are experiencing the highest burden of road traffic injuries (RTI) with more than 85% of road traffic deaths worldwide. Epidemiologic data are scarce in sub Saharan Africa to inform interventions. We aimed to estimate RTI-related mortality and assess the burden on vulnerable road users in Cameroon.

**Methods** We conducted a study of all police reports of road accidents involving personal injury for the years 2007–2009, over the entire 10 275 km interurban road network of Cameroon, a 20-million inhabitants sub Saharan African country. We analysed crash type, type of road user, impact type, crash severity, number of casualties, and fatality. Full reports were available for 64.5 % of all reported accidents.

**Results** The average daily traffic was 159 914 vehicles/year. A total of 2074 crashes were recorded in 2007, 2420 in 2008, and 2091 in 2009, causing 1257, 1433 and 1274 deaths in 2007, 2008, and 2009 respectively, and yielding a crude average of 128 fatalities per 100 million kilometres driven, 60 times higher than in Europe. The average mortality rate per road accident varied from 60.5 to 61.4% across the years. Pedestrians accounted for 30.3% of all deaths, and 34.2% of deaths resulted from crashes involving motorcycle users. Vulnerable road users, including pedestrians and motorcycle users represented 51% of all deaths.

**Conclusion** Road traffic injury is a major cause of death in Cameroon. Further research is warranted to develop context-appropriate

and effective prevention strategies to reduce this epidemic and protect the particular at-risk road user groups.

**P2-544** INFANT MORTALITY ESTIMATION IN BRAZIL: RESULTS OF A PROACTIVE SEARCH OF DEATHS AND LIVE BIRTHS IN POOR REGIONS

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**Introduction** In view of the limitations of indirect demographic techniques for infant mortality estimation in Brazil, the current strategy is to improve vital information. This paper presents results of a proactive search of deaths and live births in the Northeast and Amazonia.

**Methods** We analysed vital information from the mortality and live birth information systems. The adequacy analysis was based on five indicators calculated at the municipality level, per 3-year period, from 1996 to 2008. To complement secondary data analysis, in 2009, a proactive search was carried out in a sample of 133 municipalities in the Northeast and Amazonia, stratified by information adequacy, region and population size of the municipality of residence. Correction factors were calculated by strata and by Brazilian state.

**Results** Temporal trends of the adequacy indicators indicate advances in both information systems. In 2008, coverage of the mortality information system was 88% and coverage of infant deaths was 79%. However, the proactive search of infant deaths showed large deficiencies of vital information in some poor areas, with only 52% infant deaths informed to the Mortality Information System. The correction factors varied from 1.11 to 1.62, depending on the adequacy of vital information, and from 1.02 to 1.28, by Brazilian state.

**Conclusion** The monitoring of vital events is an essential step in the process of reducing infant mortality. The analysis of local irregularities not only improves the quality of vital data registration, making possible to estimate the infant mortality rate directly, but also identifies priority areas for intervention.

**P2-545** HETEROGENEITY OF RISK FACTORS OF DENGUE VIRUS INFECTION IN AN URBAN SETTING

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**Introduction** Although it has been established that poverty is one of the determinants of the majority of infectious and parasitic diseases, in the case of dengue this is still a matter of some controversy. The objective of this study was to describe the distribution of dengue seroprevalence and seroincidence and to investigate the relationship between the intensity of virus circulation and the population's living conditions or between group immunity and *Aedes aegypti* infestation rates, in different intra-urban spaces within a large city in north-eastern, Salvador-Brazil.

**Methods** A prospective study was conducted by means of serological investigations among a sample of people living in 30 different spaces ("sentinel areas") in the city of Salvador, which was selected according to extreme differences in living conditions.

**Results** High rates of seroprevalence (67.7%) and seroincidence (70.6%) were found for the circulating serotypes (DENV-1 and 2).