

**Conclusions** Because many of the intra-siblings correlations observed were relatively strong, the failure to take this cluster dependency into account had a substantial effect on the statistical analyses. Methods taking into account the cluster dependency are widely available in statistical software and strongly recommended.

## Epidemiology

Post Mon 1.9

### 473 IRANIAN ROAD TRAFFIC INJURY PROJECT: ASSESSMENT OF ROAD TRAFFIC INJURIES IN IRAN IN 2012

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10.1136/injuryprev-2016-042156.473

**Background** Road traffic injuries (RTIs) are the second leading cause of mortality and the first cause of disability adjusted life years (DALYs) in Iran. This study investigated the status of RTIs in Iran.

**Methods** All traffic accident data for the one-year period from March 2011 to March 2012 recorded in the national traffic accident database was investigated. The information included demographic data specific to road traffic accidents (RTAs) and injuries. The data was summarised and presented using the distributions of all components.

**Results** There were a total of 452192 RTAs with 252246 victims in the one-year period. The highest percentage (47%) of these was in the 15–30 year age group. Men constituted 78.4% of those involved in RTAs. Most RTAs (73.2%) took place between 6 am and 6 pm. The province of Semnan had the highest annual incidence rate of RTIs and Alborz had the lowest. The majority of RTAs (66.7%) occurred within the city roads. Although the levels of non-fatal injury were similar within the city roads and outer them, mortality was 3.1 times higher outer the city roads.

**Conclusions** This study confirms that the number of RTIs places a heavy burden on the Iranian population, especially on young men. Comprehensive strategies and policies must be implemented for effective prevention of road accidents in Iran.

### 474 ROAD TRAFFIC INJURIES AND DEATHS AND THEIR RISK FACTORS IN MONGOLIA

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10.1136/injuryprev-2016-042156.474

**Background** Worldwide, the number of people killed in road traffic accidents (RTA) each year is estimated at over 1.2 million, while the number of injuries reaches as high as 50 million. Low- and middle-income countries account for 91 percent of the total RTA fatalities. In Mongolia the number of road accidents, crimes and road safety violations is on the increase and it is forecasted that this trend will continue in the future.

**Methods** To identify the risk factors of road accidents and the characteristics of victims involved in road traffic accident and crimes (RTA&Cs), 25 percent (4000) of the investigation forms collected by the Police Department on RTA&C were randomly

selected and analysed using descriptive and advanced statistics methods.

**Results** The victims classified as passengers were more likely to be in urban areas and the rate of road crashes caused by alcohol is significantly different in rural and urban areas. In rural accidents, drunk driving was twice as common and seat belts were 50 percent less likely to be worn. Over 50 percent of deaths and injuries from accidents are among young adults in the age range of 19–39 years. The gender ratio of victims is 6:4, with males in higher numbers. Males in rural areas have higher percentages of moderate and serious injuries occurring than in urban.

The logistic regression analysis showed that the statistically significant risk factors of injuries were alcohol consumption and failure to stop the vehicle. The main causes of death were alcohol consumption, excess speed, vehicle defects, driver's negligence, failure to keep distance and excess loading.

**Conclusions** The age, sex, drunk driving, seatbelt use and type of participation in traffic were significantly different among victims by location. The statistically significant risk factors of injuries in RTA&Cs were; the fault of pedestrians, alcohol consumption and failure to stop the vehicle and risk factors associated with death were; alcohol consumption, excess speed, vehicle defects, driver's negligence, failure to keep distance and excess loading.

### 475 FATAL OCCUPATIONAL INJURIES IN NORWAY: SURVEILLANCE DATA ARE BIASED AND UNDERESTIMATED RISK

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10.1136/injuryprev-2016-042156.475

**Background** The Norwegian Labour Inspection Authority (NLIA) compiles and publishes statistics on fatal occupational injuries. Other institutions also register such information on a national level: Statistics Norway (SN) (from Cause of Death Registry (CDR), recently transferred to the Norwegian Institute of Public Health), the National Insurance Administration (NIA) and Finance Norway (FN) (from private insurance companies). The aim of this study was to examine completeness and quality of NLIA statistics, and see if use of additional sources could improve surveillance of risk.

**Methods** Residents in Norway have a unique personal identification numbers. This was used to compare cases of death from occupational injuries 2000–2003 registered in NLIA, NIA and FN – with information in CDR.

**Results** NLIA had registered 171 deaths from occupational injuries 2000–2003. 75 more deaths were identified from the three other sources. Of all the 246 deaths, NLIA had information on 171 (70%), NIA 158 (64%), SN 141 (57%) and FN 50 (20%). NLIA was most complete, but completeness varied between industries, from 24% for Public administration and defence, compulsory social security to 81% for Construction (Standard Industrial Classification (SIC2002)). Completeness also varied according to external cause of death, and was particularly low (32%) for transport accidents with car (ICD-10 V4). All 246 deaths were found in CDR, but due to incomplete information in death certificates, only 57% were identified as occupational injuries.

**Conclusions** The NLIA registry was most complete, but biased, and grossly underestimated risk in some subgroups.