738 EPIDEMIOLOGICAL PROFILE OF PEDESTRIANS STRUCK BY MOTOR VEHICLE IN JALISCO, MEXICO. 2012–2014

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Background At present traffic accidents are a major public health with increased mortality and morbidity in many countries. According to the WHO, in 2008 one million 300 thousand people died as a result of a traffic accident. In Mexico, in 1999–2010, 185 thousand people died in traffic accidents, 38% of those were pedestrians. The combination of human, vehicle and media environment factors are involved in those accidents. Thus, the epidemiological profile of pedestrians hit by motor vehicles with four wheels in Guadalajara Metropolitan Area (GMA) was conducted.

Methodology Descriptive cross-sectional study, conducted at pedestrians struck in the GMA. The features of pedestrian, vehicle type, location, shift and day of the event, municipality of occurrence, type of road and traffic flow were studied. Analysis was measured by averages, percentages, chi2 and Fisher test, statistically significant at P=<0.05.

Results 397 pedestrians were injured by motor vehicle wheel. Municipalities with the highest percentage: Guadalajara (41.3%) and Zapopan (29.7%). Age frecuency: 18–39 years (57.4%) and predominantly male (80.4%). Marital status: 44.1% is single and 32.7% married. Educational level: 67.8% of individuals studied middle school or lower. Occupation: 52.6% of the victims are wheter employee, trader or construction worker. Most present fractures and injuries of extremities (87.6%) and skull (67%). Index severity of serious injuries: 27%. Event occurrence between 18:00 to 23:59 hours (39.5%), weekend (65.6%) and road (72.3%). Sedan type vehicle is involved in 37.8%.

Conclusions The run over pedestrians is an everyday event in the GMA, with similar to what was found in other countries and contexts, where each day is greater the number of vehicles and the number of subjects behaviour. In that sense, the need to implement intervention programs preventive measures in the pedestrian and driver are conclusive.

739 INCIDENCE AND TRAITS OF ADOLESCENT INJURY IN CHINA: A META-ANALYSIS

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Background Injury is one of the leading causes for deaths of adolescent at present, and injury in adolescent has become a major concern for international researchers. China Health Statistical Yearbook 2011 reported that injury has become the most prevalence cause of death for both urban and rural adolescents. In order to have a thorough understanding of current situation of adolescent injury, and to give scientific evidence in the future, this article tries to systematically estimate the incidence and to examine factors that contribute to the variations in incidence of adolescent injury among studies.

Methods The term "adolescent" in this study is strict to population aged between 10 and 19 years old. Wanfang, CNKI, EBSCO and PubMed Databases were searched for adolescent injury data, based on quantitative studies between 2005 and 2015. Meta-analysis was used to calculate the pooled size of effect and to identify the sources of variation using STATA Version 12.0.

Results A total of 71 articles using data from regional surveys were identified in the review. Results showed that the estimated injury number of people and person- time were 26.4% (95% CI: 21.8%–31.1%) and 24.0% (95% CI: 22.4 % −25.7%), respectively. Differences by gender and grade could be found. When summarising data of the past decade, it is found that the incidence of adolescent injury fluctuated, while recent years have witnessed a significant increase. The type occurred in adolescents with the highest frequency is falling.

Conclusions Male and middle school students are more vulnerable to get injured, which indicates close attention should be paid to those groups. Moreover, due to increasing incidence of injury during the past years, efficient monitoring and intervention should be taken into consideration for administrators and policy-makers.

740 FACTORS ASSOCIATED WITH CHILD RESTRAINT SYSTEM USE IN THREE CITIES OF MEXICO

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Background The use of child restraint systems (CRS) is a passive safety intervention that has proved to be effective in reducing road traffic injuries (RTI) in children. As part of the Bloomberg's Global Road Safety Program in Mexico, an intervention addressing non-use of seatbelt and CRS was implemented in the cities of León, Guanajuato and Guadalajara, Jalisco. Cuernavaca, Morelos was selected as comparison city. The purpose of this analysis was to estimate the prevalence of CRS use in children ≤5 years of age and to identify factors associated with its use.

Methods We performed direct observation in a randomly selected sample of preschools. We collected information as children were arriving school about demographics, use of CRS, characteristics of the vehicle, the driver and other car occupants. Public transportation vehicles or school buses were excluded. CRS prevalence was calculated for each city. A logistic regression analysis was fitted in order to evaluate factors associated with CRS use in children.

Results Across the two rounds of observations, the prevalence of CRS use was 12.1% (CI: 10.2, 14.3) in León, 17.2% (CI: 15.4, 19.2) in Guadalajara and 19.4% (CI: 16.8, 22.1) in Cuernavaca. Regression analysis showed that factors associated with a higher prevalence of CRS were driver's seatbelt use (OR: 1.3; CI: 1, 1.6) and driving a van (OR: 1.8; CI: 1.4, 2.2). The probability of using a CRS decreased if the driver was man (OR: 0.6; CI: 0.5, 0.7), if the children travelled in the front seat (OR: 0.1; CI: 0.08, 0.2), in taxi (OR: 0.1, CI: 0.03, 0.3), and if the number of passengers increased (OR: 0.7; CI: 0.6, 0.9) (p<0.05).

Conclusions CRS use is lower than reported in high-income countries. We were able to document the presence of factors that adversely affect the use of CRS. Some of them had been widely documented, as the number of passengers in the vehicle. This information will support the development of targeted interventions to increase CRS use awareness.

741 AN ANALYSIS OF AUTOPSY REPORTS OF INJURY AND VIOLENCE DEATHS IN SRI LANKA

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Background Deaths due to injuries and violence are on the rise in Sri Lanka. However, only few statistical analysis have been carried out so far to understand the causes for those deaths. This lacuna is a major setback for prevention of violence and injury deaths in Sri Lanka. Therefore, we conducted this study to identify the reasons that contributed to the injuries and violence related deaths in Colombo, Sri Lanka in 2014, using the autopsy reports of the Institute of Forensic Medicine and Toxicology (IFMT), Colombo.

Methods We extracted data of the injury and violence deaths from the autopsy register of the IFMT for the year 2014. Circumstances and external causes of deaths, age and sex were recorded. We analysed the extracted data using Microsoft Excel.

Results In year 2014, 1122 autopsies were carried out in the IFMT and 55.3% of the deaths were due to injuries and violence (N = 621). Majority of the injury and violence death were due to unintentional injuries (80.5%). Out of those 500 deaths due to unintentional injuries and majority (68.2%) of them were due to road traffic crashes (RTC) excluding railway crashes (n = 24). Of all those 346 road traffic deaths, 83.8% were male; majority (22.8%) were between 50–59 years old. Almost half of the RTC victims were pedestrians, while another one third were motorcyclists. The other common causes of unintentional injuries that led to deaths were falls (12.0%), and drowning (6.0%). Among injury and violence deaths suicides were 12.4% and assaults were 7.1%. Main mode of committing suicides was hanging. For homicides, it was, assaults with sharp weapons.

Conclusions Injuries and violence are major reasons for deaths that are reported for medico-legal examination in Colombo, Sri Lanka. RTCs contribute to a significant number of injury deaths. Because injuries and violence are preventable with appropriate measures such as strict legal provisions, community awareness, etc. policy makers should introduce appropriate policies to prevent these deaths.

742 TRENDS IN MORTALITY, HOSPITALIZATIONS AND OUT-PATIENT VISITS DUE TO EXTERNAL CAUSES FROM 1984 TO 2011 IN JAPAN

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Background The purpose of this study is to analyse the trends in deaths, hospitalizations and out-patient visits due to external causes in Japan and to explore strategies for injury prevention.

Methods The WHO standard population data and data on mortality caused by external causes made available by the Vital Statistics of Japan were used. Also, the rates of hospitalizations and outpatient visits due to unintentional injuries were calculated using the Patient Survey of Japan.

The deaths caused by the Great East Japan Earthquake in 2011 were removed from the analysis to avoid confounding.

Results Among 0–14 year olds, the mortality due to external causes reduced from 13.2 per 100,000 populations in 1984 to 3.9 in 2011. Rate of hospitalizations reduced from 610 per 100,000 in 1984 to 478 in 2011. Rate of out-patient visits increased from 35,712 per 100,000 in 1984 to 37,118 in 2011.

Among 15–44 year olds, the mortality due to external causes reduced from 36.7 to 30.5. Rate of hospitalizations reduced from 1,028 to 630. Rate of out-patient visits reduced from 20,404 to 16,320.

Among 45–64 year olds, the mortality due to external causes reduced from 63.7 to 50.0. Rate of hospitalizations reduced from 1,071 to 722. Rate of out-patient visits reduced from 18,713 to 11,998.

Among those 65 years or older, the mortality due to external causes reduced from 135.3 to 117.3. Rate of hospitalizations increased from 1,620 to 2,094. Rate of out-patient visits increased from 15,332 to 15,537.

Conclusions Among 0–14 olds, the mortality due to external causes decreased significantly from 1984 to 2011, but the out-patient visit rate remained almost the same.

Among those 65 or older, the mortality due to external causes decreased from 1984 to 2011, but rate of hospitalizations and out-patient visits increased.

Sports and exercise safety

Post Tue 2.14

743 HEALTHY ATHLETE NATIONWIDE SPORT SAFETY IMPLEMENTATION CASE TO SPORT CLUBS

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Background The Sports and Exercise Safety (LiVE) program (2006–) aims to reduce sport injuries in Finland. The program is coordinated by the Tampere Research Centre of Sports Medicine at the UKK Institute. Every year over 350,000 sports injuries occur in Finland and the trend is increasing. Athletes are in high risk to be injured. Up to 50% of the injuries could be prevented.

Methods Healthy Athlete (HA) aims to foster coaching and training culture that promotes good health and safety in sports. Target groups are young athletes and their coaches, instructors, team managers and families. National and international study findings are delivered to the field by communication and education. Program focuses on 10 segments in Ten-point Circle. Main communication channels are website www.terveurheilija.fi, Facebook, Twitter, and YouTube channel. Website offers information packages, exercise videos, campaign materials, tutor network information etc. All materials are free of charge. Website attracts over 10000 visits per month and YouTube videos have been watched over 270 000 times. HA also arranges several seminars and tutor meetings with national partners.

Results Program has educated over 80 HA-instructors (1-year education) and created the national Sport Nutrition Society (50 sport nutritionists). Purposes of the networks are to implement preventive strategies against sport injuries among target groups by offering education and counselling for coaches and athletes at their local environments. Tutors share the same education materials and injury prevention strategies and they meet annually for re-education.