

Results Data will be collected by Dec 2015. Data cleaning and analysis will be completed by Mar 2016, and final results will be presented at Safety 2016.

Conclusions An important step to increasing bicycle helmet use is to determine additional factors, beyond laws, that may influence helmet use, such that social marketing campaigns can deliver targeted messages.

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PREVALENCE OF ALCOHOL AMONG CAR DRIVERS IN ROAD ACCIDENTS IN LATVIA: AN OVERVIEW FROM 2010 TO 2014

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Background According to European Commission's data safety on Latvian roads is improving in recent years, however fatalities and casualties are still significantly higher in comparison with the situation in other countries. The aim of the study was to examine the prevalence of alcohol in blood samples from casualties in injury accidents (where at least one road vehicle in motion is involved, resulting in at least one injured or killed person) in Latvia from 2010 to 2014.

Methods Road safety accident database includes all the cases for which the police are informed. The cut-off concentrations for alcohol findings in blood samples were set according to the legislative limits (permissible alcohol level in blood is up to 0.5 ‰, but up to 0.2 ‰ for young road users having driving license for less than two years).

Results Out of 22 332 persons injured in road accidents during this five year period, 965 were dead in 30 days after the accident. Alcohol consumption was tested for all persons involved in injury accidents. 7.2% of injured persons and 11.6% of killed persons in injury accidents were caused by drunk driving. Both victims of injured traffic accidents and accidents with alcohol involved were mostly males (60%). The prevalence of alcohol was higher among persons killed twilight than daylight or night time. Drunk driver injured accidents have decreased during this five year period (2010–7.3%; 2011–8%; 2012–5.2%; 2013–6%; 2014–5.6%) but it was not statistically significant.

Conclusions Alcohol still remains important contributing factor of traffic accidents in Latvia. In spite of legislation and public awareness campaigns, situation with drivers, who participate in road traffic under the influence of alcohol did not change significantly during past years.

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LONGITUDINAL STUDY OF MOTOR VEHICLE CRASH RATES AMONG LICENSED TEEN DRIVERS WITH ADHD

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Background Several small studies suggesting teens with ADHD are at heightened crash risk were conducted among more severely affected teens in highly specialised samples but had substantial methodological limitations. Thus, we conducted the first truly longitudinal study focused on comparing crash risk between teen drivers with and without ADHD. We also aimed to determine if

the association between ADHD and risk varies by sex, licensing age, or over the course of licensure.

Methods We utilised electronic health records (EHR) to identify residents of New Jersey (NJ) born 1987–1995 who were patients of The Children's Hospital of Philadelphia's six NJ primary care practices within 4 years of driving-eligible age. EHR records were linked to NJ's state-wide driver licensing and crash databases through June 2012. Subjects were classified as having ADHD using ICD-9-CM diagnosis codes and known chronic conditions from their EHR. Cox regression was used to estimate adjusted hazard ratios (HR) to compare crash rates for 1,307 licensed teens with and 10,415 licensed teens without ADHD.

Results Subjects had a median [interquartile range] of 17 [9, 28] CHOP primary care visits, were 18 [16, 19] years old at their last visit, and were 21 [19, 23] years old at study end. Overall, the crash rate for teens with ADHD was 35% higher (95% CI: 1.22, 1.49) than for teens without ADHD. Modelling revealed heightened risk for male teens (HR [95% CI]: 1.43 [1.27, 1.61]) with less evidence of an increase among females (1.17 [0.97, 1.42]). Conversely, the association between ADHD and crash involvement did not vary by licensing age or over time.

Conclusions Young novice drivers with ADHD—and in particular males—appear to be at increased crash risk, although the estimated increase is notably lower than frequently cited figures from previous small studies of self-reported crashes. Additional research is needed to understand the specific mechanisms by which ADHD influences per-driver crash risk.

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CHILDREN & ROAD SAFETY- A MULTIPRONGED APPROACH

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Background 'Safe Kids Foundation's, Walk This Way'-a pedestrian safety program teaches children to 'Walk Safe and Cross Safe' through educational sessions and awareness activities. Annually more than 220,000 children from 350 schools in Mumbai, Delhi and Ahmedabad are benefited by this program. While educating children on road safety, it was observed that children were receptive, willing to adapt to road safety rules and thereby act as 'young advocates' to facilitate behaviour change.

Objective To train teachers and build their capacities to carry out age specific innovative interventions on road safety in schools. To conscientize students, parents communities and other stakeholders on the issues of road safety through various activities in school/communities to naturally build the safety culture amongst the targeted stakeholders. To conduct research to study impact of educational sessions on children.

Results Teachers, children, parents and communities are conscientized on road safety. In this model, to reinforce the messages at regular intervals, activities like game, songs, competitions are conducted. Educational tools such as flipcharts, posters, banners, demonstrations materials like dummy signals, zebra crossing, activity books etc, help in better understanding and comprehension of the information provided. Peer to peer education enabled sensitise 2,500 children by fellow mates. Children's initiative as safety advocates helped in effectively bringing attitudinal & behavioural changes amongst children and adults. Photo voice, model school zone are research based interventions, initiatives like observing Global Road Safety Week, Road Safety Week- India

generates mass mobilisation, street plays and rallies help in effectively reaching the masses.

Conclusions Adopting a multipronged approach works better in building safety culture and creating positive and sustainable change.

852 EMERGING SAFETY CHALLENGES OF MOTORCYCLES ON BANGLADESH ROADS

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Background Motorcycles are becoming an increasingly popular mode of travel in Bangladesh. There are around 1.3 million registered motorcycles in Bangladesh, representing nearly 55% of total registered motor vehicles. Motorcycles are increasing at an astonishing rate, around 95% during 2009–2015 with fleet growing at a faster rate than other vehicles. Motorcycle crashes are a growing problem resulting from massive increase of motorcycles.

Methods To assess the risk factors of motorised two wheelers in Bangladesh, police reported crash data were analysed and International Road Assessment Program (iRAP) methodologies were applied in assessing road environment hazards associated with motorcyclists together with field observation of motorcycle travel behaviour.

Results Motorcycle crashes are claiming over 200 deaths annually and nearly 70% occurred in rural areas, mostly attributable to effects of speeding. Predominant crash types are head-on, hit-pedestrian and rear-end, which together account for nearly 86%. Recent iRAP assessment revealed that national highways are mostly 2-star or less for motorcyclists indicating a relatively high level of risks of deaths and injuries. Major risk factors are mostly related to road infrastructure and environmental deficiencies and unsatisfactory driver behaviour and law enforcement.

Conclusions Sustained and accelerated reduction in road fatalities involving pedestrians, bicyclists and motorcyclists is clearly a priority, particularly for achieving the target of 50% reduction of deaths by 2020 in Bangladesh. Road fatalities involving motorcycles are unacceptably high. Addressing the safety of motorcycles and the riders is therefore an enormous challenge to transport engineering professionals. It is urgent to conduct in depth research and to develop pragmatic strategies and actions with particular emphasis for wider application of road engineering and environment measures for preventing motorcycle crashes and injuries.

853 UNDERSTANDING ROAD TRAFFIC INJURIES AND PREVENTION MEASURES FOR CHILDREN IN RURAL BANGLADESH: A QUALITATIVE STUDY OF COMMUNITY MEMBERS' VIEWS

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Introduction Road traffic injury (RTI) was the second leading cause of injury mortality and fourth leading of injury morbidity

in Bangladesh. For both mortality and morbidity most the vulnerable age group was 5-9 years.

Objectives To gain an in-depth understanding of people's perception of causes and their concepts of prevention of childhood RTIs in rural Bangladesh.

Method Focus Group Discussions (FGDs) were conducted with 7 groups: mothers and fathers of children aged 5–12 years; adolescents; students and non school going children aged 6–12 years, teachers and local leaders. Out of 79 participants 40 were female. The study was conducted in Raiganj rural community in Bangladesh.

Results Most respondents considered that children, aged 5–10 years are at risk of road traffic injuries in rural community, with school going boys being particularly vulnerable. Most of the RTIs were reported to occur on school journey particularly returning home. Key sources of risk identified by participants included: risk taking behaviour, poor supervision, lack of road skills, untrained drivers, unauthorised vehicles, and poorly implemented traffic law. Preventive interventions suggested included supervision, training in road skills, law enforcement by government, increase awareness in the community, and improvement of the road infrastructure.

Conclusions Community people could identify the causes of childhood RTIs and suggest ways of preventing them; but knowledge is not translated into preventative actions. Appropriate community based intervention programmes need to be multi-facet and include practical road safety education for children.

854 CREATING A MODEL – SAFER SCHOOL ZONE PROJECT

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Background In the mega city like Mumbai, there is need to do a scalable, sustainable and cost effective projects in communities to address road safety is a must. Model school zone project is a part of Walk This Way, pedestrian safety program that was implemented at St. Joseph High School Mumbai, to create safer environment for 2,200 children. Evaluating the school zone and implementing interventions was primary goal of this project.

Method The project was carried out in 3 phases.

Phase I- Gathering statistics and information on accidents from various sources like hospitals, police, traffic & transport department. 46 stakeholders like road safety experts, engineers, policy makers, parents, teachers, community members, research agencies and 178 students were involved in the project. The tools used were school zone assessment, parents' survey, walkability checklist for students, photovoice- children's perspective on road safety, where 10 children were involved, students knowledge and awareness assessment study was also conducted.

Phase II- Interventions – zebra crossing was painted near the school, signages like school ahead were installed, usage of different school gates, widening of footpaths, fencing the footpath near the school.

Phase III- The reaserch was repeated to study the impact after the interventions. Conducted the post intervention assessment. Interpreted assessment findings.

Results Permanent road infrastructure modifications were carried out. School authorities made modifications in the premises and survey showed behavioural changes amongst children and parents. All worked together as a cohesive team and showed results.