substantially influence a child's ability to choose a safe route and to cross roads safely.

Methods Two hundred and forty 7- and 8-year-old children completed a series of road crossings in a semi-immersive virtual environment by watching traffic and stepping off of a curb onto a trigger plate when they felt it was safe to cross. Road crossing performance was assessed via measures of attention, wait time, movement timing, and crashes. Route selection was assessed by asking children to choose the safest route to a destination using vignettes and a tabletop model. BMI was calculated using BMI-for-age growth charts for boys and girls.

Results Children with higher BMI were riskier than peers with lower BMI on measures of waiting before crossing, time to spare relative to oncoming vehicles, and crashes with virtual traffic. BMI was not related to route selection.

Conclusions Childhood obesity is an important risk factor for pedestrian injury. In particular, children with high BMI had difficulty perceiving and acting on gaps in traffic.

660 CHILD DEATH REVIEW: AN EFFECTIVE APPROACH TO UNDERSTANDING AND PREVENTING CHILD INJURY DEATHS

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Background Child Death Review (CDR) is the multi-disciplinary case review of preventable child deaths. All fifty states in the United States, several Indian Tribes and Guam have well established CDR programs. A number of other countries, including Australia, New Zealand and the United Kingdom also have CDR programs. There is wide variation in the quality of CDR reviews. A majority of states utilise the National CDR Case Reporting System, a standardised system that collects and allows analysis of findings from the reviews. This educational session will present.

Objectives

- Understand the purpose and function of child death review.
- Develop knowledge and skills in establishing a multidisciplinary CDR team that reviews all injury deaths of children ages 0–19.
- Develop skills in conducting an effective review team meeting.
- Develop skills in developing recommendations for evidence-based prevention strategies. using CDR findings and data.

Results This session is designed to provide an overview on CDR, a description of the status of CDR in the United States and other countries, and then provide information on developing and implementing quality CDR reviews. Attendees will be given program materials from the US CDR Resource Centre at the National Centre of Fatality Reviews. Participants will participate in a mock case review of child injury deaths including infant suffocation, drowning, motor vehicle and child abuse. The intent of the session is to build capacity of participants to effectively develop and manage their own review programs within their own local context. Data from the US CDR Case reporting system will be shared so that participants understand how review data can be used effectively to develop and implement policies, practices and programs that prevent child injury deaths.

Conclusions is an effective approach to galvanising community and state level injury prevention programs and policy.

661 REDUCING THE RISK OF CHOKING IN CHILDREN: A MOOC (MASSIVE OPEN ONLINE COURSE) TO TEACH HOW TO PREPARE FOOD

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Background To try to respond to the need for education initiatives targeted at adults supervisors, with an easy and accessible communication format, a MOOC (massive open online course) for disseminating information on food choking injuries, has been realised.

Methods The project consists of a series of informative videos freely available on a dedicated website. The contents are intended for an audience mainly of parents, educators and childcare professionals. The video contents are realised on the basis of data provided by the Susy Safe, an International registry of foreign body injuries in children aged 0–14. Currently, it has collected over 25.000 cases. The information regarding the foreign body details and the circumstances of the injury allows the identification of the food foreign bodies causing injuries with greater frequency. Presently Food bones, Nuts and Seeds and grains have the highest incidence.

Results Following the recommendations provided by the International Guidelines for food preparation, the videos provide basic information addressed to those who have the task of preparing food for children, explaining in a clear and as simple as possible manner how to reduce the risk presented by certain foods. With simple measures even the most dangerous foods can be safely consumed by children. In each video a specific topic, closely related to the problem of food choking in children is clearly addressed (epidemiology, children anatomy, obstruction mechanism, food preparation) by a field expert. According to the Susy Safe data, almost 40% of injuries happened under adults' supervision, showing a lack of information and the need to implement specific educational campaigns targeted to families and supervisor.

Conclusions The MOOC, available at www.safefood4children.org, has been actively attended by families and firms in the food supply chain. This testifies the interest and the need for education in the field of choking injuries prevention.

Traffic Safety

Post Tue 2.5

662 MOTORCYCLE HELMET AND CAR SEAT BELT USE PATTERNS IN DELHI, INDIA: IMPLICATIONS FOR TRAFFIC SAFETY INTERVENTIONS

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Background In 1993 The Delhi government made it mandatory for all MTW riders to wear helmets and use of seatbelts for front seat passengers of cars in 2002. It became compulsory for all cars in 2002 to be equipped with seatbelts in the rear seats, but not their use. In 1999 helmet use was made optional for female MTW riders and the notification was reversed in September 2014 and helmet use became mandatory for all MTW riders again. In this paper we report the motorcycle helmet and car seat

belt use patterns in Delhi, India, and the implications for effectiveness of traffic safety interventions.

Methods In September 2014 we conducted roadside traffic surveys at 17 locations and observed 3,251 MTWs and 3,200 cars. All surveys were done between 0700 and 1900 hours. The following data were recorded: Number and sex of passengers by their location in the vehicle, seatbelt use by car occupants and helmet use by MTW occupants. The data are analysed for estimating the effectiveness helmet and seatbelt laws and the outcome in terms of lives saved.

Results MTW use patterns: Total MTW: 3251; Passengers per MTW: 1.3; Children per 100 MTW: 3; Overall helmet wearing rate: 88%; Driver helmet wearing rate: 96%; Pillion helmet wearing rate: 70%.

Car use patterns: Total Cars: 3,200; Passengers per car: 2.0; Overall belt use 60.3%; Driver belt use: 91.5%; Front seat passenger belt use: 76%, Rear seat passenger belt use: 6%.

Fatality rate estimates per billion vehicle-km in Indian cities: Delhi: Car-3.8, MTW – 16.5; Average for 5 other Indian metropolitan cities where helmet laws are not enforced and seat belt law enforcement is weak: Car – 12.5, MTW – 37.7.

Conclusions Helmet wearing rates for MTW riders exceeds 88% in Delhi where the law is enforced as compared to less than 20% in other Indian cities where the law is not enforced. Between the years 1999 and 2014 helmet use by women passengers was insignificant, but increased to more than 70% immediately after the mandatory law was reintroduced. Belt use by front seat car passengers in Delhi is 76%. This shows that publicity campaigns do not result in high belt and helmet use, but enforcement of mandatory laws has a very strong effect on compliance.

Fatality rates per billion vehicle km in Delhi for cars are 30% of those in other cities and for MTW 44%. The lower rates in Delhi are probably partly due to enforcement of helmet and seatbelt use laws.

663 REGULATIONS AND ENFORCEMENT IN OFF-HIGHWAY VEHICLE PARKS IS ASSOCIATED WITH SAFER RIDING BEHAVIOURS

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Background Previous studies showed that Iowa all-terrain vehicle (ATV) crash victims from off-highway vehicle (OHV) parks practiced safer riding behaviours than off-road crash victims outside the parks. The objective of this study was to determine the effect of regulations and enforcement on the prevalence of safety behaviours among Iowa OHV park users.

Methods From May to September of 2014, motion-activated cameras captured photos of users at the entrances of Iowa's eight OHV parks. Riders were coded by vehicle type, estimated age, sex, and safety behaviours. Descriptive and multivariable logistic regression analyses were performed.

Results A total of 6,718 vehicles and 9,083 riders were analysed. Among OHV park users, 44% were on ATVs, 51% on dirt bikes and 5% on side-by-sides (SxSs). Helmet use was 94% overall. Just 6% of single-rider ATVs and 0.8% of dirt bikes had passengers. While only 11% of park users on ATVs were <16 years old, 59% of the child operators were driving adult sized ATVs. Of those riding SxSs, 64% were not using their restraints. As compared to young adult (16–39 years) ATV riders, children were ~6 times more likely to wear a helmet and adults 40–60 years old were half as likely. When officers were patrolling the parks, there was a 3.6-fold higher likelihood of helmet use and a 40% lower likelihood of passengers on dirt bikes and ATVs.

Conclusions Regulated safety behaviours (helmet use and riding without passengers) were highly common among OHV park users. However, unregulated behaviours (SxS restraint use and children driving youth-sized ATVs only) had lower compliance. Moreover, regulated safety behaviours were significantly increased when the parks were patrolled. This study shows that a combination of regulation and enforcement is effective in ensuring safety behaviour compliance in OHV parks. Similar efforts outside parks could have a substantial effect on decreasing off-road vehicle-related deaths and injuries.

664 A NEEDS ASSESSMENT OF OPPORTUNITIES FOR SAFE BICYCLING IN AN URBAN AREA

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Background Bicycling has been proposed as a potential intervention to reduce sedentary lifestyles, decrease air pollution, and promote active transportation. This study sought to assess the knowledge, attitudes, and behaviours towards bicycling in an urban area, explore the dominant safety concerns for bicyclists, and understand equity issues.

Methods A sequential mixed-methods design was used for this study. Data were first collected from an online survey administered from mid-February 2014 through April 1, 2014. Quantitative data guided the focus of key informant interviews with a purposive sample of policymakers and advocates, and a focus group of neighbourhood residents. A literature and document review supplemented the quantitative and qualitative data. Data analysis involved identifying key themes across all data. Findings were disseminated to City leaders.

Results The online survey was completed by 1,437 City residents (62% were regular riders). Nearly three-quarters of the respondents did not feel safe riding in the City. The leading safety concerns were motorists, lack of room to ride, uneven road surfaces, and the potential for crime. Only 37% of respondents said that the bicycling community was representative of the City in terms of gender, race, and age. Qualitative data identified youth and Latin Americans as populations who use bicycles as their primary mode of transportation. Key informants emphasised the safety risks, and acknowledged that the City suffers from inadequate infrastructure for cyclists. Respondents also highlighted significant inequities in neighbourhoods where investments in infrastructure have been made.

Conclusions People who ride regularly and those who are non-riders, but are interested in riding more, reported feeling unsafe. Efforts to improve safe cycling should enhance enforcement of traffic laws targeting motorists and bicyclists and improve bicycling infrastructure throughout the City.