

scared to walk on narrow roadsides because of speeding vehicles. They also found crossing the road dangerous because of the lack of designated pedestrian crossings and disregard shown by drivers. Poor visibility caused by random roadside parking and trees also increased the sense of road danger.

Conclusion Children expressed multiple concerns which made the journey difficult and dangerous. Some of these issues could be addressed through improved road infrastructure, whilst others would require a change in driver's behaviour.

Learning Outcomes Children's views are often ignored in issues pertaining to their health and well-being. PEI is an engaging method that encourages children to express concerns about their safety.

7A.002 THE EFFECTIVENESS OF BOOSTER SEAT USE IN MOTOR VEHICLE COLLISIONS

¹Tona Pitt, ²Andrew Howard, ^{1,3}Tate HubkaRao, ^{1,3,4,5,6,7}Brent Hagel*. ¹Department of Paediatrics, Cumming School of Medicine, University of Calgary, Calgary, Canada; ²Departments of Surgery and Health Policy, Management, and Evaluation, Hospital for Sick Children, University of Toronto, Toronto, Canada; ³Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, Calgary, Canada; ⁴Faculty of Kinesiology, University of Calgary, Calgary, Canada; ⁵O'Brien Institute of Public Health, University of Calgary, Calgary, Canada; ⁶Sport Injury Prevention Research Centre, University of Calgary, Calgary, Canada; ⁷Alberta Children's Hospital Research Institute, University of Calgary, Calgary, Canada

10.1136/injuryprev-2021-safety.170

Background Alberta remains the only province in Canada without booster seat legislation. This presents an opportunity to study the effectiveness of booster seats in real-world settings. To date, results of booster seat effectiveness compared with seat-belt-only use has demonstrated mixed findings.

Methods We used Alberta police collision report data from 2010-2016. The study population includes all motor vehicle collisions involving at least one 4-8-year-old. Using a case-control study design, children who were reported by police to be injured (cases) were compared with those uninjured (controls) for booster seat use. Logistic regression was used to estimate the association between booster seat use and injury.

Results There were 12,922 children involved in a collision, resulting in 673 child injuries. There were 793 children in the front seat excluded from analysis. Unadjusted analyses indicate that compared with booster seat users, there were greater odds of injury for seat-belt users (OR=1.21; 95% CI: 1.02-1.44) and those not using any restraints (OR=8.16; 95% CI: 4.66-14.31). When stratifying by impact and collision types, front-end vehicle-on-vehicle collisions demonstrated greater odds of injury for seat-belt wearers relative to those in booster seats (OR= 1.51 95% CI: 1.10-2.08).

Conclusion Crude analyses indicate a protective effect of booster seats compared with seat-belts, depending on the type of collision and impact location.

Learning Outcomes These regionally-specific injury data may help inform policy on the use of booster seats. Stratification by collision impact location may be necessary to inform analyses on booster seat effectiveness.

7B – Injury & COVID, March 25, 2021

7B.001 TELEHEALTH APPLIED TO DELIVER BEHAVIORAL SKILLS TRAINING TO REDUCE CAR SEAT MISUSE

¹James M James Decarli*. ¹Pro Consumer Safety/public Health Behavior Solutions, Los Angeles, USA; ²Occupant Protection, California Strategic Highway Safety Plan, Sacramento, USA

10.1136/injuryprev-2021-safety.171

Telehealth is a common approach to deliver health education before and during the COVID-19 pandemic. However, its ability to apply behavioral skills training (BST) to teach parents how to install and use their child restraint system (CRS) has been undocumented. This session will review how telehealth was used to deliver behavioral skills training (BST) to teach 171 expectant parents, in a multiple-baseline-across-subject design, how to install and use their CRS in order to reduce misuse and improve retention. While baseline results identified significant misuse across all participants. Once BST was delivered by the use of telehealth, misuse improved by 97% for 37 task objectives. During the 2-week follow-up evaluation concluded that 100% of participants retained the skills they mastered during BST. This session will describe the validation of telehealth as an effective method of delivering BST to car seat education to expectant parents during COVID-19 and illustrate how telehealth has broader CRS program and train-the-trainer implications beyond the COVID-19 pandemic.

7B.002 TRANSPORT AND HEALTH DURING AND AFTER THE COVID-19 PANDEMIC

^{1,2,3}Olive Kobusingye*, ^{1,3}Margie Peden. ¹Road Traffic Injury Research Network, Kampala, Uganda; ²Makerere University School of Public Health, Kampala, UGANDA; ³The George Institute for Global Health, Sydney, Australia

10.1136/injuryprev-2021-safety.172

In May 2020, the High Volume Transport (HVT) Applied Research Programme which is funded by UKAid through the Foreign, Commonwealth & Development Office (FCDO), published an insight paper by the Road Traffic Injury Research Network's RTIRN Chair and Deputy Chair (Drs Kobusingye and Peden) on the nexus between transport and health during the COVID-19 pandemic.

The report looks at the five interacting dimensions between transport and public health – safety, active transport, clean air, connectivity/access, and equity – during COVID-19. It highlights the positive unintended effects of the pandemic – reductions in road crashes and improvements in air quality - and questions what can be done to maintain some of these gains.

The report emphasises the gaps in current knowledge, particularly in low- and middle-income countries, such as the effectiveness of masks in crowded public transport, and the impact of severe transport restrictions on vulnerable populations, especially older people, adolescents, pregnant women, and persons with disabilities. It argues that COVID-19 offers an opportunity for an inter-sectoral response from the health and transport sectors to build safer, more equitable, and resilient transport systems.

Transport systems were responsible for converting a local epidemic into a pandemic, and they have been central to the

pandemic response – transporting patients, essential workers, goods, and services – and will continue to be critical in the recovery phase as countries restructure ‘COVID safe’ transport systems and revamp their economies.

The report concludes by identifying areas that require urgent additional research, policy, and regulation development.

7B.003 REDUCING MUSCULOSKELETAL INJURY RISK USING WEARABLE AND SMARTPHONE TECHNOLOGY

Scott Coleman*. *Preventure Pty Ltd, Pyrmont, Australia*

10.1136/injuryprev-2021-safety.173

Context Wearable and smartphone technology has become a core element in the injury prevention and rehabilitation process for professional athletes. This technology can also be used in the prevention of injury in the workplace, and the return to work process following injury.

Process Wearable technology is used collect accurate and valid information which enables:

- The physical demands of the tasks to be measured and assessed
- The physical capacity of the individual to be measured and assessed
- The identification of injury risk when the demands of the task are greater than the capacity of the individual

Analysis The the physical demands of individual work tasks and the capacity of workers to perform these tasks was quantified using a combination of linear and rotational acceleration variables to calculate load.

Outcomes The data collected enabled:

- The creation of the benchmarks for the safest method of performing work tasks
- Assessment of workers performing these work tasks and comparison to the benchmark to identify injury risks for uninjured workers, and provide them with feedback to reduce their injury risks.

Learning Outcomes Delegates who attend this session will receive:

- Background on the accuracy and validity of wearable technology for movement analysis in the workplace
- An overview of the data analysis and reporting process
- Various case studies involving the use of wearable technology to identify and reduce injury risk and guide the return to work process following injury

7C – Alcohol, Drugs & Injury, March 25, 2021

7C.001 CHANGING DRUG OVERDOSE DEATHS PATTERNS WHERE US RATES ARE HIGHEST: GLOBAL IMPLICATIONS

¹Gordon Smith*, ¹Zheng Dai, ¹Marie Abate, ²Allen Mock, ²James Kramer. ¹West Virginia University, Morgantown, USA; ²WV Office of the Chief medical Examiner, Charleston, USA

10.1136/injuryprev-2021-safety.174

Background Rural West Virginia leads the US in overdose deaths. The role of multiple drug combinations in fatality trends is unclear especially given rapid increases in methamphetamine involvement.

Methods Toxicology data from our WV Forensic Drug Database contains drug levels on all drug-involved deaths in WV, including determinations if drugs caused or contributed to death. Trends from 2013 to 2018 were examined including separate methamphetamine analyses.

Results Death rates increased dramatically to 49.6/100,000 with most deaths involving poly-substances with fentanyl. Heroin-related deaths increased from 138 to 257 in 2017, falling in 2018, as did prescription drug deaths. Methamphetamine involvement increased 12-fold (28 cases in 2013 to 336 cases in 2018). Most methamphetamine-related deaths (N=815) involved other drugs (only 25% involved methamphetamine alone). Opioids were present in 63.8% of methamphetamine deaths; fentanyl/FAs having the largest increase (4% 2013, to 49% in 2018) and prescription opioids decreased by over 100%. Despite increasing methamphetamine deaths, proportions with only methamphetamine did not change over time. Heroin presence without fentanyl/FAs steadily decreased for methamphetamine-involved deaths; by 2018, only 2% had heroin present without fentanyl/FAs.

Discussion Drug-related deaths in this rural state continue to increase and most involve multiple drugs with a rapid rise in methamphetamine over the past three years. Unlike urban drug problems, the origins of the WV epidemic are largely iatrogenic, starting with extremely high opioid prescription rates. This presentation will outline the progression of the rural drug problem in WV, describe harm-reduction efforts and include more detailed statistical modeling of trends.

7C.002 VIOLENCE DOMINATES THE BASELINE FOR SDG 3.5.2 TO REDUCE HARMFUL ALCOHOL USE

^{1,2}Ted R Miller*. ¹Pacific Institute for Research and Evaluation, Silver Spring, USA; ²Curtin University School of Public Health, Perth, Australia

10.1136/injuryprev-2021-safety.175

Background/Aims Social Development Goal 3.5.2 calls for a 10% reduction in harmful alcohol use. We began evaluating efforts to achieve this goal in Alexandria, South Africa; Brasilia, Brazil; Columbus, Ohio; Jiangshan, China; Leuven, Belgium; and Zacatecas, Mexico by estimating baseline harm.

Methods Following the Global Burden of Disease (GBD), we measured alcohol-attributable burden in Years of Healthy Life (YHLs) lost. GBD estimates harmful alcohol use from a jurisdiction’s alcohol consumption and diagnosis-specific relative risk distributions. We assessed alcohol consumption and alcohol-involved violence through surveys of 1500 adults per city and, except in Columbus, 1500 youth. We combined those data with GBD’s relative risk curves and accessible police-reported road crash data to estimate the baseline. We incorporated the financial effects of health problems into the baseline by converting them to YHL-equivalents. For use in conversion. we defined a standardized YHL as the average year of life expectancy lost to a crash death or homicide.