and agriculture were enrolled in the survey. Weighting by business size within sector was applied.

Results Annually, about 16.7% of workers reported experiencing a serious harm incident at work in the last 12 months. The serious harm incidents were statistically higher in workers who disagreed and strongly disagreed that ‘their boss encourages workers to speak up if they felt something is unsafe’ (Odds ratio (OR)= 2.4, 95% Confidence Interval (CI) (1.9 - 2.6)), ‘their boss encourages workers to come up with ideas for how to make them safer’ (OR=1.5, 95% CI (1.3–1.8)), and ‘When their boss makes decisions about workplace health and safety, workers are always told how their views have been considered’ (OR=1.7, 95% CI (1.4–2.0)). Regression model indicated that decreased serious harm incident and increased workers’ engagement were greatly affected by worker’s age.

Conclusion Work-related incidents were strongly associated with positive workers’ health and safety practice and perception. Younger workers were more likely to experience both higher serious harm incidents and being less involved in H&S at work.

Learning Outcomes The study provides evidence on the importance of workers’ involvement, especially younger workers in improving H&S at work.

6F.002 INVESTIGATION OR LEARNING REVIEW?

¹Vallorie Hodges*, ¹Fiona McCarthy, ^{2,3}Sidney Dekker, ⁴Ivan Pupilidy. ¹University of Tasmania, Hobart, Australia; ²Safety Science Innovation Lab Griffith University, Nathan, Australia; ³Delft University of Technology, Delft, Netherlands; ⁴Advanced Safety Engineering and Management – University of Alabama at Birmingham, Santa Fe, USA

10.1136/injuryprev-2021-safety.167

As safety practitioners we often struggle with how to interpret and apply safety research into our environments, how to truly engage our workers, and how to positively influence our safety culture.

This session shows how shifting focus from safety culture to developing a learning culture may provide a better pathway.

We show how realigning our investigation processes to Learning Reviews is moving us away from assumptions of human error and blame and is developing a new language and shared understanding toward a safety differently approach.

Since people create safety, we show how we engage the front line to identify what works and what doesn’t, using focus groups and influence mapping as a guide to the creation of cultural interventions.

6F.003 PREVENTION IS NOT ENOUGH

¹Vallorie Hodges*, ¹Fiona McCarthy*, ²Ivan Pupilidy, ^{3,4}Professor Sidney Dekker, ⁵Crista Vesel. ¹University of Tasmania, Hobart, Australia; ²Advanced Safety Engineering and Management University of Alabama at Birmingham, Santa Fe, USA; ³Safety Science Innovation Lab Griffith University, Nathan, Australia; ⁴Delft University of Technology, Delft, Netherlands; ⁵Dynamic Inquiry LLC, Santa Fe, USA

10.1136/injuryprev-2021-safety.168

A strong prevention bias in safety thinking doesn’t offer a robust understanding of the complexity of high consequence events. Despite the best risk assessments, procedures, and people, we simply cannot prevent all incidents. We must instead balance prevention efforts with capacity to respond and recover when things go badly. But how do we promote this concept within our operations?

This session offers a model we are using as a simple visual framework to stimulate dialogue and promote learning, shared understanding and safety differently language. The model is an adaptation of the bow-tie as a propeller. It includes preventive, operational and recovery elements placed in a dynamic mode, represented by turning blades – within a margin of manoeuvre sphere.

On one side of the bow-tie, prevention efforts deter threats, while on the other side capacity to respond to events reduces impact. The centre represents operational activity and an event moment. This is also the moment when workers recognize anomaly and make sense of the information, learn in the moment, and innovate a change to the system.

The bow-tie is depicted inside a sphere of influence representing margin of manoeuvre. Positive influences create outward force, maintaining a buoyant sphere. Negative influences put pressure on the system, reduce its size, robustness and even collapse it. An unbalanced bow-tie can also collapse the system.

When we conceptually shift from bow-tie to propeller, the model becomes dynamic, demonstrating how learning creates a feedback loop to improve the entire system- including preventive, operational and response/recovery components.

7A – Child – Road, March 25, 2021

7A.001 ADOLESCENT’S PERCEPTION OF ROAD RISK ON THEIR ROUTES TO SCHOOL IN MAKWANPUR, NEPAL; A QUALITATIVE STUDY

¹Preeti Gautam*, ²Julie Mytton, ²Paul Pilkington, ¹Sunil Joshi. ¹Nepal Injury Research Centre, Kathmandu Medical College Public Limited, Kathmandu, Nepal; ²University of the West of England, Bristol, UK

10.1136/injuryprev-2021-safety.169

Background Busy and poor road infrastructure along routes to school poses high risk of traffic injury for children. Every child’s safe and healthy journey to/from school is fundamental to achieving Sustainable Development Goal 3.6. However, there is little evidence reporting children’s views about their school travel from developing countries. This study aims to understand children’s perceptions of injury risks on their journey to school in Nepal.

Methods We used Photo-Elicitation Interview (PEI) methods to collect data from 14 children (12–16 years) who walk to school along the East-West Highway in Makwanpur, Nepal. The children used a camera to record parts of their journey, which they perceived as dangerous. Photographs were used as prompts during an interview afterwards. Interviews were audio-recorded, transcribed, translated and analysed thematically using NVivo.

Results Several themes were identified, categorised under environmental and behavioural factors. The children were

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, ^{1,3,4,5,6,7}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