

concussion education materials, will further aid POLs with having conversations.

Learning Outcomes Describe how MS parents/coaches/staff evaluated concussion education training sessions.

3E – Road – Data, March 23, 2021

3E.001 ASSESSING THE REAR-END CRASHES CHARACTERISTICS ON A RURAL MULTILANE EXPRESSWAY IN INDIA

Laxman Singh Bisht*, Geetam Tiwari. *Indian Institute of Technology Delhi, New Delhi, India*

10.1136/injuryprev-2021-safety.81

Expressways are rural multilane intercity highways which are being built rapidly lately in India. As per Indian government data, the recorded deaths on intercity highways such as national highways (NHs) and expressways are 36% of the total fatalities on Indian roads in 2018. However, the contribution of NHs in total road network length is 1.94%, whereas the existing length of operational expressways in India so far is unknown. Hence safety of rural multilane intercity highways such as expressways is a significant concern in India and need to be investigated. In this study first objective was to assess the characteristics of the rear-end crashes of the 165 km long rural multilane intercity expressway using the crash data from August 2012 through October 2018. The second objective was to identify the factors affecting rear-end crashes using random parameter count model. The factors considered are geometric design elements, service lane status and access points density. Results show that rear-end crashes constitute 49% of the total fatal crashes and 34% of the total non-fatal crashes. Besides, it was also revealed that truck-involved and car-involved crashes are prominent rear-end crash types. Also, truck-strike-truck and car-strike-car crashes have the highest number of cases for both fatal and non-fatal rear end crashes. There exists variation in the safety of horizontal curve segments as compared to linear segments. However, linear sections were having more rear-end crashes comparatively. At the end, possible interventions were discussed according to the findings to reduce the rear-end crashes on the expressway.

3E.002 IDENTIFYING MODIFIABLE FACTORS RELATED TO NOVICE DRIVER FAULT 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.82

Background Motor vehicle collision is a leading cause of injury and mortality in teens. Graduated drivers licensing (GDL) is a common practice to help mitigate risk associated with younger and inexperienced drivers. However, gaps and inconsistencies exist across regions in how restrictive GDL rules are.

Methods This study used police collision report data from Alberta, Canada for the years 2010–2016. An automated, previously validated, culpability analysis tool was applied to collisions involving drivers between 16 and 19 years of age to score fault. Factors that increase odds of fault in all-collisions were identified using logistic regression.

Results There were 45,938 motor vehicle collisions involving young drivers. of these, approximately 71% of young drivers were identified as at-fault. Crude analyses indicate that driving between 2300 hrs and 600 hrs increase odds of being at-fault (OR= 1.39; 95% CI: 1.27–1.51). Odds of being at-fault in collision were lower with the presence of an adult passenger over 20 years of age (OR= 0.62; 95% CI: 0.57–0.67) or a single peer of similar age (OR= 0.90; 95% CI: 0.83–0.97). Other passenger categories (younger passenger or multiple teens) were not significantly associated with young driver culpability.

Conclusion Passenger type and time of day may both be contributing to young driver fault in collisions. Future directions include multivariable analysis as well as analysis on teen driver fault in severe injury collisions.

Learning Outcomes There exists a potential opportunity for policy regulations that may modify or reduce exposure to factors contributing to teen driver culpability in motor vehicle collisions.

3F – WHS – Hazard and Risk, March 23, 2021

3F.001 ANALYSING SUBJECTIVE INCIDENT DATA TO GUIDE STRATEGY

Kate Harris*. *Sa Health – NALHN, Adelaide, Australia*

10.1136/injuryprev-2021-safety.83

Context Incident-reporting systems enable organisations to capture and analyse large volumes of occupational safety incidents. By counting and categorising hazard and incident reports, these systems are crucial to understanding broad organisational risk. However, these systems often ask incident 'victims' to pick from set categorical fields restricting the identification of micro-trends, local hazards and those not anticipated by the system designers. Qualitative data analysis is not a standard function of most large scale reporting systems, identifying local or unique hazards often occurs outside the reporting system relying on free-text comments. Addressing hazards in this manner is labour intensive and not often integrated into risk management pathways.

Process Cluster analysis using the freely available NODEXL software program provides means to analyse subjective incident data in a semi-quantitative manner. The data can self-categorise to form a picture of local level hazards. This presentation includes examples of this method used to analyse Workforce MSI, challenging behaviour and Mental Stress incident reports in Healthcare.

Outcomes A visual representation of qualitative incident data to inform local strategy.

A repeatable and targeted method of hazard ID.

The identification of new or unanticipated hazards and their interactions.