

Methods: The driver population drove box trucks, delivering goods to convenience stores. This study used an on-board video recording system (OVRs) with forward- and driver-facing cameras which recorded driver behaviors, and accelerometers that detected vehicle maneuvers such as hard braking, acceleration, and speeding. When a vehicle event was triggered by a harsh maneuver, the OVRs saved a 30-second video/audio clip, 15 seconds before and after the triggering event. The videos were viewed by the OVRs vendor's trained observers and coded for approximately 60 different risky driving behaviors of varying severity. Two types of feedback to the drivers were evaluated: instant feedback from lights on the dashboard that flashed yellow or red to denote harsh vehicle maneuvers, and one-on-one coaching between supervisor and driver, consisting of viewing the recorded video events involving the driver and discussing safe driving behaviors. All trucks at seven business sites were equipped with OVRs, for a total of 158 OVRs at the start of the study. The seven sites were assigned to an intervention group (n=5) that received instant driver feedback and supervisory coaching, or control group (n=2) that received no feedback. The data presented here cover 17 months of monitoring using OVRs in the intervention and control groups.

Results: Over the 17 months, there were approximately 237,000 useable trigger events recorded. Driving unbelted was the most common risky behavior; using hand-held electronic devices ranked 4th. Coaching varied among the sites, from a low of 52% of the drivers that should have been coached at one site to a high of 96% at another. The rate of overall risky driving behaviors decreased significantly in the intervention (lights plus coaching) group (RR=0.47, p<0.001), with no significant change seen in the control group (RR=0.93, p=0.44).

Conclusions: Preliminary results show that the OVRs intervention was associated with a decrease in risky driving behaviors that may reduce collisions, injuries and fatalities.

A5.3 **Title: Impact of a motor-vehicle crash prevention program in a large police department**

Authors: Hope Tiesman, Jeff Rojek, Geoff Alpert, Melody Gwilliam, Srinivas Konda, Jennifer Bell, Scott Hendricks

Objectives: Motor-vehicle crashes (MVCs) are the leading cause of on-duty injury death among law enforcement officers. In 2009, a large municipal police agency developed a three-pronged crash prevention program that included policy changes, new training requirements, and a marketing campaign. We evaluated the impact of this program on MVCs and motor-vehicular injuries.

Methods: Data were obtained from four agency databases: hours worked from human resource/payroll, MVCs from internal crash files, mileage data from fleet services, and injuries from workers' compensation claim data. Motor-vehicular injury rates were defined as the total number of workers' compensation claims for a MVC divided by the total productive hours and expressed per 100 full-time equivalents (FTEs). MVC rates were defined as the total number of MVCs divided by total miles driven and expressed per 100,000 miles. MVC rates and motor-vehicular injury rates were compared between the three years before program implementation (2007-2009) and three years after full implementation (2011-2013). The year of implementation was not included in the analysis (2010). Differences between the pre- and post-intervention rates were evaluated using Poisson regression.

Results: Preliminary analyses show that the agency's motor-vehicular injury rate significantly declined 41% from pre- to post-intervention (pre-intervention=3.5; post-intervention=2.1; RR = 0.59, 95% CI = 0.48 - 0.72). This was most pronounced in the patrol divisions where the motor-vehicular injury rate was cut in half (pre-intervention=4.0; post-intervention=1.9; RR=0.47, 95% CI=0.36 - 0.62). The agency's MVC rate also significantly declined 15% from 2.2 to 1.9 crashes per 100,000 miles driven (RR = 0.85, 95% CI = 0.79 - 0.91).

Conclusions: Preliminary analyses indicate that the crash prevention program was associated with a significant reduction in both motor-vehicular injury and MVC rates. Future analyses will measure changes in injury severity and characteristics of MVCs pre- and post-intervention. Additionally, the 2007-2013 MVC trends from two other large municipal law enforcement agencies will be used as comparison groups for the current study results.

A5.4

Title: ATV and UTV safety training for agricultural workers: A safety workshop piloted with Iowa farmers

Authors: Charles Jennissen, Karisa Harland, Andy Winborn, Gerene Denning

Objectives: Although some occupational all-terrain vehicle (ATV) and utility task vehicle (UTV) safety education resources are available, few operators receive any formal training. The study objective was to develop and evaluate a workshop that provides farmers education on the safe occupational use of ATVs/UTVs.

Methods: Training with evidence-based safety information for agricultural workers was developed, and is being piloted. Demographic information, safety behaviors, crash experiences, and safety knowledge (20 questions) is being collected prior to training. The reported likelihood of using the workshop information,

NOIRS

National Occupational Injury Research Symposium

2015



May 19-21, 2015
Camp Dawson Training Center
Kingwood, West Virginia

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

