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JA:2021-33. Logging Truck Crashes in the SW Agricultural Region: Examining Severity and Associated Factors

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ATVs/Quads. Over half of respondents (56%) have rolled an ATV or Quad, yet only 18% report that they regularly wear helmets. In addition, 78% report allowing extra riders on the vehicle.

Practical Application: In the past, traditional ATV/Quad safety education has focused primarily on the use of helmets, personal protective equipment, and not allowing extra riders. However, we have observed that young adults in our program continue to follow administrative safety controls at very low rates. Due to the increasing burden of injuries and economic costs from ATV-related traumas, our unique program sees tremendous value of enhanced focus on promoting awareness of safety engineering designs to lessen the severity of such events. Therefore, future plans involve the creation of an ATV Safety Motion Graphic and in-depth examination of young adults' awareness, beliefs, and cultural acceptability of several ATV safety design features.

KEYWORDS

ATV; quad; young farmers; engineering controls; safety design; helmets

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JA:2021-33. Logging Truck Crashes in the SW Agricultural Region: Examining Severity and Associated Factors

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ABSTRACT

Purpose: The rate for fatal injuries in the agriculture, forestry, and fishing (AFF) sector far exceeds the rate for all sectors combined in the United States, based on the National Census of Fatal Occupational Injury (CFOI). Data from CFOI also illustrate that transportation crashes are among the top causes of fatal occupational injuries in the United States. However, little is known about transportation crashes involving AFF vehicles, specifically logging trucks in the southwest (SW) region (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas). The purpose of the ongoing SW AgCrash project is to develop an integrated database of AFF crashes that occurred on roadways in the SW region. These data are being assessed to determine their usefulness for supporting injury surveillance and the identification of injury risk factors.

Methods: Crash records covering approximately the period of 2010 to 2018 were obtained from the department of transportation in each state. Logging truck vehicles were identified based on coded data fields pertaining to vehicle and cargo body styles. Logging truck-related crashes were characterized over time using descriptive statistics and geospatial plots. Multiple and multinomial logistic regression is being used to identify factors associated with more versus less severe crashes in Texas.

Results/Findings: Louisiana, followed by Texas, and Arkansas recorded the largest numbers of logging truck-related crashes overall, which corresponds to their greater logging activity. Crash rates per total vehicle miles travelled were highest in Arkansas and Louisiana. Based on preliminary analyses, factors associated with more severe logging truck related crashes in Texas included overturned vehicle, failure to yield right of way, lack of restraint, and speeding.

Practical Application: Although crash records have limitations, they can be a valuable source of data for monitoring the frequency of crashes involving logging trucks, as well as for identifying potential risk factors and countermeasures. Products constructed through the SW AgCrash project support targeted outreach and education for reducing crash risk.

KEYWORDS
Logging; forestry; crash; traffic; agriculture; injury

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JA:2021-34. Chronic Farm Stress and Its Connection to Health and Safety

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ABSTRACT

Purpose: Impacts of long term, chronic stress cause concern among farm operators, workers, and their family members. The team involved with this work has built partnerships and program collaborations that connect the issue of chronic farm stress with high rates of workplace injury and occupational health problems common in the agricultural industry. Acute and chronic stress contribute often to distraction while performing work activity and feelings of being overwhelmed, and they complicate a farm operator's or employee's ability to make optimal operational and financial decisions. Our farm stress educational and technical support programs have focused on the biology and physiology of chronic stress, stress management practices and behaviors, communication, and taking control of one's financial future.

Methods: A team of approximately 30 educators, researchers, and partner personnel created a comprehensive web-based resource center focused on interventions connected to chronic farm stress, suicide prevention, communication, and financial tools that help guide farmers and ranchers through difficult financial conditions and decisions. These efforts have also focused on teaching farmers, ranchers, agricultural service providers, and other allied community professionals about linkages between chronic stress, high injury rates (resulting from fatigue, distraction, and error rates), and disease (cardiovascular, type 2 diabetes, infection, etc.).

Findings: The work is ongoing and has been led by a cross-disciplinary team with member expertise including agricultural health and safety, financial management, farm family relationships, program evaluation, and human health and well-being. An intervention evaluation "question bank" has been created that contains specific program evaluation questions developed for 16 different program curricula/series including those developed by the team or by other partner organizations.

Translation to practical application by agricultural industry: It is our goal that this work on prevention and intervention on farm and ranch stress will impact on agricultural safety and health for farmers, farm workers, and family members. The program evaluation information will prove useful as participants and readers consider similar efforts within their respective organizations, states, companies, etc., and as they develop appropriate anticipated outcomes and impacts and associated evaluation tools.

KEYWORDS
Chronic stress; injury; health impacts; distraction; error

Conflict of Interest Disclosure

We have no personal or financial conflicts of interest to disclose.

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