Work-related injury and illness among older truck drivers in Australia: A population based, retrospective cohort study

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Abstract

This study explores the landscape of work-related injury and disease in the Australian transportation industry. This population based, retrospective cohort study was based on claim data collected from the National Dataset for Compensation-based Statistics (NDS) in Australia. Three key findings were identified: the relative risk of workers' compensation claims increased with age; older truck drivers were not found to have significantly higher rates of musculoskeletal (MSK) or fracture injuries, and; older truck drivers had a significantly larger proportion of neurological injury compared to younger age groups. The findings of this research support the need for context sensitive, multi-domain, interventions targeted at older drivers.

Background

The professional truck driver population is aging in Australia (ATA, 2017). It has been projected the rate of truck driver recruitment in the Australian road freight industry will need to increase by 150% to account for the increase in demand for road freight services and to replace retiring and / or ageing truck drivers (Department of Transport, Victoria, 2010). These figures suggest that policy and practice should focus on strategies to retain older truck drivers in the industry for as long as (safely) possible.

This study explores the landscape of work-related injury and disease in the Australian transportation industry. The research categorises the data by distribution of injury types, mechanisms of injury and body part sustained following the injury and calculated the relative risk for older truck drivers (i.e., 60+ years) compared to their younger counterparts. The objective of this study was to identify the unique challenges facing older truck drivers, so to inform recommendations to improve the health and wellbeing of this valued workforce.

Method

This population based, retrospective cohort study was based on claim data collected from the NDS (Safe Work Australia, 2004) across four time periods (2004–2006, 2007–2009, 2010–2012, and 2013–2015). The NDS is compiled from workers' compensation claims data from all nine of the state, territory and Commonwealth workers' compensation systems. The database contains information on the injured worker, their employer, job characteristics, injury or disease details, and claims outcomes.

Negative binomial regression was used to determine relative risks (RRs) and 95% confidence intervals (95% CI) for the comparison of claim rates across age groups. The 35-44 years age group was set as reference group. Regression models adjusted for time period and jurisdiction to investigate the differences in the RR of a particular type of injury across age groups.

Results and Conclusions

The relative risk of workers' compensation claims increased with age. The highest rates were observed in the older truck driver group (79.53 per 1,000 workers per year), with a 26% increased risk compared to the 35-44 years old group (adjusted RR: 1.26, 95% CI: 1.10 to 1.44).

Older truck drivers were not found to have significantly higher rates of MSK or fracture injuries. The overall rate was 41.79 per 1,000 workers. The rate was 18% lower for the oldest and the youngest age groups compared to the 35-44 age group (adjusted RR: 0.82, 95% CI: 0.72-0.95; adjusted RR: 0.68, 95% CI: 0.60-0.77). Furthermore, older truck drivers had a slightly higher rate of fracture injury than drivers in the 35-44 year old age group (adjusted RR: 1.03, 95% CI: 0.89-1.20), but this was not statistically significant. A possible explanation of these findings is self-regulation, whereby older drivers compensate for deficiencies in certain areas by adapting their behaviour to minimise their crash risk (Koppel & Charlton, 2013).

Older truck drivers had a significantly larger proportion of neurological injury (i.e., sound and pressure) compared to younger age groups and that the percentage of these claims increased with age. In fact, the rate reached 19.11 among older truck drivers, which was nearly 15 times higher compared to the 35-44 year old age group (adjusted RR: 15.2, 95% CI: 12.31-18.80). Although it is well known that truck drivers are susceptible to traffic noise (e.g., engine and road noise) for long durations, the magnitude of this problem was surprising.

Several recommendations emerged from this research including (i) the need for self-screening tools within regular workplace health and safety programs to assist in identifying and managing any decline in functional and/or cognitive performance over time (ii) selecting vehicles with superior noise controlling measures (iii) journey planning practices and (iv) the review and revision of noise related risk controls within health and safety laws and regulations.

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