



Workplace road safety risk management: An investigation into Australian practices



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ABSTRACT

In Australia, more than 30% of the traffic volume can be attributed to work-related vehicles. Although work-related driver safety has been given increasing attention in the scientific literature, it is uncertain how well this knowledge has been translated into practice in industry. It is also unclear how current practice in industry can inform scientific knowledge. The aim of the research was to use a benchmarking tool developed by the National Road Safety Partnership Program to assess industry maturity in relation to risk management practices. A total of 83 managers from a range of small, medium and large organisations were recruited through the Victorian Work Authority. Semi-structured interviews aimed at eliciting information on current organisational practices, as well as policy and procedures around work-related driving were conducted and the data mapped onto the benchmarking tool. Overall, the results demonstrated varying levels of maturity of risk management practices across organisations, highlighting the need to build accountability within organisations, improve communication practices, improve journey management, reduce vehicle-related risk, improve driver competency through an effective workplace road safety management program and review organisational incident and infringement management. The findings of the study have important implications for industry and highlight the need to review current risk management practices.

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1. Introduction

According to the World Health Organisation (WHO) 1.3 million people die annually as a result of road traffic accidents, which equates to more than 3000 deaths each day, globally. The economic consequences of motor vehicle crashes have been estimated to fall between 1% and 3% of the respective GNP of the world countries, reaching a total of over \$500 billion annually (WHO, 2013).

In Australia, more than 30% of the traffic volume can be attributed to work-related vehicles. There is also evidence to suggest an over representation of injury when comparing work-related drivers with non-work-related drivers (Newnam et al., 2002). In

terms of fatalities, work-related road traffic crashes are the leading cause of occupational death, with this figure estimated to be 33% of all work-related fatalities (Driscoll et al., 2005). In the Australian state of New South Wales, there are up to 5.3 fatalities per 100,000 registered fleet vehicles (generally referred to as light vehicles <4.5 t; Haworth et al., 2000; Stuckey et al., 2010). This trend is not limited to Australian roads with work-related road traffic deaths estimated to account for 22% of work fatalities in the USA and 16% in New Zealand (Driscoll et al., 2005). Considering the social and financial implications of work-related road traffic crashes, there is an urgency to investigate the maturity of risk management in workplace road safety. Although work-related driver safety has been given some attention in the scientific literature, it is uncertain how well this knowledge has been translated to industry. This is due to two reasons. First, workplace road safety has not been well integrated within Occupational Health and Safety (OHS) system

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(Newnam et al., 2002, 2012). The work vehicle is now considered to be part of the workplace; however, there has been significant lag in the acknowledgement of this, particularly in light vehicle fleets (Newnam and Watson, 2011). Second, there is a lack of understanding regarding what constitutes ‘best practice’ in risk management. With the exception of a few case studies (e.g., Wallington et al., 2014) that describe effective fleet safety programs, there is limited research to guide practitioners in the establishment of best practice. The lack of evidence suggests that a deductive approach to risk management is unlikely to be effective in reducing workplace road safety death and injury; rather, an inductive process, whereby, industry practice guides scientific knowledge needs to be considered. To this end, this study focuses on exploring risk management through the lens of current benchmarking practices.

1.1. Benchmarking

“Benchmarking is a business excellence tool for finding, adapting and implementing outstanding practices”. (Mooren, 2015, pp. 5). This process has received attention within Australia (Mooren, 2015) and internationally (European Union, 2010; Adminaite et al., 2015; Aeron-Thomas et al., 2002). Despite this, limited consensus of the practices that constitute effectiveness of a best practice criterion. An evidence-based approach provides greater predictive and explanatory utility as it aids in understanding the underlying mechanisms contributing to an organisation’s success or failure in benchmarking (Watson, 2004). Building an evidence-based framework for benchmarking will not only result in increased implementation rates of effective safety practices in industry (Chen et al., 2016; Mooren et al., 2012), it also has the potential to improve the quality of decision making and therefore consensus, among researchers and practitioners.

Consistent with this thinking, there has been a recent move towards developing an evidence-based benchmarking tool in Australia by the National Road Safety Partnership Program (NRSPP). The NRSPP is an initiative that constitutes a network of organisations and academics working together to develop a positive road safety culture in Australia (Carslake and Van Dam, 2014). One of the core aims of this initiative was the development of a national fleet benchmarking tool. The first stage of the tool has been completed, which involved the development of an evidence-based framework to better illustrate best practice.

The NRSPP program tool was designed to allow organisations to measure their safety performance against a series of lead and

lag indicators, and was developed and informed by the recommendations of the ‘World Report on road traffic injury prevention and commission for global road safety’ as set out by the World Health Organisation (Arboleda et al., 2003). The WHO report introduced ‘five pillars’ of road safety, with each pillar representing a set of activities that are recommended to be implemented at a national level. The approach aligns with existing road safety frameworks such as Safe, Vision Zero and Sustainable Safety, and maps out five pillars to guide national road safety plans and activities: building road safety management capacity; improving the safety of road infrastructure and broader transport networks; further developing the safety of vehicles; improving the behaviour of road users; and improving post-crash care (see Fig. 1). The current definitions set out by the WHO are detailed in Table 1. The results are categorised under each of the five pillars.

2. Research aim

The NRSPP framework provides an ideal benchmarking tool to examine the alignment between current practice and ‘best practice’ in workplace road safety risk management. The aim of the study was to map the current landscape of risk management in workplace road safety against the NRSPP benchmarking tool thereby, guiding practitioners in the development and implementation of risk management practices along with identifying opportunities for the improving current workplace road safety management.

3. Methods

3.1. Participants

A total of 83 organisations were recruited through the Victorian Work Authority (VWA), with recruitment also extending to organisations in metropolitan Sydney, New South Wales. The organisations ranged in size, from microbusiness (N = 1, 1%), small (N = 2, 2.5%), medium (N = 19, 23%) large (N = 8, 10%) to enterprise (N = 53, 64%). Table 2 presents a summary of industry type, as classified by the Australian and New Zealand Standard Industry Classification (ANZSIC).

A representative within the Occupational Health and Safety (OHS) and/or fleet management division of each organisation was approached to participate in a face-to-face interview. Job roles ranged from OHS managers, to fleet managers and quality managers (see Table 3). The majority of participants were male 61%

Table 1
World Health Organisation Definitions of the Five Pillars of Road Safety.

Pillar	Description	Definition
1	Road safety management	Adhere to and/or fully implement UN legal instruments and encourage the creation of regional road safety instruments. Encourage the creation of multi-sectoral partnerships and designation of lead agencies with the capacity to develop and lead the delivery of national road safety strategies, plans and targets, underpinned by the data collection and evidential research to assess countermeasure design and monitor implementation and effectiveness.
2	Safer roads and mobility	Raise the inherent safety and protective quality of road networks for the benefit of all road users, especially the most vulnerable (e.g. pedestrians, bicyclists and motorcyclists). This will be achieved through the implementation of various road infrastructure agreements under the UN framework, road infrastructure assessment and improved safety-conscious planning, design, construction and operation of roads.
3	Safer vehicles	Encourage universal deployment of improved vehicle safety technologies for both passive and active safety through a combination of harmonization of relevant global standards, consumer information schemes and incentives to accelerate the uptake of new technologies.
4	Safer road users	Develop comprehensive programs to improve road user behaviour. Sustained or increased enforcement of laws and standards, combined with public awareness/education to increase seat-belt and helmet wearing rates, and to reduce drink-driving, speed and other risk factors.
5	Post-crash response	Increase responsiveness to post-crash emergencies and improve the ability of health and other systems to provide appropriate emergency treatment and longer term rehabilitation for crash victims.

Source: (WHO, 2013).

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