

Driving for work: A series of organisational audit results

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Abstract

Previous research has indicated that road crashes are the most common form of work related fatalities (Haworth et al., 2000). Historically, industry has often taken a "silver bullet" approach developing and implementing a single countermeasure to address all their work related road safety issues, despite legislative requirements to discharge obligations through minimising risk and enhancing safety. This paper describes the results and implications from a series of work related road safety audits that were undertaken across five organisations to determine deficiencies in each organisation's safe driving management and practice. Researchers conducted a series of structured interviews, reviewed documentation relating to work related driving, and analysed vehicle related crash and incident records to determine each organisations current situation in the management of work related road safety and driver behaviour. A number of consistent themes and issues across each organisation were identified relating to managing driver behaviour, organisational policies, incident recording and reporting, communication and education, and formalisation of key work related road safety strategies. Although organisations are required to undertake risk reduction strategies for all work related driving, the results of the research suggest that many organisations fail to systematically manage driver behaviour and mitigate work related road safety risk. Future improvements in work related road safety will require organisations to firstly acknowledge the high risk associated with drivers driving for work and secondly adopt comprehensive risk mitigation strategies in a similar manner to managing other workplace hazards.

Key Words

work-related road safety, organisational fleet audit, work-related road safety policy, crash reporting, intervention strategies.

Introduction

Work related road safety is an issue often ignored by industry with many organisations risk management practices primarily focusing on workplace processes that the organisation considers central to their core business, while not addressing driving for work processes with similar levels of consideration (Davey et al., 2008a; Wishart et al., 2004; Wishart & Davey, 2004). The Australasian Fleet Managers Association (2008) state that in Australia approximately 75% of all locally produced passenger vehicles are purchased as fleet vehicles and more than half of all new vehicle registrations annually consist of fleet vehicles. This would indicate that a high proportion of vehicles operating within the Australian road environment are utilised for work purposes. Furthermore, under many jurisdictions, a vehicle when used for the purpose of work is considered a workplace and thus organisations and other stakeholders are obligated by legislation to ensure a safe system of work in the use of the vehicle (Rowland et al., 2006). Previous research has also indicated that road crashes are the most common form of work related fatalities (Haworth et al., 2000; National Institute for Occupational Health and Safety [NIOSH], 2004; Safe Work Australia, 2009) Work related

road crash injuries are also approximately twice as likely to result in death or permanent disability as other workplace injuries (Wheatley, 1997) and the average time lost due to injury is greater than any other workplace claim (Stewart-Bogle, 1999). In relation to workers compensation, fatality claims vehicle accidents are the most likely mechanism of injury, approximately three times higher than the next most common mechanism of injury attributed to injury from chemicals or substance (Australian Safety and Compensation Council, 2006).

Despite the legal obligations and trauma associated with motor vehicles used for work purposes, many organisations often lack the necessary risk management frameworks and processes central to minimising work related road safety risk (Rowland et al., 2005; Rowland et al., 2006; Wishart & Davey, 2004). Furthermore many organisations also fail to actively promote work related road safety. For instance, in many organisations there exists posters and informative material regarding manual handling, office ergonomics, skin cancer and general health issues along with established training programs promoting and educating staff in safe work procedures. In contrast, these same organisations offer very little in the way of similar mechanisms directed toward promoting and improving vehicle safety.

Organisations in attempting to address issues associated with work related road safety often adopt an overarching reactive one size fits all approach, often primarily focussing on the driver, without addressing deficiencies in the supporting organisational systems and processes required to support safe vehicle use (Davey et al., 2008). In order to improve their work related road safety organisations need to implement a multidimensional organisational approach of risk management incorporating all processes associated with work related vehicle use (Davey et al., 2008; Rowland et al., 2005; Rowland et al., 2006; Wishart & Davey, 2004). One of the initial key steps in proactive risk management and thus minimising risk associated with organisational vehicle use is to investigate and assess the current situation associated with the organisations safety management of their vehicle fleet and use (Rowland et al., 2006; Wishart & Davey, 2004). This paper reports on a current series of work related road safety audits undertaken across five organisations to determine deficiencies in each organisation's safe driving management and practice. Due to the confidential nature of this research and to ensure the anonymity of each of the organisations involved, specific results for each organisation are unable to be provided. Therefore this paper provides an overview and synthesis of results obtained from the five organisations along with discussing the similarities and overall organisational deficiencies in work related road safety risk management across the organisations that emerged from the audits.

Method

Within the occupational road safety arena, researchers discovered a lack of risk management tools to assess the "current state of play" in relation to organisational work-related road safety (Davey et al., 2008; Rowland et al., 2005; Rowland et al., 2006; Wishart & Davey, 2004). Many current workplace health and safety risk management and audit tools were found to lack the necessary content or detail to thoroughly examine work-related road within organisations. Therefore, based on previous research (Davey et al., 2008; Rowland et al., 2006; Rowland et al., 2008; Wishart & Davey, 2004), the current researchers developed the "Organisational Work-Related Road Safety Situational Analysis" which is an audit tool developed specifically to assess work-related driving processes within organisations. The aim of the audit tool was to:

- Provide a systematic process to conduct a situational analysis of an organisation's work-related road safety practice and procedures;
- Obtain situational analysis information for an organisational report;
- Identify gaps between legislative requirements and current practice; and
- Identify any training needs or intervention strategy implementation.

Primarily, this research focussed on determining the effectiveness of current work-related road safety programs within each of the five similar organisations. An audit of each organisation's work-related road safety management and operational systems was conducted and involved a multiple level process. For example, a triangulation approach was adopted with the data from each stage of data collection being drawn from different sources. This approach was first applied in the academic setting in 1959 to enhance research (Campbell & Fiske, 1959). The term triangulation is borrowed from navigational circles, where it is a strategy for taking multiple reference points to locate an unknown position. In the academic setting triangulation refers to the use of a combination of research methods to gain a holistic understanding and to depict more accurately the phenomenon being investigated. Specifically, the research used dissimilar but complementary methods of data collection to achieve convergent validity (see Figure 1). This combination of methods was adopted to counterbalance the weaknesses of one method with the strengths of other methods. The three stages of research included:

- 1) Structured interviews and discussions with participant samples from each of the five organisations and incorporating three levels of staff; including management, supervisory staff and operational field staff.
- 2) A review of each organisation's work-related road safety management systems including policy and procedures, identification of hazard and risk exposures, effectiveness of training and induction programs, as well as, any work-related road safety intervention strategies, initiatives or countermeasures; and
- 3) Analysis of crash/incident data for each organisation.

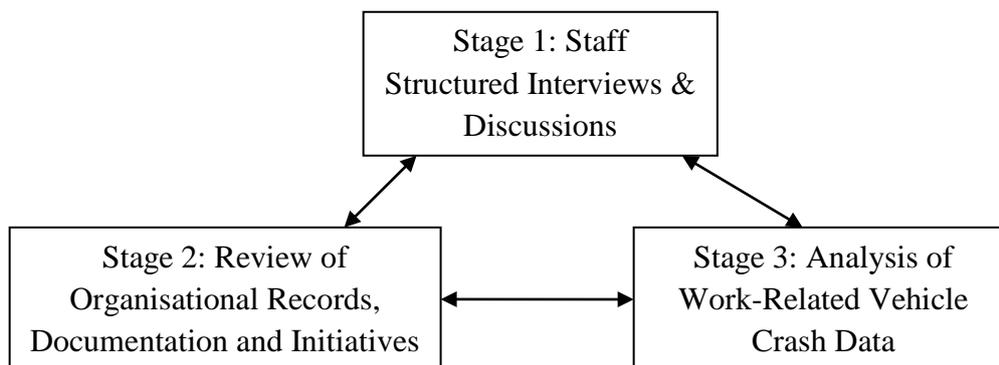


Figure 1: Diagrammatic representation of the triangulation pathways

Procedure

1. Structured Interviews and Discussions

In regards to the first phase of the audit, the 'structured interviews and discussion' data collection method was selected based on prior calls for qualitative investigations into Occupational Health and Safety (OHS) issues and initiatives (Hignett & Wilson, 2004; Kompier et al., 2000), as well as, the effectiveness of this method in exploring the complex nature of workers; their beliefs, attitudes and behaviours; their employment organisation and their interaction with their work environment (Ovretweit, 1998). Structured staff interviews and discussion were conducted with a cross section of staff (including managers, supervisory and field staff) from each of the five organisations who volunteered to be involved in the research. All five organisations could be considered as medium size organisations with approximately 1500 employees and representing both government and commercial industries. Participants were strategically approached from within all five organisations, including those in positions engaged in the management or operational areas involving vehicle operations and safety (e.g., executive managers, operational line managers, fleet managers, health and safety, supervisory staff), along with a sample of field-type drivers. Each of the three levels of staff were interviewed separately in small groups not exceeding 6-8 participants and the interview process was conducted across a one to two hour time period.

Participants were asked various pre-defined audit questions relating to work-related road safety within their own organisation and were encouraged to focus on the conditions, effectiveness and consequences arising from discussion relating to the various work-related road safety themes. For example, "*Do you have a work-related road safety policy?*" "*What areas of work-related road safety are covered within the policy?*", and "*How is this policy communicated to staff?*" The technique is drawn from grounded theory which does not rely on frequency counts of specific words or pre-defined words, but rather facilitates the examination of major themes arising from the experiential data such as participants' responses (Corbin & Strauss, 1990; Yin, 1993). In essence, the research incorporates a structured and open-ended inquiry method aimed at generating linkages and identifying patterns among key variables and outcomes such as the identification of characteristics that are associated with work-related road safety within each organisation. The "open" coding technique (Strauss, 1987) entailed repeatedly reading and categorising participants' responses, focusing on similar experiences and events, which facilitated the development of themes and a coding manual that was employed to analyse the text. The reliability of the coded schemes was addressed by having a second researcher independently identify themes and then code responses according to themes obtained from participant responses. The researchers collaborated on each of their results and subsequently developed themes from the sample. Reliability of coding between researchers on the sample indicated a 92% level of accuracy between coding responses according to the themes identified. This level of accuracy was achieved by computing the total number of agreements of coded responses between the two researchers divided by the total number of agreements plus disagreements of both researchers. Minor corrections were then made to the coding scheme and/or the coding of participants. The researchers subsequently re-read and re-coded the transcripts in order to make the necessary changes that resulted from the coding exercise with the second researcher.

2. Review of Organisational Records, Documentation and Initiatives

Information obtained from the staff structured interviews and discussions provided leads for the comprehensive critical review of organisational records, documentation and initiatives. Relevant documentation and records identified within the organisational participant interviews were requested for review by the research staff. Organisational documentation, such as work-related road safety policy and procedures and risk management strategies, were reviewed to determine if the organisation has a plan for addressing work-related road safety risks. Furthermore, research identified and assessed any work-related road safety intervention strategies, initiatives or countermeasures that have been implemented to improve work-related road safety processes and reduce the risk of incidents/crashes.

3. Analysis of Work-Related Vehicle Crash Data

Each organisation was requested to provide a sample of their work-related vehicle crash data. The work-related road crash/incident data was analysed to ascertain the quality of crash data recorded, the frequency of major types of crashes/incidents within each of the organisations and, if possible, identify any contributing factors of the incidents/crashes. Analysis of the crash data was largely dependent on the comprehensiveness of the crash data supplied. Generally, data was supplied in Microsoft Excel format and therefore analysed utilising frequency and descriptive analysis.

Results and Discussion

The various components of data obtained via the triangulation approach were analysed by the researchers to identify consistent themes and deficiencies in organisational systems across all organisations that impact on their work related safety. This process identified three areas that were consistently deficient across all organisations and the following section will focus on these core areas identified from the triangulation process. Specifically, these deficiencies were central to themes relating to:

1. A lack of comprehensive policy relating specifically to work related driving;
2. A lack of consistent and sufficient detail in relation to crash data reporting and recording, and
3. A lack of communication and promotion strategies associated with promoting safe work related driving.

Each of these themes along with the consistencies across the five organisations will be explained individually below.

1. A Lack of comprehensive policy specifically relating to work related driving

Analysis of the interview data revealed two major themes, lack of a comprehensive work-related road safety policy and lack of direction regarding where to locate existing policy documentation. Although each organisation did provide evidence of policy documentation relating to vehicles, none of the organisations involved possessed a standalone policy that specifically related to work related driving. For example, a common response included: *I am*

not aware of any driving safety policy within our organisation ... do we have one? (male field operational driver). Any reference to work related driving or vehicle use within policy documentation in each of the participating organisations was contained in numerous documents that related to other core business activities and protocols and mainly consisted of policy relating to the management of the asset. For instance employee code of conduct documentation often contained a paragraph that conveyed an employee's obligation in regards to the use of fuel cards and contained no further mention of any other activities or company guidelines regarding other vehicle procedures relating to safe vehicle use. An operational manager stated: *we do have information concerning the running of our vehicle fleet within our code of conduct document but we don't have a standalone policy.*

Furthermore, in each of the organisations, any reference to vehicle use (particularly safe vehicle use) was often contained within multiple documents in contrast to being confined to one safe vehicle use document resulting in increased ambiguity. Consequently, any employee driving a vehicle for work and requiring information regarding company procedure or policy on the use of such a vehicle was expected to seek out this information from multiple documents. For example, a supervisor from a state government organisation suggested: *we cover off on fleet safety within our general workplace health and safety policy and procedures, such as, fatigue, code of conduct, health and safety accountabilities and responsibilities, safety inductions, etc.* In addition, there appeared to be an expectation that all employees would be able to find the relevant information without any clear supporting guidelines. Information obtained from various employees during the interview process provided further evidence attesting to the difficulties within indications that employees were unable to find information and in some cases were even unaware of the existence of particular policy documentation. For example, an operational driver stated: *I do know that our policy and procedures are on the intranet ... however, I could not tell you what they are or where exactly they are because I don't have the time to search for them let alone read them... also my computer skills aren't great.*

2. A lack of consistent and sufficient detail in relation to crash data reporting and recording

Each of the participating organisations was able to provide a sample of recent crash data although it should be noted that in each organisation this consisted of only insurance claims data. The reliance on insurance claims data provides in itself a consistent difficulty within every participating organisation. That is, insurance claims data relates to the management of the asset from the insurers perspective and of primary interest in the details of the vehicle insured and the type and cost of damage ascertained. Therefore the data set from the insurer's perspective provides little information that relates to contributing factors to the crash sustained other than to determine "fault" for insurance claim purposes relating to insurance excess (see Table 1 for typical crash data fields recorded).

Table 1: Type of crash data fields recorded

Vehicle	Work Group ID	Vehicle Registration	Driver	Date	Crash Type
Ford	1234	XYZ 123	J Smith	1.10.10	Lost Control
Commodore	1235	ABC 456	John Smith	1.10.10	Rear End
Hi Ace	1234	DEF 123	Smith J	July 10	Hit Object

Furthermore, organisations' crash reporting mechanisms to their insurance provider incorporates an online process for expediency of processing claims. This type of claim process enables the employee or driver involved in the crash to provide the details of the crash answering a series of questions via an online insurance claim form. From an organisational perspective, the fast processing of claims and subsequent repairs is viewed as of high importance in order to get the work vehicle back on the road and operational as soon as possible. For example, an executive manager stated: *It is imperative that any damaged vehicle is repaired quickly otherwise this would impact on productivity of our operations.*

A consistent theme across all organisations in regard to the reporting and recording of crash data in this manner relates to the amount of missing data contained in the datasets. In other words, in every crash dataset the type of information provided as answers to particular questions in the insurance claim form is firstly not undertaken in a consistent format or often is incomplete. In many cases complete fields of information contained no answers or information at all. For example, specific details as to where the crash occurred may have been missing or alternatively in some cases the driver details were not provided. For instance, a supervisor stated: *Sometimes the data provided is incomplete but to chase up any additional information takes time that I don't have.* Furthermore, if information was provided regarding the type of crash it was often summarised without providing specific information that may have contributed to the crash. For instance crashes involving errors or aberrant driver behaviour were recorded as vehicle loss of control incidents which does little to inform rehabilitation or education programs that aim to discourage unsafe vehicle use. For example, a supervisor stated: *It is not my job to determine crash contributing factors... I would think that is a safety officer's job ... my main aim is to get the vehicle on the road as soon as possible.*

Importantly from an organisational safety management perspective, given each of the organisations primarily make decisions relating to the performance of work related road safety interventions by analysing trends obtained from crash data analysis, one wonders as to the accuracy of these "informed" decisions. In other words, when high proportions of crashes contain missing data any decision made regarding viewing trends will only be a minor snapshot of the true picture of what could be happening. To highlight the potential difficulties and errors associated with this form of decisions making, this could be likened to asking the financial analyst to provide an indication as to the organisation's current profit or loss statement by only including minor proportions of the information contained in financial

transactions. Therefore, current processes relating to crash reporting and recording lack clarity and inhibit understanding relating to the aetiology of crashes.

Finally in relation to crash reporting and recording, it is clear from the lack of information and detail obtained that actually relate to the incident as opposed to the asset, that organisations are failing to adequately address their work related road safety incidents with similar levels of consideration and proactive risk management processes as other work related incidents. For instance in any organisation if a workplace incident was to occur involving a piece of machinery or workplace process other than a motor vehicle primarily relying on analysing trends in crashes would be unacceptable. For example, a workplace health and safety officer stated: *all general safety incidents are reported and investigated, however, we don't investigate vehicle accidents unless they involve an injury to one of our staff.* Furthermore, recording a series of workplace incidents and not reporting comprehensive and detailed information relating to the incident would be considered completely unacceptable.

3. *A lack of communication and promotion strategies associated with promoting safe work related driving*

The structured interviews and the review of documentation revealed a lack of awareness of communication and promotional strategies associated with safe driving for work across all organisations. The major themes identified from the interviews included lack of work-related road safety intervention strategies, communication of work-related road safety and promotion of vehicle safety initiatives. For instance employees interviewed commented that work related road safety is rarely discussed at team meetings and tool box talks in contrast to other work related hazards. For example, an operational supervisor stated: *We have team meetings approximately every week but I don't believe we ever discussed driving as a safety issue.* In the review of documentation there was very little evidence of any printed material promoting safe vehicle use for work or highlighting particular issues relating to work driving such as fatigue, remote locations, or speeding. In contrast, employees were aware of posters and promotional material on notice boards relating to hazards such as skin cancer, emergency evacuation procedures and other hazards associated with what could be considered core work processes within these organisations. For example, a driver suggested: *I have seen many posters, etc relating to manual handling, ladder safety, working in the sun safety.. but none in relation to vehicle safety or safe driving.*

Employees also commented about workplace hazards and the notification of hazard alerts relating to particular hazards within the workplace, especially following an incident within the organisation. Employees when questioned were not aware of similar material in relation to vehicle crashes and the review of documentation process did not reveal the existence of any material of this nature within any of the five organisations. All workplace health and safety officers from each of the organisations stated that general safety is thoroughly discussed at all levels, excluding work-related road safety. For instance, one safety officer stated: *we target any safety issue or incident within the organisation with a high degree of urgency and comprehensively... but I must admit we do not target work-related road safety*

with the same degree of attention. Similarly, newsletters and communication strategies utilising the organisations' intranet facilities contained information regarding general and specific workplace hazard and safe work promotional material, although again none of these mechanisms contained information specifically relating to vehicle safety. The results obtained regarding the lack of focus on vehicle safety for work in promotional and communication material would provide an indication that within each organisation other core work place hazards and processes and the subsequent risks associated with these are identified and viewed as of higher potential risk. However, as research highlighted earlier can demonstrate this assumption in many organisations can be misleading.

Conclusions

The results obtained from this series of work related road safety audits across the five organisations revealed three major shortcomings consistent across each of the organisations relating to the management of vehicle safety for work. Interestingly, all of these shortcomings do not necessarily require a great deal of external expertise to ensure improvements in the organisational management of work related road safety. Although each of the organisations did have some documentation relating to policy and guidelines for vehicle use, it is apparent that the documentation in existence requires amalgamation into one central document of reference. In regards to crash reporting and recording mechanisms, the overall major concern in this area is a lack of attention to the details in reporting and recording crashes. As such organisations will need to vastly improve this type of data collection procedures especially if they intend utilising this information to better inform or even evaluate strategies to improve work-related road safety. Furthermore, an incident in a vehicle should be considered as a serious event and equal consideration be given to such an incident especially in regards to potential underlying contributing factors such that future events of a similar nature can be addressed and likely prevented. Finally, the results relating to communication and promotion strategies demonstrate that across all organisations there is a lack of prioritising or highlighting dangers and risks associated with driving to the same level of consideration as other workplace hazards. In these cases organisations if they are to decrease the frequency of vehicle related events will need to establish a higher level of importance to promoting safer work related driving.

Study Limitations

When interpreting the results of this study a number of limitations should be taken into account. The number of organisations and participants involved within the research was relatively low, but consistent with previous research of this scope and scale. Questions also remain about the representativeness of the sample utilised in the research. However, the organisations and participants in this research include both government and private industry drivers and are similar to a greater proportion of the Australian work-related driver population. For example, the majority of the present study's participants are primarily field type employees who drive in similar road and environmental contexts (city, urban, rural and

off road). Therefore, although this sample may not be a true representation of all professional driving populations in Australia and especially overseas, it does represent a substantial cohort.

Further Research

The findings of this research project suggest that it is an area of considerable risk. Therefore, further research should be conducted utilising larger numbers of participants within the interviews and discussion groups and utilise an increased cross section of industry organisations to improve generalise-ability and reliability of results. Due to the high frequency of work-related vehicle incidents within industry organisations across Australia and with many resulting in a fatality or serious injury, further research regarding work-related road safety is required.

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