Overcoming the barriers to fleet safety in Australia

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Abstract

Improved fleet safety can enhance business effectiveness, road safety and occupational health and safety. This paper reviews several recent UK and Australian-based projects to identify a range of barriers to successful fleet safety. Ten such barriers are identified as: purpose of journey data, operational procedures and structures, senior management commitment, integration between fleet safety and OH&S, 'claims-led' procedures, crash investigations, standard definitions and conventions, reactive focus on injury prevention, inflexible attitudes to change and poor management. The main area for improvement in the research, the need for more rigorous evaluation incorporating a control group, is also identified.

Keywords: Fleet safety, work related road safety, change management

Introduction

Fleet safety is an emerging issue in Australia and an area of opportunity for road and occupational health and safety (OH&S), although the gains may not necessarily be easy. Researchers including Howarth (1) and Murray (2), state (3) and local governments (4) and commercial managers (5) are beginning to understand the extent of the problem and to recognise a whole range of moral, legal, financial and business reasons to focus on fleet safety (summarised in Table 1).

Table 1 - Reasons to focus on fleet safety in Australia

Roads are the major safety problem for Australian transport. ATSB data for 1998 indicated that there were 1839 road deaths, 42 rail, 64 air and 52 at sea) and most Australians are very road dependent for work.
On average fleet drivers travel three times the distance of other drivers.
Business travel makes up 33% of Australian travel (over 50% if commuting is included).
Fleet vehicles make up 1/3 of Australian vehicles and 50-60% of all new vehicles sold.
Road crashes increased from 39-49% of work fatalities between 1982-84 to 1989-92. Of the 2389 at-work deaths between 1988-92, 26% involved commuting, 23% driving for work and 9% were on-site transport related.
Queensland Workers Compensation (QWC) figures for 1997-2000 show that vehicle accident payments from 10,195 claims (5% of total) cost over $52.5 million (10%) and resulted in 233,013 work days absent (9%).
Queensland Motor Accident Insurance Commission data suggests that bus and taxi fleets have a disproportionately high number of compulsory third party (CTP) insurance claims.
10-50% of fleet vehicles crash annually costing approximately $2000 each. This equates to 500,000 damage only crashes at a cost of $1billion. If the 'return on sales' is 10% $10 billion of revenue is required to pay for crashes.
Indirect costs of fleet crashes are estimated to be 4-20 times the average damage repair bill.
Workplace injury costs are split between employees (40%), employers (30%) and the community (30%).
Employers control and manage their fleets - so actions can be taken and monitored.
OH&S regulations, duty of care and chain of responsibility requirements are increasing in the transport sector.
Problems with the popular fleet driver training countermeasure – including not being needs based, being sales driven, risk compensation, regression to the mean and limited evaluation.
Australian statistics are often dated, exclude 'purpose of journey' and are typically fragmented between the States, CTP, Workers Compensation, OH&S, hospitals, damage only insurance and vehicle maintenance data.
Sources: (1); (4); various papers in (6); (7); (8) and (9). Direct data from ATSB, MAIC and QWC.

This paper's objective is to understand and improve the management of fleet safety with positive benefits for road safety. It is based on a review of two recent research projects from the UK called DAMP (10), www.hud.ac.uk/sas/transold/damprel.htm), and CoVIR (11), three management development workshops undertaken in Australia and a review of an Australian University's fleet. Over 120 managers from a range of industry and government organisations were involved in these projects.

Company vehicle accident reporting and recording (CoVIR) data barriers

The company vehicle incident reporting and recording project (11) was based on a literature review, analysis of 80 crash report forms, group discussion interviews with 50 managers, a questionnaire and the pilot study of a new crash reporting and recording system. It identified eight 'data-based' barriers to fleet safety.

?? Current UK (and Australian) data cannot identify, or quantify, the full extent of crashes involving work vehicles. Most are relatively minor, damage only, slow speed manoeuvring, costing on average less than £1,000 and frequently single vehicle. Most fall outside national level recording systems, and the link between this type of crash, injuries and fatalities is largely overlooked.

?? Variations in reporting mean that there are no standards, conventions, procedures nor coding systems for fleet vehicle crashes. Fleets often say that the process is dictated by insurance, whilst insurers say they respond to client need. There is also no common crash definition and little understanding of underlying causes. When does 'fair wear and tear' become a crash? Should minor and unreported damage be counted as crashes? Currently most personal injuries (PI) appear to be reported by oganisations, but there is a high level of under-reported vehicle damage (hidden in the maintenance budget) and property damage.

?? Many drivers have modest writing skills, do not fully and accurately complete report forms and understate the level of the crash. The 'do not admit liability' culture draws out the claims process, adds costs and encourages dishonesty. This results in third party claims being made for crashes that have not been reported by drivers, damage found, under-reporting/unreported damage (hidden in the maintenance budget), incomplete forms and low quality data. Crash-based penalties, incentives, competitions, excess schemes, points-based disciplinary schemes and bonus schemes often lead to under-reporting and dishonesty.

?? An equal number of work vehicle crashes occur off the road as on, however they are dealt with by different agencies and regulatory frameworks (Transport and OH&S). This means that policy-makers rarely take into account the overall picture. In addition, some major fleets, including the military and fire services, are outside many regulations in the UK.

?? The primary purpose of current processes is to make or prevent a successful insurance claim. Legal, claims handling, establishing liability/mitigating circumstances and insurance cost minimisation requirements drive crash reporting and recording. Systems typically focus on claim and cost minimisation rather than risk management analysis and investigation. Coding the data for meaningful risk analysis is limited. Current forms try to establish who was to blame, rather than what happened and why. A great deal of claims data is available, but is difficult to utilise for risk management. Paradoxically, many of the crashes are often not actually covered by insurance, nor recorded due to high excesses and self-insurance.

?? Limited pre-crash initiatives, such as safety audits, risk assessments, induction, wellbeing (fatigue, drug and alcohol programmes) training, handbooks and crash packs (including a camera, at-scene instructions and reporting guidance) are provided. Post-crash limited investigation and risk management KPI development is undertaken to identify underlying causes and remedial actions. Wider information than just the crash details, such as business changes, seasonality, payment terms, shift patterns, times/distances worked and fleet/driver information, is important for crash analysis. Existing databases may not be easy to change to a new system.

?? Safety is not considered an operational priority. Job and finish payment contracts for drivers encourage speed and higher crash rates - but companies, drivers and their unions often like such schemes. The operating environment and culture, getting managers and drivers to accept best practice, change processes and new systems are important. Senior managers are often unaware of the problem and make safety a low priority behind 'getting the job done'. Crashes cut across functional boundaries in organisations, which masks the problem and makes decision-making difficult. Risk or OH&S manager often struggle to persuade the company's transport and senior managers to take on the extra work required.

?? Change management and implementation are overlooked - takeovers and restructuring means that the responsibility for collecting crash data keeps shifting within the organisation. Small companies are often too busy 'surviving' at a time of staff changes, opening new depots and dealing with pay disputes, IT problems and lack of resources. To devote time and effort to fleet management.

Overcoming the CoVIR data barriers

?? At the national/state level data on 'purpose of journey' is a key issue in understanding the full extent of the fleet problem, and much more needs to be done to integrate the data sets of the different agencies (Table 1).

?? Ideally fleets should record all damage only crashes. Realistically, however, many fleets find this impractical for cost and staffing reasons, and have numerous unreported minor crashes. As far as is reasonably practical 'any contact or alleged contact with another vehicle, property or person, both on- and off-road' should be reported and recorded as a crash at the local level.

?? An ideal report/investigation form should be an appropriate mix of quantitative (tick box, coded) and qualitative (open ended, descriptive) questions to allow drivers to describe what happened in their own words and managers to code this for analysis. Quantitative questions allow easier analysis, but qualitative questions allow more detail and explanation. Drivers should also be trained in what is expected of them, particularly in relation to the crash sketch and description, which are very important parts of the driver report form because they provide detail and context. Photographs have proved useful for confirming driver and third party evidence, can help to reduce the cost of third party claims and are useful training tools.

?? An investigative interview is important after all fleet crashes, however minor to verify the information and procedures. The focus of the investigation should be on underlying and immediate causes of the crash and identifying remedial action. This allows risk management as well as claims management to be undertaken.

?? Standard key performance indicators (KPIs) are important for relating crashes to workload. Comparable standards should be identified, evaluated and agreed on to cater for all operation types (eg cars, light and heavy commercial) and issues such as seasonality. An integrated relational database linked to a vehicle and driver database should record the data, because much of it is of a repetitive nature. Such a database must be tightly managed and updated, particularly if there are high levels of staff turnover and seasonality.

?? Change management and gaining the involvement, acceptance and support of top-level senior managers, local managers, the workforce and trade unions is vital in any attempts to improve crash reporting and recording practices. Drivers and their representatives should be involved through consultation and feedback of regular crash information. A management champion within a business or site is often the difference between the success and failure of crash reporting, recording and reduction schemes.

A long term pilot study and detailed evaluation of this project is currently underway.

UK driver assessment and monitoring project (DAMP)

DAMP supported 16 UK-based small and medium sized enterprises (SMEs) to implement safety systems, including management development and CD-ROM driven systems for driver assessment and crash analysis. The project identified a range of uses and benefits of the systems (www.hud.ac.uk/sas/trans/dampmeet.htm), but also the following barriers.

?? 'Getting into' SMEs - they tend to be very secretive, particularly about their data and costs and to be very focused on day to day issues rather than longer term programmes.

?? Finding a mechanism for the systems to fit into existing management structures in the organisations, giving managers time to implement and exploit them fully and drivers the opportunity and time to participate.

?? Basic IT problems including: availability of computers, software set-up, compatibility and reliability, deciding the most suitable computer in the organisation to use, negotiation over priority use of PC shared between transport and personnel managers and dealing with low staff IT skills/confidence.

Developing very close relationships and trust with the participant organisations, providing networking opportunities and helping them understand benefits are the key success factors in overcoming these barriers. A more detailed evaluation, as part of potential funding bids identified by the project, is the next stage of this work.

Queensland Workplace Fleet Safety System (WFSS) workshop barriers

Queensland Transport has developed and promoted the WFSS as one of its community road safety initiatives. A management seminar described by Anderson, Murray and Clements (3) was organised to evaluate and develop

the take-up of the WFSS. Over forty participants, out of 300 people that had requested copies of the WFSS, identified the following barriers to implementation and suggested a range of ways to overcome them.

?? Apathy and low management priority in the organisation leading to a lack of people and financial resources.

?? Who in the organisation should be responsible: health and safety or operations? The extent of this barrier is reflected in the range of job titles of the participants – including driver trainer, health and safety consultant, administration manager, health and safety manager, logistics co-ordinator, maintenance manager, transport clerk, fleet manager, purchasing manager, technical manager, project manager, quality manager, transport manager and training officer.

Overcoming the Queensland Workplace Fleet Safety System (WFSS) workshop barriers

Participants committed to the following steps to begin focussing on improving fleet safety in their organisation.

?? Start locally in their own area with the things they can control, for example making fleet safety a regular item on the agenda of their health and safety committee meetings.

?? Build driver assessments into their recruitment process and fleet safety into their inductions for new staff.

?? Review and use the content of the Queensland Transport Workplace Fleet Safety System to evaluate and improve their existing fleet safety policy (or develop a new one).

?? Develop a claims database to identify the extent of the problem, increase management and driver awareness and try to convince senior managers of the importance of fleet safety for occupational health and safety.

?? Allocate time and resources if given approval by managers.

This project is currently developing process-based case studies that identify and understand the key implementation and change management issues.

Local government barriers

Participants from seven Australian local government councils attended a management workshop to evaluate and invigorate their existing fleet safety programme. They identified the following barriers to implementation.

?? Lack of senior management support and leadership in their own use of vehicles.

?? Fleet vehicles are involved in very few major crashes. This means that senior managers see little immediate headline proof of the need for improved fleet safety (until they are involved in a high cost incident) and little time or priority is given to effective implementation.

?? Current cultures and organisational structures make change difficult. Fleet Safety cuts across several traditional areas – including insurance, health and safety, risk management, operations, human resources and vehicle maintenance and some things are already in place, but not under one umbrella with a single budget. This leads to a lack of cost information because the budgets are separate and due to inertia or conflicts in other cases. A good example is the risk or insurance management issue. At present there is some lack of understanding of risk management, with insurance systems focusing on claims rather than risk management.

?? The unions were not involved early enough in the process as a way of getting their support.

?? The limitations of traditional skills-based driver training were recognised by participants. Given this, what type of training should be chosen? How should it be funded? Should it be an internal or external trainer? Should it be vehicle or classroom based?

Overall, senior management support, time and resources, the culture and internal structure of local government, managing the unions and identifying training needs and resources were the barriers identified.

Overcoming these local government barriers

Participants were asked to consider how to overcome these barriers.

?? Participants agreed to 'bring something, including data, issues and case studies, to the ongoing two monthly meetings to learn from each other, brainstorm particular problems and share best practice. To obtain more

senior management support the results of the seminar were presented to the next senior manager's meeting. This focussed attention on the extent and costs of damage-only crashes (as suggested by Murray and Dubens (12), Bateman, King and Lewis (13), Bird (14), www.safetyperformance.com/articles.htm, and Boyle (15)).

?? It is necessary to work closely with the unions. This is important for dealing with both new and existing staff. A supportive union advocate was identified and requested to talk to the group and to other union representatives. The meetings should also be used as a mechanism to involve union advocates, other council staff and guest speakers on an invited basis. The regular non-attendees at meetings should be encouraged to attend by participants and senior managers.

?? A joint council approach should be adopted to driver assessment and training. A group decision theory-based approach, following the Swedish Telverket (16), BP (5) and US pizza delivery (17) studies, was the favoured option. Several mechanisms were discussed, including the use of internal or external facilitators.

?? Participants agreed to focus on what they can control in 'bite size chunks'. Small wins and outputs and pilot projects such as better data, driver training and undertaking risk assessments at regularly visited sites are all good examples. Positive PR and news items for internal and external publications will be used to focus attention on the issue.

Some follow-up has been undertaken to assess these outcomes, and an increasing number of councils, other government agencies are joining the scheme and further work is being undertaken to interpret their crash data.

Australian University fleet review

A review of the fleet operated by an Australian university has highlighted the following barriers.

?? Vehicles are very de-centralised with no fleet management, safety policy or university control which means that there is uncertainty about where responsibility and accountability for the existing policies lies and who makes sure they happen.

?? Salary sacrificed vehicles driven by senior employees, their staff and families are felt to be outside the 'authority to drive process' due to their stake in the vehicle and seniority. It is unknown what proportion of staff drive a university vehicle, or what proportion drive their own vehicle for work.

?? Data is fragmented between claims forms, the insurer's database and leasing wear and tear invoices. Reporting and recording of crashes and time to report are poor. Some drivers do not appear to report their crashes at all. Drivers have no guidelines on what to report and the University often finds out about crashes only when they are reported by a third party. This means vehicle wear and tear costs are high and there is no policy, no driver feedback on the extent of the problem.

?? Inconsistency between the financial and OH&S instructions to drivers and disagreements about control, management and procedures. Avenues for communication are limited and there is little adherence to occupational health and safety best practice. There is no evidence of the crash investigation requirements described in the written procedure being undertaken. Work related driving is not a regular item on health and safety committee agendas, there is no fleet safety policy, driver handbook or basic log of vehicle use in place, nor is any use being made of existing insurance broker-held crash data brokers for risk management.

?? Several senior academics/administrators, their staff and families driving salary-sacrificed vehicles drivers have a high at-fault high crash involvement rate typically at low speed in the CBD at or close to the University. The data hints at poor and careless driving, specification of vehicles that are too large for the environment, and a need for risk assessments on University sites – none of which has occurred.

Financial and occupational health and safety mangers are due to meet soon to discuss a range of recommendations that were made in all of the above areas.

Australian oil company barriers

Twelve company and contractor managers were involved in a workshop to discuss the barriers to transport safety in their organisation. They identified the following barriers and ways to overcome them, mostly related to issues of management policy, analysis and change.

?? Lack of commitment to standards by individual managers and drivers making culture change difficult.

?? Lack of resources to get message across and make safety a priority.

?? Lack of measurement resources and data.

?? Lack of company direction/support for contractors and particularly sub-contractors.

Over coming these Australian oil company barriers

The company's managers pledged to undertake the following actions.

?? Assess the current situation by focusing on damage only crash reporting, recording and risk management to ensure that programmes are tailored to the types of incidents. This information would also be summarised for senior managers to enable them to prioritise the issue and provide resources.

?? Leadership by example was seen as important to ensure that more safe practices are implemented in the city and the field. Focusing on fleet safety with their work group at safety forums and in tool box meetings was the main channel to achieve this.

To date only limited follow-up has been undertaken to assess these outcomes.

Conclusions

A range of barriers to effective fleet safety have been identified from the projects described in this paper. Table 2 summarises these barriers and the suggestions that participants have put forward to overcome them.

Table 2 – summary of barriers to fleet safety

Current barriers	Ways to overcome them
Limited Federal/State level data to identify the true extent of the problem.	Federal/State data (eg ATSB, Transport, CTP) to include 'purpose of journey'.
Current operational procedures and management structures. Examples include job and finish payment schemes, crash related bonus schemes and traditional hierarchical structures.	Safety should be built into OH&S strategy, focussing on its impact on all areas of an organisation. Where possible safety should be linked to other programmes such as quality, efficiency, customer service or environmental projects.
Limited senior management (or Government level) commitment.	Identify 'board level' advocates and involve senior managers, help them understand the full costs, impact across the whole organisation and external consequences.
Limited integration between fleet safety and OH&S, and limited or no mention of fleet safety in overall health and safety policy.	Encourage more co-operation between fleet and OH&S teams in organisations, for example including an OH&S specialist in crash investigations and including fleet safety in OH&S committee meeting and minutes. Implement a fleet safety policy.
Limited 'claims-led' pre-crash procedures and instructions for drivers, supervisors and managers.	Develop procedures manual, driver handbooks and in-vehicle crash packs to show how to manage the scene and report the crash effectively for risk management.
Limited fleet crash investigation procedures and forms, particularly for damage only crashes.	Develop a procedure to investigate and learn from all incidents, identify remedial action and allocate tasks.
No standard definitions, codes, conventions and methodology for reporting and recording fleet crashes.	Developing a standard set of agreed Key Performance Indicators to allow current claims data to be used for risk management.
Reactive focus on injury prevention by fleets.	Proactive focus on damage only, vehicle wear and tear, near hits and their costs as well as injuries.
Lack of operational management, supervisory and driver interest and inflexible attitudes to change.	Develop change and union management programmes, involving people in the process early, utilising key advocates, change agents and champions.
Lack of management, supervisory and driver skills and limitations in current training programmes.	Tailored development programmes based on KPIs, assessments, needs analysis and group decision theory. Proactive supervisors and managers with a hybrid mix of skills research, analysis, management of change and programme implementation skills are required.

The main limitation of the study is that it is exploratory, mainly qualitative based and includes no controlled experimental or before and after data. This should clearly be a key future stage in the research process. Further research is also being undertaken to understand the fleet safety evaluation processes currently in use by Australian organisations.

Despite this limitation, the paper offers several new opportunities. Road safety research in Australia has traditionally focussed on injury data. By focussing on 'damage only' data as well as injuries more proactive approaches can be developed. Fleet safety is a very good and focussed way to lead road safety researchers in this direction.

Acknowledgements

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