Review of Best Practice Road Safety Initiatives in the Corporate and/or Business Environment

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Summary

This paper summarises an investigation of the potential to introduce road safety based initiatives in the corporate environment.

The literature review concluded that the following fleet safety initiatives have the potential to be effective:

- selecting safer vehicles
- some particular driver training and education programs
- incentives
- company safety programs where there is an overall safety emphasis.

European research and programs vary widely from the incorporation of fleet safety into quality assurance of transport in Sweden to the use of driver training and driver discussion groups in other jurisdictions. Evaluation of the effectiveness of fleet safety initiatives is rarely undertaken.

The current OHS legislation in Victoria allows considerable opportunity for promotion of best practice injury prevention measures. However, enforcement is only relevant to a small range of fleet safety problems.

Introduction

In response to an increasing awareness of the role of work-related driving in crashes and the related costs, many private and government organisations have developed programs to improve fleet safety. While many of these programs have focused on the management and driving of company vehicles, some have taken a broader approach. These corporate road safety programs have sought to prevent road trauma and the associated costs of absence from work resulting from non-work-related crashes.

Road safety authorities in many jurisdictions in Australia have developed an interest in fleet safety, both directly and as a method of influencing overall road safety. In Victoria, the Corporate and Fleet Safety Working Party was formed, with representation from VicRoads, Transport Accident Commission, Victoria Police and the RACV. Its long-term aim is to implement a program that is likely to be well accepted in the business environment and which will reduce casualty crashes. The Corporate and Fleet Safety Working Party commissioned the report on which this paper is based (1).

Since 1986, fleet vehicles have comprised the majority of new car sales (2). This is true for the Australian-based car manufacturers but not for the other manufacturers. In 1997, Ford and Holden sold 72% of their new vehicles to fleets. The corresponding figure for Toyota and Mitsubishi was 61%.

Yet fleet and private vehicles are no longer distinct categories. There is now an ownership continuum, with vehicles owned by companies and used exclusively for business purposes at one end and vehicles owned by individuals used exclusively for private purposes at the other end. In between, there are vehicles owned by companies for which part-private use is allowed, vehicles which are provided by employers as part of salary packages, vehicles which are the subject of novated leases and other arrangements. To add complexity, many fleet vehicles are leased, rather than owned.

We have defined fleet vehicles as *vehicles over which a business has some degree of influence in their selection and operation*. The degree of influence decreases as the type of vehicle moves from the business towards the private end of the continuum. The distinction between fleet road safety programs and corporate road safety programs becomes somewhat blurred when there is considerable private use of fleet vehicles.

The scope of this investigation was limited to light commercial vehicles and cars, including taxis and rental cars.

Fleet vehicles and road safety

Road crashes are the most common form of work-related death. In 1989-92, 541 persons were killed in road crashes while they were working and 628 persons were killed in road crashes while they were commuting to and from work (3). This represents 23% and 26%, respectively, of work-related deaths. From another perspective, it represents 6% and 7%, respectively, of road fatalities during that period (4). These figures do not count the other persons who were killed or injured as a result of these work-related road crashes.

Wheatley (5) estimated the cost of work-related traffic injury to be about a half a billion dollars per year. The costs of injury crashes can be substantial for large organisations. In 1991, Drummond and Vulcan (6) estimated the annual direct cost to Telecom of injury crashes to be at least between $14 and $21 million. On-duty crashes comprised approximately $5 million. The costs are derived from superannuation costs, unplanned absences, vehicle costs and payments to third parties. Drummond and Vulcan note that there are a range of other organisational costs that could be added to the direct costs, e.g. training investment, retraining/replacement training and productivity losses.

Due to their greater frequency, the total cost of property damage crashes may be even greater than that of injury crashes. A benchmarking study conducted by Lumley General Insurance (cited in 7) found that 27% of fleet vehicles were involved in a crash each year. If the average cost for these minor crashes is about $2,000 each (as suggested by Wheatley), then applying those figures to the 2 million light vehicles used for business purposes results in an estimate of the total cost of property damage crashes of about $1 billion per year.

Lynn and Lockwood (8) speculated that company car drivers might be expected to have more accidents per year than drivers of private cars because they usually drive very high mileages and are sometimes required to drive under time pressures imposed by tight schedules. In addition, because the cars they drive are not their own, they may be less concerned about them.

The Transport Research Laboratory surveyed a random sample of all drivers in Great Britain who drove a company-owned or company-financed car or van during working time. The survey found that company drivers drove more than twice the annual distance that private car drivers drove. Company car drivers reported an average of 0.19 accidents per year, of which 0.10 occurred while driving for work and 0.08 occurred during non-work driving. Younger, less experienced drivers had a higher accident rate than older, more experienced drivers. Accident liability increased with annual mileage, but less than proportionally. After differences in demographic and exposure variables had been considered, company car drivers had about 50% more accidents than private drivers.

In response to those findings, Downs et al. (9) conducted interviews and focus groups to determine why British company car drivers have a higher accident risk than the general driving population. This research indicated that the driving culture within an organisation may stress business needs, such as delivery quotas, before safety. It was also found that a strong ‘safety culture’ within a company will positively impact on safety concerns being addressed more rigorously in that company. In addition, companies with strong safety cultures were found to be more satisfied with the outcomes of safety measures that had been implemented.

There is some evidence that speeding and fatigue may be more prominent road safety problems in work-related driving than in other types of driving.

Harrison et al. (10) found that higher driving speeds were associated with business or work car use, driving a large, relatively new car owned by someone other than the driver, a relatively high level of driving exposure, being on a long trip and driving relatively little in built-up areas. A study of company car drivers in Britain (11) reported that speeding was common for over half the sample, and excessive speeding was common for 13% of the sample. The most influential reason was found to be a desire to arrive at meetings on time, even if this meant breaking the speed limit. This was combined with a reduced perception of excess speeding as an important accident risk factor and lower driving experience.

Working and work-related travel also appear to play a significant role in driver fatigue. Fell and Black (12) reported that in the Northern Region of NSW, over a third of driver fatigue crashes or near crashes occurred on trips related to work. When drivers in the Sydney region were interviewed, 43% of respondents who had a fatigue incident (a crash, near miss or moved out of their lane because of fatigue) stated that their trip was work-related. Among the respondents who said that they had insufficient sleep, 55% attributed this to long working hours or overtime.

Review of fleet safety initiatives

The literature review identified a large number of references to fleet safety in industry magazines and relatively few references in the scientific literature. There were numerous claims of likely or possible crash savings resulting from fleet safety programs. However, few initiatives had been evaluated.

The fleet safety initiatives identified as potentially effective were:

- selecting safer vehicles
- some particular driver training and education programs
- incentives (not rewards)
- company safety programs in companies with an overall safety emphasis.

Safety considerations may influence which level of car is purchased within a manufacturer's range (or which options are selected). For most companies, vehicle selection is a choice of the safest possible car within reasonably tight constraints, rather than choosing the safest possible car on the market.

Despite the widespread belief in the effectiveness of driver training courses by those involved, there is no clear evidence of their effectiveness in lowering crash rates. Most courses aimed at fleet drivers have not been evaluated.

One of the most rigorously evaluated studies of the safety effects of driver training within the corporate environment was undertaken by the Swedish Road and Traffic Research Institute (13). They undertook an experimental study in the Swedish telecommunications company, 'Televerket' which involved five groups of around 900 drivers each.

There were reductions in accident risk for the driver training, group discussion and bonus groups, with the bonus group showing the least reduction. The campaign group and the control group showed no reduction. All experimental groups showed a reduction in costs, with the group discussion group showing the largest reduction. The control group showed no reduction in costs. The campaign group did not have a reduction in the number of crashes, but did have a reduction in the severity of crashes. The group discussion and special form of driver training were the most effective measures. The cheapest measure was group discussions and the most expensive measure was driver training.

The National Safety Council piloted a four-hour defensive driving course with the rental car division of the Hertz Corporation in 1992 (14). Hertz trained half of its fleet drivers and their supervisors. There was an almost 35% reduction in the frequency of crashes for trained compared to untrained drivers. If

the trained and untrained drivers were chosen to be equivalent before training, then this study shows a useful effect. Additional information about longer-term safety effects was not reported, however.

Very little literature was available regarding the effects of fleet safety programs on safety of non-work-related driving by employees. The restricted nature of data collection undertaken may mean that employers know little about this – and state accident databases are not suited to monitoring this.

The need to tailor programs to the types of vehicles, types of use and role that driving plays in the employment of different employees of the organisation was commonly cited. There was a general consensus that fleet safety programs require management focus and drive to be implemented and to be maintained. Cost is still a major driving factor in fleet safety – there is a need to show that the cost of improvements is less than the cost of losses.

The threat of penalties is often used to control driver behaviour, rather than monitoring and guidance. An exception to this has been policies to fit cruise control to limit unintentional speeding. There is little evidence of driver management in relation to fatigue.

There often appears to be a gap between those responsible for fleet management and those responsible for occupational health and safety within the organisation. Fleet management is often part of the finance sector, and occupational health and safety part of human relations. The potential exists for fleet safety to be neglected if it is not clearly seen as the responsibility of fleet management or of occupational health and safety.

In contrast, fleet safety appears to be emphasised in organisations where there is a strong general safety ethos. These organisations are likely to have better incident data monitoring systems that allow them to identify the magnitude of the safety problem comprised by fleet safety.

European research and programs

In the Sweden, the operational strategy of Vision Zero includes a move to public authorities applying quality assurance principles to work-related travel (15). Quality assurance of transport aims to ensure that people and goods arrive at the right place, at the right time and in the right way (i.e. without danger of serious injury or damage to the goods or the environment). Thus there is a linking of road safety and environmental outcomes. There is an emphasis on ensuring the quality of outsourced transport as well as the use of company vehicles.

The Swedish approach to vehicle safety in fleets focuses more on the rated crashworthiness of vehicles, rather than a specific list of safety features. In this way it differs from the general approach in Australia and the United States.

In France, there has been a program to increase the involvement of private companies in road safety related to their use of vehicles. Agreements have been drawn up between government, insurance companies, the national occupational health fund and volunteer companies. The programs focus on motivating companies to undertake road safety programs by increasing the knowledge of the cost of road crashes to the company and by decreasing workers compensation and vehicle insurance premiums if programs are implemented. Some of the programs have concentrated on drink driving because of its large role in both work- and non-work-related road crashes in France (16).

The German Traffic Safety Council has promoted the establishment of voluntary safety circles in which employees from the company vehicle fleet meet together to discuss critical points and devise solutions under the leadership of an experienced moderator (17). It also runs a one-day training course in “Safe, Economical and Environmentally Friendly Driving”.

In the United Kingdom, driver training programs, incentive schemes, penalties, accident reviews, driver monitoring systems and driver feedback procedures have been implemented to improve road safety within organisations. The effects of these measures have not been reported.

Interviews with government and corporate representatives

Representatives of fleets which had won awards for fleet management or fleet safety were interviewed. A number of companies reported changing the content of driver training programs away from improving driving skills to improving driver attitudes and reducing risks. There was relatively little emphasis on driver management. In some organisations, driver management was difficult because fleet management is a centralised function and there is little direct contact with the drivers.

The move to maximise resale values has led to programs to take better care of cars and also consideration of the resale implications of some safety features (this can possibly encourage airbag fitting).

In fleet management, there is a general emphasis on counting accidents (particularly "preventable" accidents) and repair costs, rather than injuries. This may be because injury accidents are much less common than property damage accidents. Many organisations do not appear to count the hidden costs of crashes (e.g. lost time and productivity).

Many fleet safety programs are undertaken in response to a period of poor road safety performance or in response to the interest of someone in management. There are very few evaluations undertaken, even by best practice companies. Benchmarking is one of the few examples of evaluation, but benchmarking only hints at why some organisations may have lower crash rates or costs than others.

Review of occupational health and safety legal perspective

The examination of the OHS legislation has shown that vehicles can be considered to be workplaces (on public roads) and plant (when not on public roads). Thus there is a requirement to ensure that the vehicles and the ways in which they are used provide, so far as practicable, a working environment that is safe and without risks to health.

The current OHS legislation in Victoria allows considerable opportunity for promotion of ideal best practice injury prevention measures. However, the lack of regulations specifically targeting vehicle and driver safety in the occupational setting means that enforcement is only relevant to a small range of fleet safety problems.

Conclusions and Recommendations

There is considerable interest in fleet safety among road safety agencies as a strategic approach to improving the safety of the entire vehicle fleet. Under this view, corporate purchasers of vehicles and transport services can specify high safety standards and thus create an economic imperative for providers of vehicles and transport services to meet these standards. The Swedish example suggests that a possible approach to occupant protection for road safety agencies is to focus on a market-driven approach and target fleets – particularly the government fleet.

Evaluations and cost estimates may be necessary to convince both fleets and government agencies of the feasibility of this approach to improving road safety. However, there are difficulties in identifying fleet vehicles in many road crash databases. This will make it difficult to compare the safety performance of fleet and private vehicles and will make it difficult to evaluate large-scale programs.

From the OHS legal perspective, promotion of improvements to fleet safety should be considered the appropriate approach in the short-term, accompanied by encouragement of longer-term legislative changes.

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