

## **UPDATING MUARC'S CAR POLICY – RESEARCH MEETS PRACTICE**

Session: Work related road safety

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### **Abstract**

The policy for the purchase and use of vehicles at MUARC was developed in 1999 as an internal set of guidelines. Nevertheless it became a stimulus, and in some cases a template, for the development of similar policies by many road safety agencies and private companies in Victoria and throughout Australia. The policy was placed on the MUARC website where it has registered several thousand hits.

Given the changes in vehicle safety technology since 1999, MUARC has recently undertaken an update of the policy. This process identified a number of issues that are likely to be of interest to other road safety organisations and companies with an interest in improving workplace road safety.

Two complex issues arose in updating the criteria for vehicle selection - the extent to which the effectiveness of safety features needed to be scientifically proven (versus potentially effective) in order to be included and potential conflicts between the Occupational Health and Safety requirement of providing the safest possible workplace for employees and the public safety aspect of not unnecessarily endangering other vehicle occupants and vulnerable road users.

A further issue arose, in terms of guidelines for use of vehicles, regarding the extent to which legal, but potentially unsafe, behaviours could be proscribed. An example that will be discussed in the paper relates to the use of hands-free mobile phones.

### **INTRODUCTION**

In recent years there has been an increased emphasis on improving the safety of fleets operated by companies and other organisations. The safety of heavy vehicle fleets has long received attention but the focus has shifted more to fleets of light vehicles. A variety of terms have been used to describe the interface where road safety meets occupational health and safety – fleet safety, work-related road safety and corporate road safety. While the terms differ, there is little dispute as to the importance and potential of this interface. Work-related travel comprises about a third of all travel (Wheatley, 1997; Harrison, Fitzgerald, Pronk & Fildes, 1998), increasing to more than half if commuting to and from work is included (Wheatley, 1997). Road crashes are the most common form of work-related death in Australia (National Occupational Health and

Safety Commission, 1998) and in many other countries (including the United States as noted in Janicak, 2003). Our analyses of data provided by the Roads and Traffic Authority found that almost 400,000 fleet vehicles were involved in crashes (towaway, injury or fatal) in New South Wales during the period 1996 to 2000, comprising about one-quarter of all vehicles in crashes (Symmons & Haworth, 2004).

Much of the published research concludes that fleet or company drivers have an increased crash risk relative to that of drivers of privately registered vehicles. For example, Lynne and Lockwood (1998) found that company drivers had an accident liability 29-50% higher than private drivers of similar age, gender and annual mileage. Bibbings (1997) found that workers required to drive 25,000 miles per year as part of their job have an almost comparable risk of being killed in a road accident to that faced by coal miners in their job (1 in 8,000).

Fleet safety is important, not just for improving the safety of work-related driving, but as a strategic approach to improving the safety of the entire vehicle fleet. If corporate purchasers of vehicles and transport services specify higher safety standards, this can create an economic imperative for providers of vehicles and transport services to meet these standards. While regulatory mechanisms to improve the safety of vehicles are notoriously slow and constrained by international compatibility issues, using the fleet market to demand particular features has the potential to result in a speedier introduction of those features. For volume production reasons, these features are likely to be also offered to private buyers.

Similarly, organisations with a strong commitment to safety can implement requirements for the use of vehicles that are stricter than those prescribed by legislation. For example, some fleets ban the use of hands-free mobile phones while driving or have a no alcohol or drugs policy. The examples set by these fleets can then be used to demonstrate that implementation problems are not insurmountable.

Company fleet safety policies have the potential to improve safety outcomes by reducing the frequency and severity of risky driving behaviours (speeding, fatigue, alcohol etc.) and by improving the degree of protection to employees in crashes (by purchasing safer vehicles). As part of a review of best practice in corporate road safety (Haworth, Tingvall & Kowadlo, 2000), MUARC developed a Policy for Purchase and Use of Vehicles (the "MUARC Car Policy"). This policy incorporated (then) best practice elements from a number of guidelines. It borrowed heavily from the "travel policy" of the Swedish National Road Administration (SNRA) that was introduced in January 1998.

The MUARC policy was developed as an internal set of guidelines and as an example of what best practice policy should look like. The policy became a template or a point of departure in the development of similar policies by many road safety agencies and private companies in Victoria and throughout Australia. The policy was placed on the MUARC website where it has registered several thousand hits.

The policy has two main components: requirements for purchase of cars and requirements for use of cars. It states that "the policy should build on current knowledge

and should be reviewed at least once per year, given the rapid development of knowledge and technology”. Despite this statement, the policy has not been regularly reviewed and updating of the policy only commenced early in 2004. This paper describes some of the issues that were addressed in this process.

## **UPDATING VEHICLE SELECTION CRITERIA**

In the original MUARC Car Policy, the vehicle selection criteria were divided into Safety, Environment and Economy groupings. The safety criteria were classified into:

- Mandatory requirements, passive safety
- Highly desired, passive safety (to be mandatory requirements later)
- Mandatory, active safety
- Highly desired, active safety (to be mandatory requirements later)

Most of the highly desired criteria related to features that were considered to have safety benefits but which were not currently available at all or only on cars that were not affordable.

One of the aims of revising the vehicle selection criteria was to move from a prescriptive approach that specified particular safety features to a more performance-based approach. The initial attempt resulted in a decision tree approach where the first step related to performance on real world crashworthiness ratings (or ANCAP if real world ratings were not available) and the final step rank ordered the remaining vehicles in terms of their lifetime costs. However, concern was expressed by some staff that no vehicles existed that would meet all of the criteria and so this approach would fail. So the mandatory and highly desired approach of the original model was kept.

The extent to which the effectiveness of safety features needed to be scientifically proven (versus potentially effective) was discussed. It was noted that restricting features to those which had proven safety benefits would rule out many promising features that, because they were new, had insufficient time in service for one to be conclusive about their worth in real-world crashes. Thus, some potentially effective devices were included in the “highly desired” section.

The issue of the kerb weight requirement was hotly contested. Some researchers felt that kerb weight was the dominant factor in determining crashworthiness and therefore wanted a high kerb weight to protect the occupants. Other researchers argued that some smaller cars were now showing good performance in real world crashes and therefore the recommended kerb weight range should be expanded so that these vehicles were not excluded. The potential for heavier vehicles to be more aggressive in impacts with other vehicles was also raised. Thus the discussion was not only one of science, but also the ethical issue of the potential conflicts between the Occupational Health and Safety requirement of providing the safest possible workplace for employees, versus the public safety aspect of not unnecessarily endangering other vehicle occupants and vulnerable road users. The outcome was not to change the kerb

weight requirement (1300-1700kg) but to move it from the mandatory to the highly desired category.

Discussions were held regarding whether antilock braking systems (ABS) should be part of the vehicle selection criteria. In the original Car Policy, ABS was a mandatory active safety feature. This recommendation was based on studies in the early 1990s that demonstrated reductions in the risk of having a two-vehicle crash (Evans & Gerrish, 1995; Kullgren, Lie & Tingvall, 1994). However, more recent research has suggested that ABS may reduce the risk of rear-end collisions (which are relatively low severity) but increase injury in single vehicle crashes (which are often high severity). This resulted in a quandary. Should the new policy recommend against ABS on the research evidence, despite the likelihood that any car that complied with the other requirements would almost certainly have ABS fitted? It was decided to take the approach of not recommending for or against ABS.

## **UPDATING VEHICLE USE POLICY**

In terms of updating the guidelines for use of vehicles, there were concerns regarding the extent to which legal, but potentially unsafe, behaviours could be proscribed, the example here being the use of hands-free mobile phones.

A recent paper that MUARC staff have prepared for the Australasian Road Safety Handbook reviews the road safety implications of using hands-free mobile phones while driving (Symmons & Langford, 2003). The paper cites simulator and epidemiological studies showing increases in crash risk equivalent to those resulting from illegal blood alcohol levels and little real difference between hands-free and hand-held phones. Some large companies (mostly multinationals) have banned the use of mobile phones in cars, whether hands-free or hand-held.

The original MUARC Car Policy stated that "Use of mobile phones when driving has been found to be associated with increased crash risk. Hands-free phones are better, but not ideal. Minimise the use of mobile phones while driving". Given the research evidence that has accumulated since the Policy was developed, it was felt that this statement should be changed. Many MUARC staff at both the management and technical level spend significant amounts of times away from the office and therefore there is considerable use of mobile phones. While some members of staff were willing to do so, there was strong opposition from some members to removing hands-free kits from cars. Some staff who opposed this suggestion stated that they used the hands-free kits to charge their phones or to gain greater range when in outlying areas. Others were concerned that some staff would use hand-held phones if no hands-free kit were available. A compromise was reached that staff who wished to have hands-free kits in their cars would be required to have a notice placed that warned them not to use the phone while driving.

Many components of the vehicle use policy have not been fully implemented or abided by. While the monitoring of fuel consumption as an indicator of a non-aggressive driving style was undertaken for some months this has ceased. There is no evidence that the

recommendation that driving should not occur more than 16 hours after the previous night of sleep is being complied with. Use of headlights in daytime is uncommon, despite its being recommended and MUARC vehicles having a feature whereby the headlights turn off once the driver has turned off the engine and left the car.

## **CONCLUSIONS**

Most of our experience is in research, making recommendations and evaluating the implementation of safety programs. The Car Policy is an example in which we have been the implementing agency and has provided insight into some of the difficulties in translating research and policy into practice.

The Policy has probably been more successful in raising awareness of fleet safety policies and changing the policies and practices of other organisations than of MUARC itself. While the Policy elements were based on current evidence, there was probably a lack of sufficient and ongoing communication to staff (including new staff), reporting and monitoring. For example, the Policy stated that “the status of the MUARC car fleet should be included in the Annual Report, together with the total and average fuel consumption as performance indicators for a non-aggressive and environmentally friendly driving style” but this never occurred. While vehicle selection is relatively easier than changing driving practices, not all MUARC vehicles have always complied with the policy. Some vehicles purchased were too small.

MUARC policy shows some similar characteristics to those identified in other fleets – it is developed by someone who has a passion for improving fleet safety and then after that person has left the organisation, the necessary systems for continuing implementation and monitoring lapsed.

To put research and policy into practice in fleet safety, you need not only the right policy but also commitment across all levels of staff to abide by the policy and management systems to ensure that this occurs. It is good to have a policy but a policy is not good enough.

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