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Curbing Roadside Hazards

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This article was contributed by SaferRoads www.aaa.asn.au/saferroads

Introduction

In 2004 the ACRS published " Road Safety Towards 2010" – a compilation of expert views on what was needed to achieve the National Road Safety Strategy (NRSS) target of a 40% reduction in the road crash death rate by 2010. By the time the review was published, the road death rate had been trending downwards and was only slightly above the pro-rata target. Many contributors to the review, while noting the need to maintain the effort to improve safety, were cautiously optimistic. Now however, three years since the College review was published and with four years remaining in the national strategy, the task of achieving the national target is more daunting than ever.

Road deaths in 2006

During 2006, 1,605 people were killed in road crashes, which is 22 (1%) less than in 2005, but 22 (1%) more than the 1,583 deaths that occurred in 2004– when the College review was written. The improvement in 2006 over the 2005 result was led by South Australia, with 31 (21%) fewer deaths, the Northern Territory with 13 (24%) fewer deaths and the ACT also with 13 (50%) fewer deaths. Notably, the 2006 result in South Australia was 19 fewer than the previous low of 136 deaths, recorded in 1953.

As shown below in Figure 1, reductions were also recorded in Victoria and NSW. Unfortunately Western Australia, Queensland and Tasmania each recorded more deaths in 2006 than in 2005. The increase in Western Australia of 40 (25%) deaths is particularly concerning.

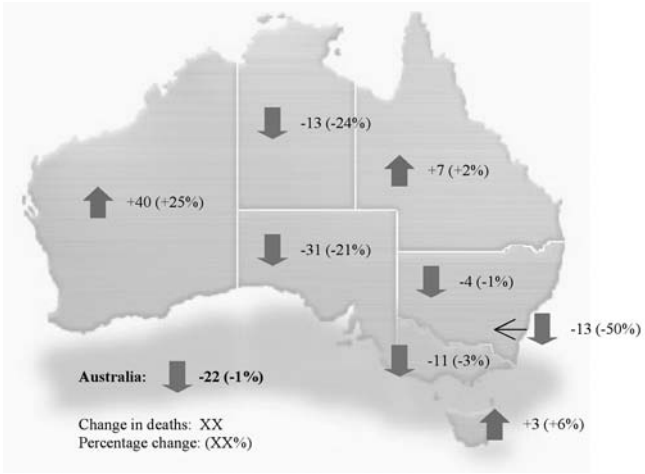

Figure 1 Change in road deaths between 2005 and 2006
Source: Australian Transport Safety Bureau Fatal Road Crash Database

A step backward

By December 2006, the national death rate per 100,000 population was 7.8. Although this is an improvement on the rate of 9.3 at the beginning of the Strategy, it is actually higher than the January 2005 rate of 7.7. That is, during the past two years the national road fatality rate has gone backwards. The effect of this is that since the start of 2005, the gap between what would be expected if we were on target and the actual death rate has grown, as shown below in Figure 2.

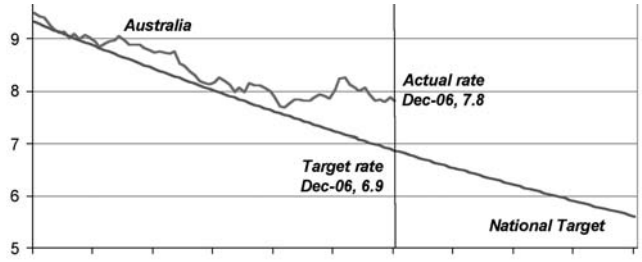

Figure 2 National road death rate versus National Road Safety Strategy target (deaths per 100,000 population
Source: Australian Transport Safety Bureau

In order to achieve the December 2006 target rate of 6.9 deaths per 100,000 population, the number of people killed on Australian roads in that year would need to have been 1,411–194 deaths lower than the actual number of 1,605. In fact, if Australia had been 'on target' every year since the Strategy was implemented, then approximately 550 additional lives would have been saved. Clearly, much greater efforts are needed if the 2010 target is to be achieved.

National Road Safety Action Plan 2007-08

The new National Road Safety Action Plan 2007–08 (NRSAP) provides a number of explanations as to why we are behind. These include:

- growth in the number of kilometres travelled on the roads is higher than expected;
- with the exception of Victoria, speed management improvements have been incremental;
- investment in road infrastructure has remained fairly constant - greater investments are needed in order to produce greater benefits;
- the uptake of technology to encourage seat belt use and increase speed awareness and the installation of electronic stability control in new cars has been slower than anticipated; and
- other factors such as ' learning effects' , whereby motorists learn where enforcement is likely to occur, and driver distraction, including the use of mobile phones, has increased.

Despite these mitigating factors, the NRSAP argues that a ' step down' in road deaths is possible, given a concerted effort by all those involved in road safety across numerous action areas. One of these action areas, road infrastructure, and in particular, roadside safety, holds enormous and arguably as yet largely untapped potential.

Roadsides should not be sidelined

The 2007-08 NRSAP notes that low-cost, safety focused treatments like erecting roadside barriers are associated with substantial crash and injury reductions. It also acknowledges the significant work being done in this area by VicRoads as part of the $130 million Safer Roads program. However, such large-scale, targetted programs appear to be the exception rather than the rule.

At least part of the reason for this is that roadside safety does not generate a great deal of interest for the community, and so is arguably sidelined both in public debates and in policy making. Evidence of this can be seen within the issue young driver safety, which was one of the defining issues of 2006, particularly for NSW.

Nationally, 112 drivers aged between 16 and 20 were killed on the roads, 15 (15%) more than in 2005. In NSW, 39 drivers of that age were killed, an increase of 15 (63%) on the previous year.

One crash in particular drew considerable community and media attention. In October 2006, four young teenage boys, three aged 16 and one aged 17 were killed when their Holden Commodore ran off the road near Byron Bay, in northern NSW. The car, which was being driven by another 17 year old boy – who actually survived the crash – hit a number of trees before stopping on an embankment. The crash occurred just after midnight.

A high-profile debate followed the crash, in which the need for laws relating to passenger and nighttime restrictions and driver training was the focus. Undoubtedly this debate was beneficial for road safety, in that it engaged a sometimes apathetic community, and ultimately led to what the NSW Government argues is a much improved Graduated Licensing Scheme (GLS); from 1 July 2007, new restrictions on novice drivers will include nighttime passenger restrictions, automatic loss of licence for speeding and a ban on mobile phone use.

However, at least one important aspect of road safety was conspicuous in its absence from this debate and subsequent policy initiative – roadside safety. While the fact that the car hit trees and an embankment was reported, little attention seemed to have been given to possibility that this might have been a contributing factor in the deaths. In terms of injury prevention, roadside safety was a potentially salient point; in terms of public debate it was trifling.

In fact an enormous number of road deaths occur each year when vehicles hit roadside objects like trees and poles: in Victoria, the figure is around 40%. And while the fact that a tree or pole was involved in a crash is often reported by the media, in many cases, it is the immediate behavioural causes of the crash which are the focus.

The question of whether the focus of road safety policy should be on the cause of crashes or the prevention of injuries goes to the heart of the safe systems approach – ultimately both aspects need to be addressed. While road safety debates and policy tend to focus on behavioural issues that are linked to the causes of crashes, like speeding, drink driving and distraction, they should also acknowledge the fact that mistakes, errors of judgment and poor driving decisions are normal human traits in motorists. Roads can be designed to cope with this.

It is not for a lack of technical expertise that run-off road deaths remain so prominent in crash statistics; we learned a long time ago how to make run-off road crashes survivable. There now needs to be a concerted effort to develop a debate within the community about the importance of roadside safety. Through AusRAP, AAA and its constituent motoring clubs have begun this process. In October 2006, we released the first road safety star ratings of the AusLink national network. RACV and RACWA also released star ratings for major state highways, and plans are in place to expand the star ratings in other states. The star ratings not only provide an overall assessment of safety, but also an assessment based on specific crash types, including run-off road crashes. The national results showed that just 57% of the AusLink network has safe roadsides.

The Federal Government has provided valuable financial support to AusRAP through the Australian Transport Bureau (ATSB). In its 2007–08 Federal Budget submission, AAA called on the government to use the AusRAP star ratings to complement the Black Spot program with a new, $400 million program to that proactively identifies and targets low-cost, high return priorities for the AusLink national network.

In particular, it is increasingly clear that, for any significant attempts to bring down the level of crash fatalities and serious injury, there needs to be a heightened focus on addressing roadside hazards. This is a challenge for all who want to see the NRSS target achieved – governments, the community and road safety bodies.

Retrospective on Road Safety Visits to Sweden and Ireland

by Graham Smith, Driver Training Centre, Gympie, Queensland

This is a shortened version of a talk presented at the December 2006 meeting of the Queensland Chapter of the College.

A visit to Europe in 2005 brought my wife Lyn and I into contact with a number of Road Safety practitioners. Out of these contacts came an invitation to visit Sweden to have a look at the "Vision Zero" concept. It also resulted in an invitation to present a paper and conduct a workshop at the *Vision in Vehicles* Conference in Dublin, Ireland, in July 2006. I have been a Senior Road Safety Educator at Roadcraft in Gympie, Queensland for more than 20 years. In common with all other educators in our organisation I work part-time. Roadcraft is a not-for-profit organisation started nearly 30 years ago by members of the local Rotary clubs with the help of other service organisations.

Road Safety in Sweden

My host in Sweden was Mr Thomas Lundgren of the Trafiksakerhets " Skid Training" Centre, at Gillinge, just outside Stockholm. We were joined for the day by Mr David Wilde from Vision Zero, which is a section of the Vagveket or Transport Department in Sweden.

Vision Zero

Vision Zero is an image of a future in which no person will be killed or seriously injured on Sweden's roads. It was ratified by the Swedish Parliament as a national policy in 1997. Vision Zero establishes that the loss of human life or suffering serious injury on the road is unacceptable. It recognises that there is no single factor that causes road crashes, therefore there is no single factor that will prevent road trauma. Vision Zero takes an integrated approach and considers that road safety education, road design and construction, vehicle design and law enforcement are all inter-related. Vision Zero requires thorough investigation into every crash that results in serious injury or fatality. These investigations must be carried out independently of any court of law or insurance consideration and must be carried out solely with the view of reducing death and injury.

Skid Training

Skid Training is one mandatory element of the licensing procedure in Sweden. A 4½ hour course is attended by every person before a driver's licence is granted. Eighteen years is the minimum age at which a person can hold a licence in Sweden. In practice, most young people do not receive a driving licence until they are between 19 and 20 years of age.

There are a number of Trafiksakerhets or Skid Centres in Sweden that are either privately or municipally owned. They are co-ordinated by the Transport Authority to ensure consistent presentations and outcomes. Each instructor teaches a class of 8 students using 4 cars. In-car activities are controlled by one-way radio broadcast and a remote control engine kill switch. A bitumen road circuit is used which contains a skid section covered by a plastic material that has the same frictional co-efficient as ice when it is kept wet. Sprinklers are used to wet the surface and are turned off as the participating car approaches the skid area. This allows clear vision during the skid sequence.

This training is orientated towards students experiencing a skid situation and its potential outcomes. The students are taught braking and energy concepts where the physics and dynamics of energy are thoroughly explained. They are also shown some crashed cars that have collided with and killed animals such as moose, wild boar and deer etc. The preserved bodies of these unfortunate animals are also displayed. These courses would serve to warn drivers to slow down where skids are likely but would do little to identify such danger areas or deal with a skid situation should it occur.

It is interesting to observe that many of my Australian road safety colleagues who speak against the concept of skid training often quote Sweden as being in the forefront of Road Safety, but omit any reference to skid training in that country. Perhaps we need to look to a third country, Canada, where I witnessed a skid training technique that would be very unlikely to psychologically stimulate the typical young " hoon" or be too challenging for the timid or over-cautious driver.

Vision in Vehicles Conference, Dublin, Ireland, July 2006

This conference, at which over 30 papers were presented, was the eleventh in a series of biennial meetings to foster research into the role of vision in the use of all vehicles across the transport sector. The presenters came from throughout the world, some from university research departments and some from vehicle manufacturers. I had been invited to present a paper and conduct a workshop on young drivers involved in motor vehicle crashes. In this paper I presented Roadcraft's history, educational philosophy and some of our teaching/learning techniques.