With the close of the first quarter of 2013 fast approaching, it is timely that this issue of the Big Impact profiles topics likely to be on the road safety agendas both in Australia and beyond this year namely, enhancing the safety of young novice and older drivers. Much of the Centre’s research has focused on elements of novice driver research and more recent research, led by Associate Professor Judith Charlton, has proposed opportunities for regulating older driver licensing. However, the research highlighted in this issue identifies an important element of safety for these vulnerable driving populations, namely vehicle choice.

There is much evidence highlighting the road safety gains delivered by vehicle safety and the significant opportunities in road safety by increasing the overall safety of the vehicle fleet. Clearly, the opportunity is greatest among the sub-populations of motorists at greatest risk of injury namely, novice and older drivers. As highlighted in the research by Associate Professor Stuart Newstead and his team, there is the potential to reduce the number of serious injuries and fatalities if the vehicle choices of young drivers trended towards vehicles with high crashworthiness ratings.

Similarly, the research also found “poor crashworthiness” in car choice was particularly evident in the 75+ age group. These findings point to a need for social marketing that influences consumers and their vehicle choice with a range of innovative approaches needed if we are to successfully influence the novice and older drivers vehicle choice.

I urge you to visit our website (www.monash.edu.au/miri/research/research-areas/transport-safety/) to review the broad range of research we are (or have) undertaking and to approach our staff if you require information on any aspect of our work.

Professor Mark Stevenson
Director, MUARC

Below are a sample of recent MUARC publications.


Keall, M., Newstead, S.V., 2013, The potential effectiveness of young driver high-performance vehicle restrictions as used in Australia, Accident Analysis and Prevention [P], vol 52, Elsevier Ltd, United Kingdom, pp 154-161.


Young, K.L., Salmon, P.M., Lenne, M.G., 2013, At the cross roads: an on-road examination of driving errors at intersections, Accident Analysis and Prevention [P], vol e, Elsevier Ltd, United Kingdom, pp 1-9.
Keeping our novice drivers safe

Novice drivers, who are generally in their late teens and early 20s, are over-represented amongst those killed or injured in traffic accidents. When accidents involving novice drivers occur – and particularly when they involve multiple injuries and deaths of young people – there is much debate about what can be done to reduce the risk of road fatalities amongst our youngest and most inexperienced drivers. While the debate generally covers factors such as driver training, speed, alcohol and drug use, distracted driving, very rarely does it look at getting novice drivers into safer cars.

In 2009, the Monash University Accident Research Centre, conducted a study into car choices amongst novice drivers.

Australian research estimates that if all young drivers killed or seriously injured in crashes over the past five years had been driving the safest vehicle of the same age and general price range as the one they were driving when they crashed, more than 500 young deaths and serious injuries could have been prevented each year. This is a reduction of deaths and serious injuries of more than 60 per cent.

The crash profile of novice drivers differs from that of experienced drivers – with younger drivers over-represented in night-time and single-vehicle crashes.

The MUARC study found that it is possible to reduce the number of serious injuries and fatalities if the vehicle choices of young drivers trended towards vehicles with high crashworthiness ratings.

Importantly the analysis found that there is only a small difference in price between the most crashworthy vehicle manufactured in a particular year and the prices of models manufactured in the same year that are popular with young drivers.

According to Associate Professor Stuart Newstead, Director of MUARC’s Injury Analysis and Data team, too often a novice driver “inherits” the car that is no longer wanted or needed by older members of the family.

The recent MUARC study of older driver vehicle choice revealed that many older drivers “downsize” to smaller, cheaper and less crashworthy cars. “These cars are then passed onto the novice driver in the family, essentially passing a car that is less likely to withstand an accident into the hands of an inexperienced driver,” Newstead said.

“It’s more likely that a novice driver gets a cheap car (because that is what he/she can afford or because it is considered a poor investment to provide a more expensive car to a driver that is more likely to crash/damage the car) as their first car. This is a mistake. Why wouldn’t you spend more on keeping your novice driver safe particularly knowing how much more likely they are to crash.”

In response to the MUARC research findings the Victorian Road Safety Partners developed a First Car List, based on the Used Car Safety Ratings developed by MUARC researchers. The List was been specifically prepared for young people who are buying their first car. It includes small, medium and large sized used cars with either four or five star safety ratings ranging in cost from as little as $2,000 up to around $14,000. The Road Safety Partners are currently working on an updated online version of the list that integrates into commonly used vehicle sales web sites.

www.monash.edu/miri/muarc
The importance of vehicle choice in keeping older drivers safer

With an aging global population there will be a trend towards increasing numbers of older drivers who want to continue driving into the 70s and 80s. Keeping older drivers and those that drive and use the roads with them safe through safer vehicle choices was the focus of a report released late last year by the Monash University Accident and Research Centre (MUARC) titled "The potential crash and injury reduction benefits of safer vehicle choices for older drivers in Australia and New Zealand".

The study found that making sure older drivers choose safer cars – rather than cheaper or smaller cars which is the current trend – can cut serious injury by up to 90%.

Choice of vehicle is a major contributor amongst older drivers to their higher rates of death and serious injury in road crashes, according to the OECD. This latest MUARC study looked at how older driver vehicle choice impacts on injury outcomes in crashes. The study (which used data from Police-reported crashes in Australia and New Zealand involving drivers aged 65 years or above) also aimed to quantify the potential reductions in older driver road trauma that could be achieved through safer vehicle choices.

The study found that older drivers are more likely to be injured in a crash and the injury was more likely to be serious. According to MUARC’s Associate Professor Stuart Newstead these injuries are often serious because older people are less physically resilient than younger people. “The accidents older people are involved in are not necessarily more serious, but the impacts of these accidents are. A broken hip in a young person is far less serious – for instance – than a broken hip in a person over 65,” he said.

Contributing to this higher injury rate – the study found – was the vehicle type chosen by the older driver. The study found that vehicle involved in older driver crashes tended to be less crashworthy than vehicles chosen by younger drivers (35-54). This “poor crashworthiness” in car choice was particularly evident in the 75+ age group.

According to Newstead, older drivers tend to “downsize” their cars after retirement. These cars are smaller and cheaper than what the driver has usually bought; are either bought new or only a few years old and are retained for long periods, essentially until the driver no longer wishes to or can drive any more.

The study found that putting older drivers in safer cars can reduce the serious injury and death rate by up to 90% - if cost of car is not a factor. However, when limited to popular (ie affordable) cars made since 2000 – it is possible to reduce injury and death rates by 37%.

Newstead argues that road safety organisations should develop campaigns targeting older drivers encouraging them to look at safety ratings of cars when purchasing a vehicle “they may have for many, many years.”

“We have so many campaigns aimed at younger drivers yet we let older drivers drive in essentially unsafe vehicles because we haven’t alerted them or their families to the benefits of driving a safer car. It may be self evident but this study shows this is not yet happening.”
The Importance of the Graduated Licensing System

The aim of graduated licensing systems is to moderate the effect of risk-taking and inexperience and thereby reduce a young driver’s risk of crashing, as well as the risk of trauma to their passengers and associated road users. Graduated licensing can be described as a process in which novice drivers begin their driving careers with significant restrictions that are removed in stages depending on driving experience or successful test results.

An elementary version of the system exists in all Australian states and territories. Learners are required to drive only under the supervision of an experienced driver, and probationary/provisional drivers have significant restrictions placed on blood alcohol content and, in some states, maximum speed, carriage of peer passengers and the use of mobile phones.

Integral to the effectiveness of the system are late-night driving and peer passenger restrictions during the early probationary period of licensing. To date, only three Australian jurisdictions (including Victoria) have incorporated peer passenger restrictions into the system and no jurisdiction has introduced night-driving restrictions.

The systems that include the late-night and peer passenger restrictions have led to significant reductions in fatal and injurious crashes for young drivers.

In New Zealand, where the licensing system has included these restrictions, reductions of between 7 and 23 per cent in serious injury have been observed. Importantly, evaluations of graduated licensing systems that include late-night driving restrictions have shown crash reductions of up to 60 per cent during the restricted hours.

Proponents of late-night and peer passenger restrictions in Australia have met with a number of objections.

Law enforcement officials believe the restrictions would be difficult to enforce, politicians perceive a potential backlash from constituents, and young drivers – particularly those from rural areas – believe the restrictions would place an undue burden on them given the absence of alternative transport.

According to Professor Mark Stevenson, Director of MUARC, “despite these concerns, research in countries that have implemented the restrictions have reported overwhelming support. Enforcement appears not to be an onerous task, with many parents playing a significant role in policing the restrictions,” he said.

“Additionally, reductions in road trauma attributable to the initiatives have led to politicians responsible for implementing comprehensive licensing systems enjoying additional support rather than retribution.”