

## **SPEED LIMITS AND ROAD SAFETY IN REGIONAL NSW**

**Organisation:** Vehicle Design and Research Pty Limited

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Hi Kieran

I would like to make a comment on recent media reports about the inquiry. I realise that submissions closed in July but hope you will allow me to share my extensive experience in this field.

Note that in 1998 I gave a presentation on speeding and road safety at a Staysafe conference at Parliament House and have been professionally involved in this field since then. I also gave a presentation on this topic to Staysafe in 2003. See <http://www.vdrsyt.com/mp/speed.html> for links to presentations and papers ("Alerts").

From 1996 to 2017 I provided consulting services to the Australasian New Car Assessment Program. I attended more than 300 crash tests, assessed the outcomes and assigned star rating for these crashed vehicles. This experience strongly confirmed that impact speed is the most important factor in the injury outcome of crashes and that setting appropriate speed limits, and encouraging motorists to stay within these speed limits, is key to reducing road trauma.

I also analysed vehicle model sales data and real-world crash outcomes and was able to estimate the potential savings in fatal and serious crashes due to improved vehicle safety. The results are set out in the attached graph, which I presented at a vehicle safety conference in Sweden in 2015. In brief, 5-star rated vehicles have half the serious-injury risk compared to vehicles rated 3 stars or less. It was not until 2010 that more than half of new car sales in Australia were 5-stars. As predicted, about 95% of new car sales are now 5-stars. This means that many second-hand cars being bought by young adults are now 5-star rated (it pleases me to see so many 5-star cars with red P-plates parked outside high schools).

My estimate is that fatal and serious injuries are now 33% lower than if the current fleet had the same crashworthiness as that in 2001. This huge improvement in vehicle safety has obviously contributed to the 58% reduction in young driver fatalities reported by Transport for NSW (along with increased use of speed cameras, 50km/h residential speed limits and improved (e.g. divided) roads. I am skeptical that the graduated licence scheme, and particularly novice driver speed limits, have made much of a contribution to this reduction. Let me explain...

Speed limits are based on a range of factors but a key one is sight distances - the distance ahead of the vehicle at which a hazard first becomes visible (but not necessarily seen by the driver). A primary aim is to give the driver time to detect and react to an unexpected hazard in order to avoid a collision or reduce the impact speed. While I appreciate that novice drivers may take longer to correctly respond to a hazard than "typical" drivers there are many other factors that cause these typical drivers to crash, such as speeding, fatigue or distraction.

I do have one caveat on allowing novice drivers to travel at the speed limit. That is the trend towards 110km/h speed limits on two-lane rural roads. I recently travelled more than 4000km on rural roads in NSW and South Australia and was horrified at the numerous instances of unsafe road conditions for that speed (I actually rarely exceeded 100km/h). There is a clear need for a rigorous assessment of these rural roads according to the iRAP and Austroads guidelines while avoiding political/populist pressures to set inappropriate speed limits. In my view 110km/h is not appropriate for many rural roads.

Incidentally, in 2011 I conducted an analysis of speeding and life expectancy for TfNSW. I showed that a 25 year old driver travelling at 110km/h in a 100km/h speed zone would save 6 minutes, at most, on a trip of 100km but the associated increased risk of death (43%) would reduce their life expectancy by 13 minutes. I can provide a summary of this analysis if you wish.

Finally, an issue that requires higher penalties and stronger enforcement is intimidation of drivers to attempt to get them to travel faster - particularly to exceed the speed limit. Tailgating is very distracting for the victim, more so with novice drivers.

Regards

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