

**LA TROBE UNIVERSITY'S SUBMISSION TO
THE ECONOMY AND INFRASTRUCTURE
STANDING COMMITTEE, PARLIAMENT OF
VICTORIA**

February 2020

Inquiry into the Increase in Victoria's Road
Toll

ENQUIRIES
Leon Morris
Chief of Staff
La Trobe University
Victoria 3086



latrobe.edu.au

INTRODUCTION

La Trobe welcomes the opportunity to respond to this Inquiry into the increase in Victoria's road toll, particularly the need for different approaches in regional and metropolitan areas¹ given the higher rates of fatalities in country Victoria.

La Trobe is a State-wide university covering central and north-eastern Victoria with campuses at Albury-Wodonga, Bendigo, Mildura and Shepparton. Our Melbourne campus is in Bundoora, part of Melbourne's rapidly growing north, and we also have campuses in Melbourne city and Sydney. This multi-campus network differentiates La Trobe from other universities. Our footprint includes a wide range of communities and socio-economic groups, making us one of the largest higher education providers in regional Victoria. Throughout the years, we have established extensive connections with regional leaders and communities across Victoria. We take great pride in the research expertise we bring to solving the challenges faced by the communities we serve.

It is clear that current approaches have not been as successful as every Victorian would hope. La Trobe submits that the increase in Victoria's road toll, particularly the disproportionate percentage of deaths in country Victoria, requires a multi-faceted interdisciplinary approach tailored for the different needs and circumstances of regional and metropolitan areas.

La Trobe proposes the establishment of a Rural Road Trauma Research Hub that would focus on the holistic elements that are leading to, and could prevent, rural road trauma. La Trobe's Bendigo campus, with its wide-ranging research expertise and close community connections would be the ideal place for the location of this research hub. Strengthening the research profile of Victoria's regionally-based universities is also in line with the State Government's vision to develop Victoria as a globally competitive destination for higher education and research².

This submission will focus on three key issues:

- The need to adopt different approaches for regional and metropolitan Victoria
- The need for a cross-disciplinary approach and the involvement of regional communities
- La Trobe's proposal to develop a Rural Road Trauma Research Hub at its regional campus in Bendigo.

La Trobe looks forward to working with the Committee towards finding strategies for reducing the road toll across Victoria towards zero.

¹ 'Rising Victorian road toll to be investigated', Media Release, 20 November 2019

² Victorian Government, International Education Strategy, 2016
(https://www.business.vic.gov.au/__data/assets/pdf_file/0010/1275499/International-Education-Strategy-web-version-20160308.PDF)

A. KEY ISSUES FOR THE INQUIRY

1. The new Road Safety Strategy needs to adopt different approaches for regional and metropolitan Victoria

The current 'Towards Zero' strategy acknowledges that a disproportionate number of fatalities are occurring in country Victoria. As shown in Figure 1, on a population basis, the risk of fatalities in country Victoria is about four times that of Metro Melbourne. Sadly, this continues to be the yearly trend. In 2019 alone, there was a 37% increase in the number of deaths in rural Victoria when compared to 2018³.

Figure 1: Metro Melbourne versus Country Victoria [Source: Vic Roads (2015)]

Metro Melbourne versus Country Victoria

Figure 3 shows (a) fatalities and (b) fatalities per 100 million VKT for Metro Melbourne and Country Victoria. In 2015, there continues to be approximately 1.2 times as many fatalities in Country Victoria. This is a particular concern as the total number of vehicle kilometres travelled in Country Victoria is 40% higher than the kilometres travelled in Metro Melbourne (not shown), making the risk of a fatality about twice as high for Country Victoria road users for every vehicle kilometre travelled. On a population basis, the risk of fatalities in country Victoria is about four times that of Metro Melbourne. Two out of three deaths on country roads involve country people.

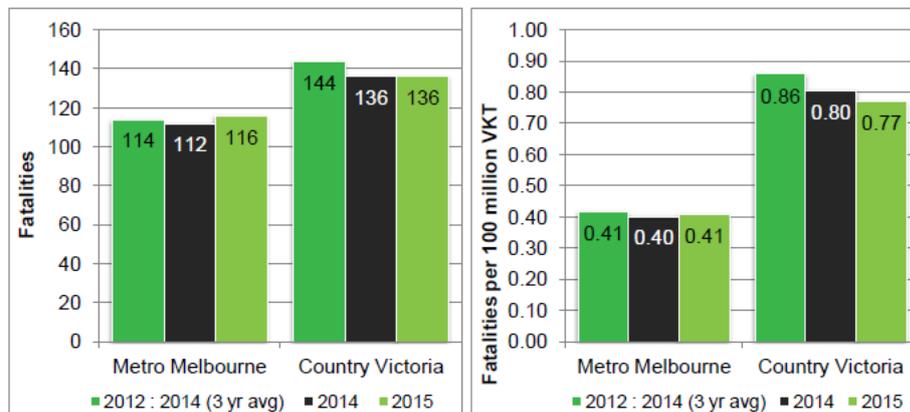


Figure 3: (a) Fatalities and (b) Fatalities per 100 million VKT in Metro Melbourne and Country Victoria (3 year average 2012 to 2014, and totals for 2014 and 2015)

The 'Towards Zero' strategy primarily makes a pledge to make rural roads safer. Similarly, the National Road Safety Strategy highlights the need to prioritise improving high-risk rural roads where deaths continue to occur at two or three times the national average.

Any improvement to roads which leads to fewer accidents is welcomed. However, an infrastructure-based approach must be complemented with a more holistic approach to identify and understand the reasons that are leading to a higher rate of deaths in regional and rural Victoria. Research is needed to unearth the underlying reasons for the disproportionate rural road trauma in order to devise tailor-made strategies.

Research focus areas could include the profile of the drivers, the victims and the vehicles involved in the accidents. This should lead to further insight into the over-representation of young males and older people, and the extent to which suicide is a factor in rural road trauma. Further investigations could include behavioural changes such as how public transport can be made more appealing for

³ Source: Transport Accident Commission, Statistics, Lives Lost- Annual (<http://www.tac.vic.gov.au/road-safety/statistics/lives-lost-annual>)

regional users and how to target inter-generational behaviour change through school-based programs aimed at influencing the attitudes and behaviour of young road users.

Recommendations

- Complement the current infrastructure-based approach with a more holistic approach to identify and understand the broader reasons that are leading to higher fatalities in regional Victoria
- Commission cross-disciplinary research (see 2. below) to unearth the underlying reasons for the disproportionate rural road trauma
- Use this research to develop and adopt separate, tailor-made strategies for reducing regional and metropolitan fatalities

2. Adopt a cross-disciplinary approach and involve regional communities in research and strategy design

Road trauma is largely attributable to three complex overlapping categories of factors: human, environmental, and vehicle⁴. There are clear patterns of riskier behaviour from drivers in rural and remote areas compared to those in metropolitan areas, including not wearing a seatbelt, unlicensed driving, and alcohol intoxication⁵. These risks are often compounded by poor roads and higher speeds. Improvements in rural road safety in recent years have mostly come from engineering advances such as road and vehicle design⁶ and legislative changes including the mandatory use of seat belts, random breath testing⁷ and close monitoring of learner drivers⁸. Arguably, much of the groundwork for improving road safety from these approaches has already been completed.

However, as argued above, the causes and consequences of rural road trauma are complex and cannot be addressed by mono-disciplinary lines of research, making this fertile territory for collaborative, interdisciplinary research. By bringing together different areas of research such as (but not limited to) public health policy and research, psychology, allied health, law, engineering, education, urban and environmental planning and multimodal transport planning it may be possible to devise comprehensive strategies for improving road safety⁹ that might be more successful in a regional context.

According to the Australasian College of Rural Safety, one of the reasons interventions successfully adopted in metropolitan areas have not been effective in rural areas is the lack of community

⁴ In 1968, Dr William Haddon Jr, the first administrator of the US National Traffic Safety Agency and the National Highway Safety Agency defined the three phases of a crash event namely pre-crash, crash and post-crash and the trio of human, machine and environment factors that interact during each phase of a crash.

⁵ Bureau of Infrastructure Transport and Regional Economics, Impact of road trauma and measures to improve outcomes: Report 140. 2014, Department of Infrastructure and Regional Development: Canberra.

⁶ Turner, B., T. Makwasha, and P. Hiller, Original road safety research: Infrastructure treatments for managing speeds on rural and urban arterial roads [online]. *Journal of the Australasian College of Road Safety*, 2017. 28(2): p. 13-20.

Turner, B., C. Jurewicz, and T. Makwasha, What works when providing safe road infrastructure?: 10 treatments that need to be used more [online]. *Road & Transport Research: A Journal of Australian and New Zealand Research and Practice*, 2017. 26(3): p. 36-45.

⁷ Crozier, J., The social and economic cost of road related injury and death [online]. *Journal of the Australasian College of Road Safety*, 2015. 26(2): p. 53-59.

⁸ Scott-Parker, B. and K. Rune, Review of the graduated driver licensing programs in Australasia. *Journal of the Australasian College of Road Safety*, 2016. 27(4): p. 15.

⁹ Stevenson, M. and J. Thompson, On the road to prevention: road injury and health promotion. *Health Promotion Journal of Australia*, 2014. 25(1): p. 4-7.

involvement in their design¹⁰. In their work on bridging the gap between injury prevention research and community safety promotion practice, Hanson, D.W., et al. argue that working at the local level with rural communities is very important as it allows for ownership, identification and prioritisation of issues, and the development of place-based solutions¹¹. It is therefore critical that regional communities are involved in the research and design of future regional road safety strategies.

Recommendations

- Adopt a cross-disciplinary approach to reducing rural road trauma
- Ensure regional communities are involved in both the research and design of the strategies

3. La Trobe's proposal for a rural road trauma research hub

La Trobe submits that the next wave of reform to reduce death and injury on our roads in regional Victoria must be guided by a campus-based rural road trauma research hub conducting cross-disciplinary and translational research into rural road trauma prevention and intervention.

The aims of the proposed hub would be:

- to identify local road safety issues and needs that are resistant to available measures aimed at improving safety on rural roads. These will span, but are not limited to engineering, public health, health sciences, psychology, pharmacy, education, nursing and law;
- to change attitudes, behaviours and social norms around road safety in rural communities, and create shared ownership of solutions; and
- to empower rural communities to inform the agenda for change in their community.

La Trobe's Bendigo campus, with its wide-ranging, already-available inter-disciplinary research expertise and close community connections would be the ideal place for the location of such a hub. Strategically located in the geographic centre of Victoria, the Bendigo campus is perfectly positioned socially and intellectually for a range of partnerships with a range of health, education and government partners to show national and international leadership on tackling this problem that is disproportionately impacting on rural and regional communities around the world.

Also located on the Bendigo campus is Australia's largest rural health school, the [La Trobe Rural Health School](#) (LRHS), which has an outstanding rural health research profile supporting research on and with rural communities across aspects of health, wellbeing and access to services.

While the proposed research hub would be located on the Bendigo campus, it is proposed that a multidisciplinary approach to road trauma research will include cross-campus partnerships. This will allow us to tap into the expertise and networks of our main campus in Bundoora (which hosts extensive and highly relevant expertise such as the [Centre for Alcohol Policy Research](#)) and our network of regional Victorian campuses in Albury-Wodonga, Mildura and Shepparton. La Trobe's regional campuses form an integral part of their communities and will be instrumental in ensuring rural road trauma issues being considered and addressed by the Research Hub are relevant to each local area. Similarly, La Trobe's extensive regional experience would underpin engagement with rural communities across Victoria, with the engagement being led by researchers based in Bendigo.

¹⁰ Australasian College of Road Safety. Rural and Remote Road Safety 2012 [cited 2018 22 June]; Available from: http://acrs.org.au/wp-content/uploads/ACRS_Rural-Remote-Road-Safety1.pdf.

¹¹ Hanson, D.W., et al., Closing the Gap between Injury Prevention Research and Community Safety Promotion Practice: Revisiting the Public Health Model. Public Health Reports, 2012. 127(2): p. 147-155.

Recommendation

- Provide support for the establishment of a Rural Road Trauma Research Hub (RRTH) at the Bendigo campus of La Trobe University

Annex 1: Fields of research that could be developed from within existing discipline bases located on the La Trobe Bendigo campus include, but are not limited to:

Engineering – road, pavement, infrastructure, and vehicle design to improve safety and mitigate risk attached to driving on rural roads; intelligent transport systems, connected and automated vehicle technology, and other new technologies to improve road safety; safety performance measures and monitoring.

Health Sciences - all stages of care, from acute transport and advanced life-support (paramedicine) to acute (intensive care), sub-acute care (nursing) and long-term rehabilitation and community re-integration (physiotherapy, occupational therapy, speech pathology, social work, psychology, exercise physiology, public health, rehabilitation counselling, dentistry, pharmacy).

Examples of complex issues requiring interdisciplinary research programs include return to work, mental health, family support systems, drug and alcohol counselling, housing, public transport access, return to driving, chronic pain management, fatigue, etc.

Law & Criminology- evidence-based legislation to improve road safety; driver compliance with legislative requirements; evidence-based policing; evidence-based road laws, including speed limits; developing approaches to managing unlicensed driving/recidivist driving offenders; evidence-based sentencing policy for driving offences and crime and justice-related research and policy.

Education & Teaching- role of school-based programs (primary and secondary) in influencing attitudes and behaviours of young road users; efficacy of targeted driver education programs for at-risk groups (e.g., older drivers, inexperienced drivers, repeat drink-drivers).

Psychology – factors that influence driver attitudes, skills, and behaviour; assessing and managing neuropsychological consequences of acquired brain injury; counselling (individual and family); alcohol and other substance addictions; role of age in judgement/reaction times and return to driving; grief and loss; managing post-traumatic fatigue; post-traumatic stress disorder; behaviour management and social skills training.

Pharmacy – impact of prescription and illicit drugs on driving performance; role of polypharmacy in road trauma; improved detection of licit and illicit substances in road-side testing.

Planning –urban rural and environmental planning including policy planning, design and transport systems. Multimodal transport planning for regional and rural towns to promote sustainable and safe travel.

Science – forensic analysis of crash scenes.

Business (includes marketing and sports management) - road safety messaging, marketing of road safety programs, working with existing sports partners (e.g. AFL, Academies of Sport etc) targeting at risk groups with road safety messages and access to at risk groups (particularly 18-25-year olds).

IT- (including cybersecurity and digital research) – management of big data with a strong focus on industry-linked projects. Secondary analysis of hospital data, TAC data; community level technology-based interventions, mobile applications and computer systems for road safety analysis.