

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

**Organisation:** School of Health Sciences, University of Sydney

**Date Received:** 8 July 2022

## **Submission to the Parliament of New South Wales Joint Standing Committee on Road Safety (Staysafe)**

Terms of Reference - Speed limits and road safety in regional New South Wales, with reference to:

- a) The impact of speed limits and travel times on driver behaviour and safety
- b) The impact of improved vehicle technology and road infrastructure
- c) The use of variable speed limits
- d) Any other related matters.

This submission is written by Dr Joan M. O'Donnell with contributions from Dr Beth Cheal and Ms Kate Kirkness. Dr O'Donnell is a part-time lecturer in Occupational Therapy in the School of Health Sciences, Faculty of Medicine and Health at The University of Sydney. Dr O'Donnell also works in clinical practice as an Occupational Therapy Driver Assessor (OTDA) and conducts research in the field of assessment of drivers with medical conditions (O'Donnell et al 2013, O'Donnell et al 2019). Dr Cheal completed her PhD in Occupational Therapy at The University of Sydney in the field of cognitive assessment of fitness to drive and is a practicing OTDA clinician and educator in driver rehabilitation and vehicle modifications. Ms Kirkness is a highly experienced OTDA who provides services in the New England region of NSW.

Dr O'Donnell is grateful for the opportunity to contribute to this StaySafe enquiry into speed limits on regional roads. Dr O'Donnell has experience as a researcher and tertiary educator on fitness to drive, which considers drivers' competency, capacity, lifestyle/needs and their driving environment. There are several issues that need to be raised in considering the safety of all road-users, and some aspects are unique for driving on regional roads. It is important to consider road design for varying vehicle types and metrics, however driver capacity is equally important, especially with an aging population and changes in vehicle technology. Below are some points that we believe need to be considered, in accordance with the Terms of Reference.

**Terms of Reference:**

**a) The impact of speed limits and travel times on driver behaviour and safety**

| Issue   | Consideration  |
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| Minimum driver competencies and drivers with medical conditions         | A set of core competencies are checked when a driver undergoes an on-road test with an accredited examiner, at the initial and post-turning 85 years of age driving tests. The core competencies set out the minimally acceptable level of knowledge, skill and ability to safely perform the task of driving. It is assumed that these competencies are maintained throughout the intervening years. However, driving abilities fluctuate due to many life circumstances (e.g., non-driving periods because of overseas travel, prolonged illness, loss/suspension of drivers' licence etc.). Speed limits need to be determined according to the minimum competency to enable drivers with medical conditions and age-related changes to continue to drive for as long possible.   |
| Insight into driving behaviours, and awareness of own driving abilities | Driver rage and volatile behaviours can be exacerbated with frustration from speed limits that the driver considers to be too restrictive. Extended periods of driving lead to fatigue which may cause irritability and erratic behaviours even if driving periods are in 2 hour periods. These issues are more pronounced on regional roads due to the increased distances people in rural areas often need to travel. Insight and behaviour management strategies needs to be screened particularly for drivers who are required to drive for long distances eg truck drivers. Insight into a person's own abilities and their risk-taking behaviours should be taken into account and assessed when determining if their fitness to drive (Cheal et al 2019, Johnston et al 2020) |
| Familiarity of driving environment vs novice                            | When determining speed limits on regional roads, consideration needs to be given to the local drivers who are familiar with the conditions and drivers who have no experience on the regional road. The minimum competency expectation needs to be applied, that is the minimally  |

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|  | acceptable level of knowledge, skill and ability to safely perform the task of driving on any section of a rural road.  |
| Too slow, inability to pass  | Drivers who proceed excessively slow in relation to the stated speed limit can cause frustration to driver unable to overtake the slow vehicle. This is especially pronounced on regional roads, where opportunities to overtake vehicles safely can be infrequent or unsafe due to the condition of the road or poor visibility.   |
| Intimidation of large heavy vehicles, impatience of other drivers      | Heavy vehicles driving can create trepidation for drivers of small cars if approaching from behind rapidly, or if following behind the car very closely especially at high speed. Additionally, car drivers may lack an understanding of the challenges/constraints faced by heavy vehicle drivers, increasing accident risk (e.g., a small vehicle pulling in front of a heavy vehicle driver travelling at speed with insufficient time to brake safely, or a small vehicle travelling too closely behind a heavy vehicle negotiating a steep hill ascent or descent).  |
| Decline in speed of movement and information processing                | As drivers age, there is a decline in their reaction time and speed of information processing. Insight into this change is imperative for safe driving, especially when driving on regional roads where speed limits are higher than on urban roads. Older drivers experiencing a reduction in speed of information processing may require increased time to safely process information which may not be available to them when travelling at speed. Older driver's experiencing information processing speed issues may be observed to drive well below the recommended speed limit to compensate for slower information processing. |
| Conflict of interest, fear of impact and loss of rapport – country GPs | Physicians are ultimately responsible for determining fitness to drive but report concern about damaging the patient relationship and losing a customer if they withdraw driving. Within regional areas there are older people who live within larger centres who are able to access home delivery services and local shops and services by walking, using scooters, taxi's, local bus services   |

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|  | <p>or community transport providers. There are however many people who live several kilometres out of town who are required to access the major regional centres on roads with 80-100km speed zones. Rural drivers may report a greater dependence on driving as driving a personal motor vehicle is often the only cost effective, practical and readily available means of transport to and from the closest regional centre to access essential services. People in rural areas are also often required to use vehicles such as utility vehicles ('utes') to assist with the transportation of agricultural supplies (i.e. animal feed). This further compounds the issue for GPs assessing fitness to drive as licence cessation places this population at further risk of isolation.</p> |
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**b) The impact of improved vehicle technology and road infrastructure**

| Issue  | Consideration  |
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| Training of advanced vehicle technology  | A study is underway examining the effectiveness of training in advanced vehicle technology for older drivers. It is a collaboration with The University of NSW, The George Institute of Global Health, Western Sydney University and The University of Sydney. |
| Demands of varying regions and roads e.g. windy/hilly vs flat and straight, weather impact, sealed or non-sealed roads, narrow roads, presence of livestock/animals on or near the roads, causeways/cattle grids etc | Consideration needs to be made of the driver's familiarity of their local environment, as well as drivers who are unfamiliar to the conditions.  |

**c) The use of variable speed limits**

| Issue   | Consideration  |
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| Recommended speed around corners relies on drivers with non-risk behaviours | The speed limit sign states a speed to which the driver must adhere, but recommended speed for corner signs allow the driver to have a choice. A study is needed to determine the effectiveness of recommended speed signs and the predictors of drivers who do not comply with them and cause a crash. Factors such as competency, underlying medical conditions and behavioural insight may be identified. |
| Varying times for school zones  | Confusion if different for some schools and the expectation of drivers knowing school attendance times and dates. This is often difficult for older drivers who may not have   |

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|            | an interest in or knowledge of school holidays or the actual date/day of the week.  |
| Road works | Often it is not clear if a road-works zone has ended if it is particularly long (typically on regional roads) and the required speed is not regularly sign-posted |

**d) Any other related matters.**

There is a lack of referral pathways and services for fitness to drive assessments and driver rehabilitation in rural areas, which impacts on the safety of rural communities.

There have been conflicting instructions between Services NSW and the Licence Review Unit of TfNSW to drivers about their requirements to attain or retain their drivers' licence, especially for older-age drivers and drivers with a disability or medical condition (de-identified case studies can be provided on request).

Dr Joan M. O'Donnell PhD

Registered Occupational Therapist [REDACTED] and Occupational Therapy Driver Assessor Registration [REDACTED]

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