

Rural & remote road safety

- Less than one third of the Australian population lives in regional and remote areas¹, but nearly two thirds of all fatal road crashes occur on rural and remote roads².
- Despite this, the rural and remote road safety problem has received limited attention.

State of the Road A Fact Sheet of the Centre for Accident Research & Road Safety - Queensland (CARRS-Q)

THE FACTS

This Fact Sheet complements CARRS-Q's *Indigenous Road Safety Fact Sheet*.

- Defining where 'urban' areas end and 'rural' areas begin is complex. The Australian Bureau of Statistics (ABS) uses a geographic classification system for locations based on distances from major population centres¹. Broadly, 'rural' can be considered as those areas with a low population density and without ready access to a major hospital.
- Until recently it has been difficult to compare crash data for rural areas from different studies and states. The Bureau of Infrastructure Transport and Regional Economics (BITRE) recently analysed fatal crashes for the period 2008 to 2014 by regional remoteness providing a uniform method of classification across different jurisdictions and an alignment between hospital and medical classifications.

Fatal crashes and injuries

- Rural road crashes contribute substantially to the overall road toll in Australia, accounting for 65% of all fatal road crashes in 2014² (See Figure 1).
- In 2014, there were 690 fatal crashes in regional and remote areas².
- The BITRE analysis of fatal crashes by remoteness for 2008 to 2014² (see Figure 1) indicate that national fatal crashes have reduced by 19.8% but with the smallest reductions in remote regions.
- The road crash fatality rate per population is over three times in rural areas than in major cities. For young men aged 20-24 years it is nearly four times higher³.
- Indigenous Australians, the majority of whom live outside major cities, are three

times more likely to be killed in a road crash and significantly more likely to be injured as passengers or pedestrians⁴. Road crashes accounted for 26% of all fatal external injury causes among Indigenous Australians between 2005 and 2010⁵.

The risk of sustaining a road crash injury increases with the degree of remoteness.

- The rate of serious road-related injury among residents in rural areas is nearly twice that of those in major cities⁶.
- Rates of life-threatening road injury increased from 2001 to 2010 and the increases were greater in remote areas (average annual increase of 3.7%) than in either major cities or outer regional areas⁷.

- In 2013, just over 11,000 people in regional and remote Australia were hospitalised for injuries sustained in crashes, accounting for 32% of all hospitalised injuries nationwide².
- Many fatal and serious injury crashes in rural and remote areas are not recorded in official road crash data, including crashes on public land and private property, where rates of seatbelt and helmet use are low compared with public roads. High proportions of public land and private property crashes involve motorcycles and quad bikes⁸.

Characteristics of rural road crashes

- Most casualty crashes occur during daylight hours, particularly between 2pm and 6pm. More occur on a Saturday or Sunday than other days of the week⁹.
- Higher travel speeds results in a greater risk of fatality or serious injury in the event of a crash.

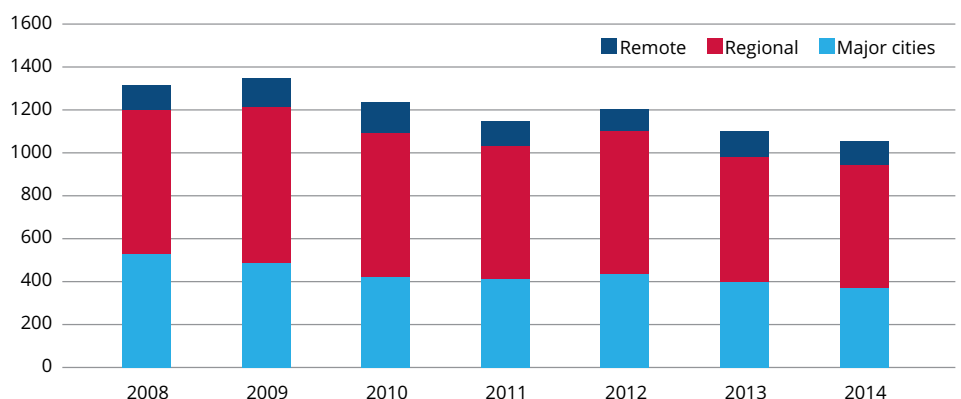


Figure 1: Fatal crashes by remoteness region (adapted from BITRE, 2015) Remoteness Regions were classified by BITRE as per Australian Statistical Geography Standard (ASGS) but here the five categories have been collapsed to three: Regional = Outer regional & Inner regional; Remote = Remote and Very remote

- Most rural crashes involve local residents, with only a very small proportion of crashes attributable to international or interstate visitors.
- Most rural crashes are single-vehicle crashes, particularly run-off-road crashes.

Factors consistently associated with rural road crashes.

Human factors

- **Alcohol:** The proportion of serious crashes involving alcohol has been found to increase with the level of remoteness⁹. Fatal crashes are approximately twice as likely to involve alcohol compared with serious but non-fatal crashes⁸.
- **Distraction:** A North Queensland study of hospitalised road users found that 30% of rural drivers reported being distracted prior to the crash⁸.
- **Fatigue:** Longer travel distances and associated driving time in rural areas lead to increased risk of fatigue¹⁰. Fatigue is estimated to be the primary contributing factor in 30% of fatal crashes on rural roads¹¹. The sparse roadside environment in rural and remote areas may also lead to a sense of 'monotony' and fatigue-like effects¹².
- **Seatbelt use:** Despite high levels of seatbelt use in the general community, the non-use of restraints has been found to increase with remoteness, from 2.6% in major cities to 13% in very remote areas. This is a substantial contributor to increased severity⁸.
- **Speed:** While exceeding the speed limit is often cited as a cause of crashes, inappropriate speed for the road

conditions is also frequently reported. Excessive speed can lead to a crash even when driving within the speed limit, while higher speeds are also generally associated with increased crash severity¹³.

- **Age:** Young drivers 17-24 years are at an elevated level of crash risk generally, but male drivers and riders aged 30-50 years make up the majority of serious rural road crash casualties. Rural bravado, e.g. "being a hero" amongst young males has been found in some research¹⁴.

Environmental factors

- **Travel distances:** Greater travel distances and time spent driving result in increased exposure and therefore higher crash risk. Distance from population centres can also compromise emergency service response times and access to medical treatment.
- **Road conditions:** Lower quality road conditions (e.g. narrow shoulder, unsealed surface) and variability of conditions interact with other issues such as inappropriate speeds.
- **Higher speed limits:** Rural and remote roads in Australia have high default speed limits (100km/hour in most jurisdictions) and it has been found that the proportion of crashes in higher speed zones increases with remoteness⁹.
- **Unsealed roads:** From 2005 to December 2014, 2.8% of crashes in Queensland occurred in unsealed roads. Crashes on unsealed roads were more severe, with almost double the rate of fatalities compared to those on sealed roads.

- **Unique hazards and unpredictability:** Wildlife and livestock often appear on roads without warning, while farm and mining vehicles movements may also be unpredictable. Research has found driving on unfamiliar roads to be associated with higher crash risk⁸.

Vehicle factors

- Research suggests that inexperience with a particular vehicle type is related to higher crash risk.

CARRS-Q'S WORK IN THIS AREA

- Development of a drink driving program for regional and remote Aboriginal and Torres Strait Islander communities.
- Identifying strategies to improve road safety for rural and remote populations through an increased understanding of crash causation and the role of culture and remoteness.
- National protocol for the development and delivery of Indigenous road safety programs.
- Examining the contribution of road surface defects to motorcycle crashes on rural roads.
- Exploring the possible contribution of prescribed drugs to road deaths in rural and remote Queensland: a coroner's report study.
- Investigating differences in Random Breath Testing effectiveness and drink driving factors between rural and urban areas. Findings suggest the need for targeted interventions in rural areas.
- Examining quad bike related hospitalisations and emergency presentations across Australia.

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