



Hospitalised injury due to land transport crashes

All land transport crashes

What are land transport crashes?

Land transport crashes are unintentional crashes involving the types of transport that operate on land. This fact sheet focuses on two groups of non-fatal hospitalised cases where a person was injured in a land transport crash. The first group of cases, on-road crashes, usually happen on public roads and streets. The other group of cases, off-road crashes, occur entirely in any place other than a public road or street. For a third group of cases, it was not specified whether they were on-road crashes or had occurred off-road. In nearly two-thirds of this group of around 6,000 cases in 2014–15, the injured person was an animal rider or occupant of an animal-drawn vehicle (62%). While the third group is not a focus of this report, these cases are included in the total number of land transport injury cases.

Quick facts

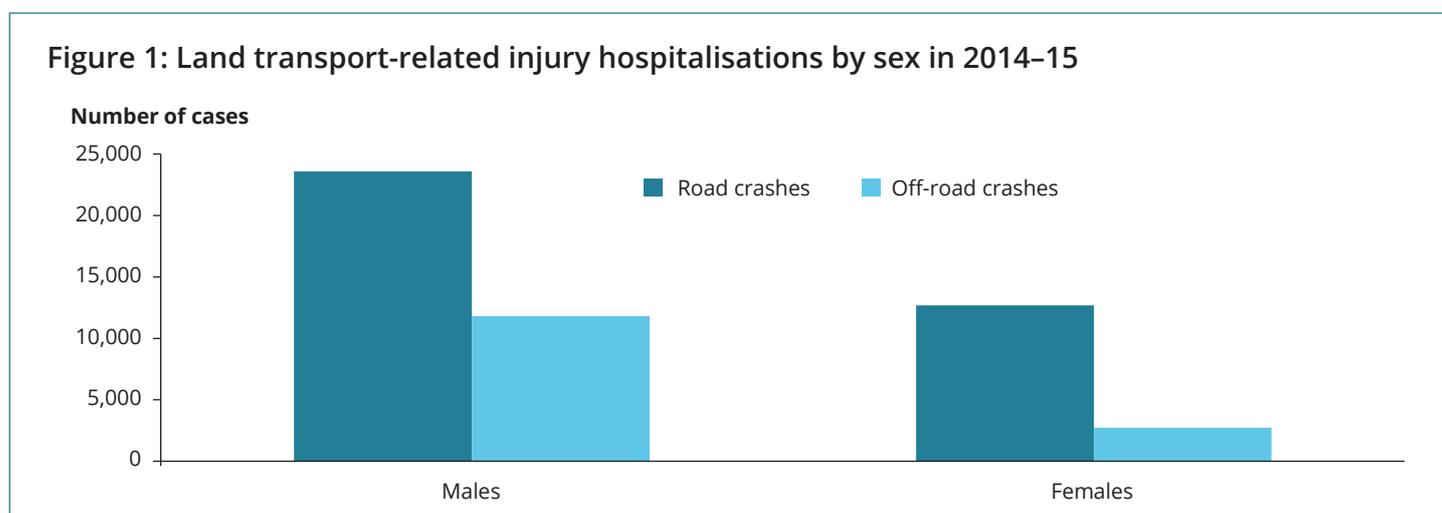
- In 2014–15 over 36,000 people were admitted to hospital due to non-fatal injuries sustained in road crashes.
- Over 14,000 people were hospitalised after being injured in off-road crashes.
- In addition, there were about 6,000 injury cases due to non-fatal land transport crashes where it was not specified whether the crash occurred on-road or off-road.
- Non-fatal male and female road crash cases were most likely to involve car occupants (rates of hospitalisation were 71 and 74 cases per 100,000 population, respectively).
- Males aged 15–24 had the highest rate of hospitalisation due to non-fatal road crashes (321 cases per 100,000 population).



How many people are hospitalised due to all land transport crashes?

In 2014–15, nearly 57,000 people were hospitalised as the result of injuries sustained in land transport crashes. This equates to an age-standardised rate of 242 cases per 100,000 population. Nearly two-thirds of these people were injured in on-road crashes and around one-quarter in off-road crashes.

A substantially higher number of cases involved males than females for both on-road crashes and off-road crashes (Figure 1).



On-road crashes

How many people were hospitalised due to on-road crashes?

In 2014–15, over 36,000 people were hospitalised as the result of being non-fatally injured in road crashes. This equated to age-standardised rates of 201 and 106 cases per 100,000 population for males and females, respectively.

Who is hospitalised as a result of on-road crashes?

In nearly two-thirds of non-fatal hospitalised injury cases due to on-road crashes, the injured person was a male. In all but the youngest age group, males were considerably more likely than females to be hospitalised due to a road crash (Figure 2).

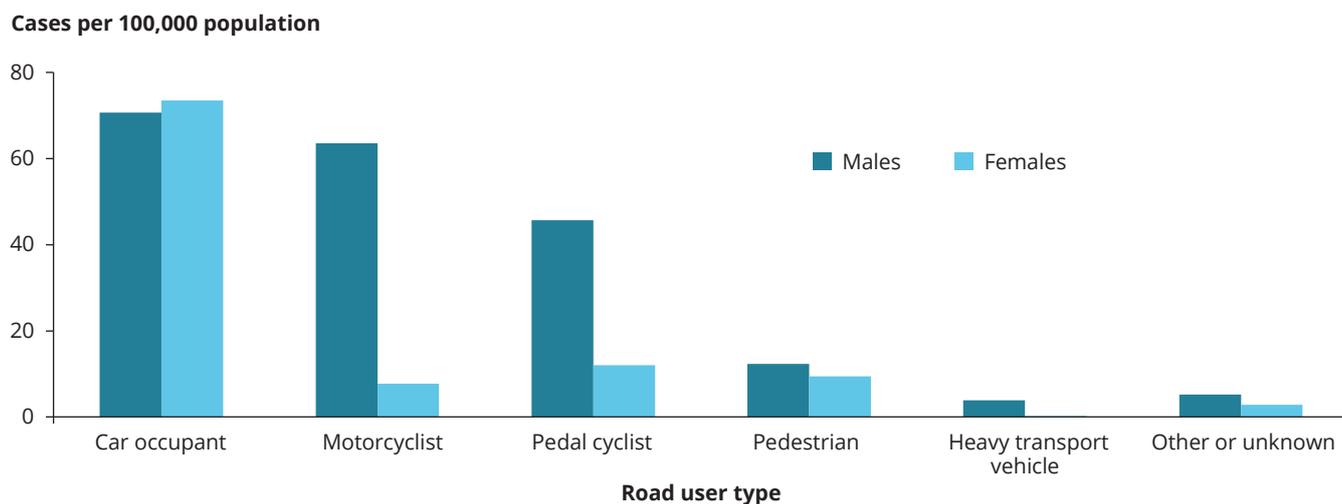
The highest age-specific rate for being hospitalised as the result of a road crash was for males aged 15–24 (321 cases per 100,000 population). Children under 5 had the lowest rates of hospitalisation (21 cases per 100,000 for both boys and girls (Figure 2).



What type of road user was involved?

Males and females hospitalised because of injury in a road crash were most likely to have been injured while in a car (age-standardised rates of 71 and 74 cases per 100,000 population, respectively). Road injury while motorcycling or pedal cycling was much more common for males than for females. Age-standardised rates for motorcycling for males and females were 64 and 8 cases per 100,000, respectively. For pedal cycling they were 46 and 12 per 100,000, respectively (Figure 3).

Figure 3: Age-standardised rates for hospitalised cases of on-road crashes by sex and road user type in 2014–15



What were the main body regions injured?

Overall, the most frequently injured body regions were the trunk (26%) and shoulder and upper arm (25%). Head injuries were also common (19%) (Figure 4). The major body region injured varied according to the type of road user. For example, head injuries were substantially more common among injured pedestrians than among other types of road user. Injuries to the neck or trunk were more prominent among car occupants, and injuries to the shoulder and upper limb were most prominent among pedal cyclists (Figure 5).

Figure 4: Hospitalised cases of on-road crash-related injury by main body region affected in 2014–15

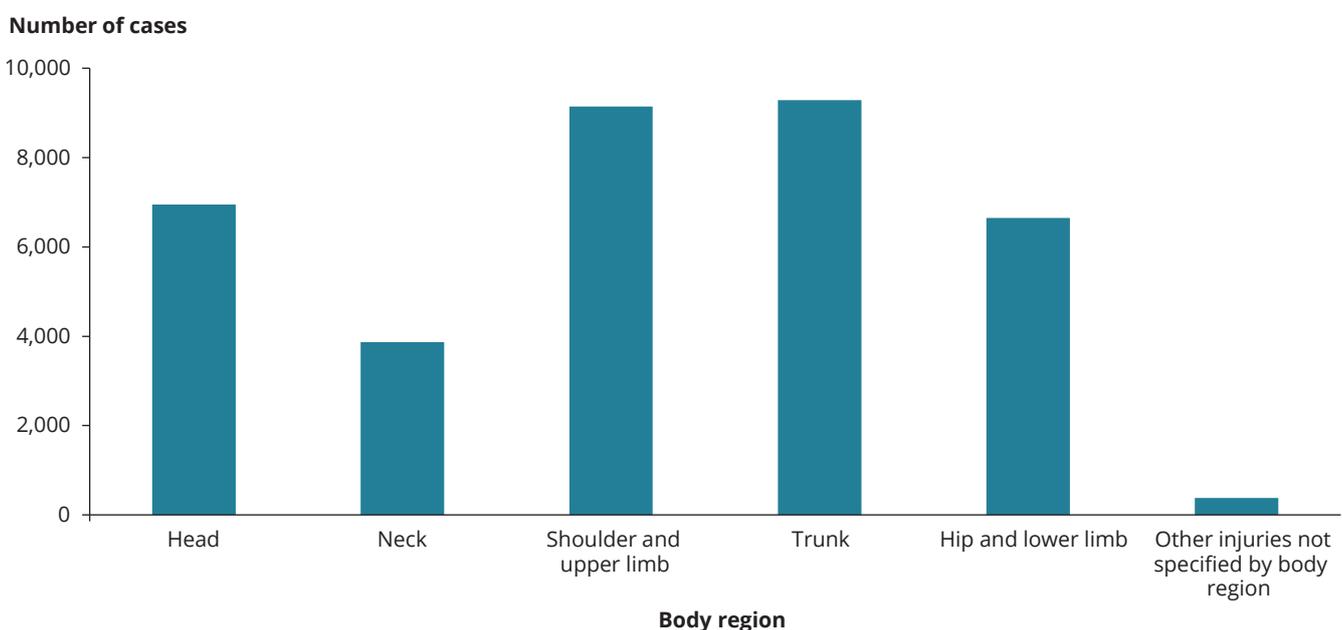
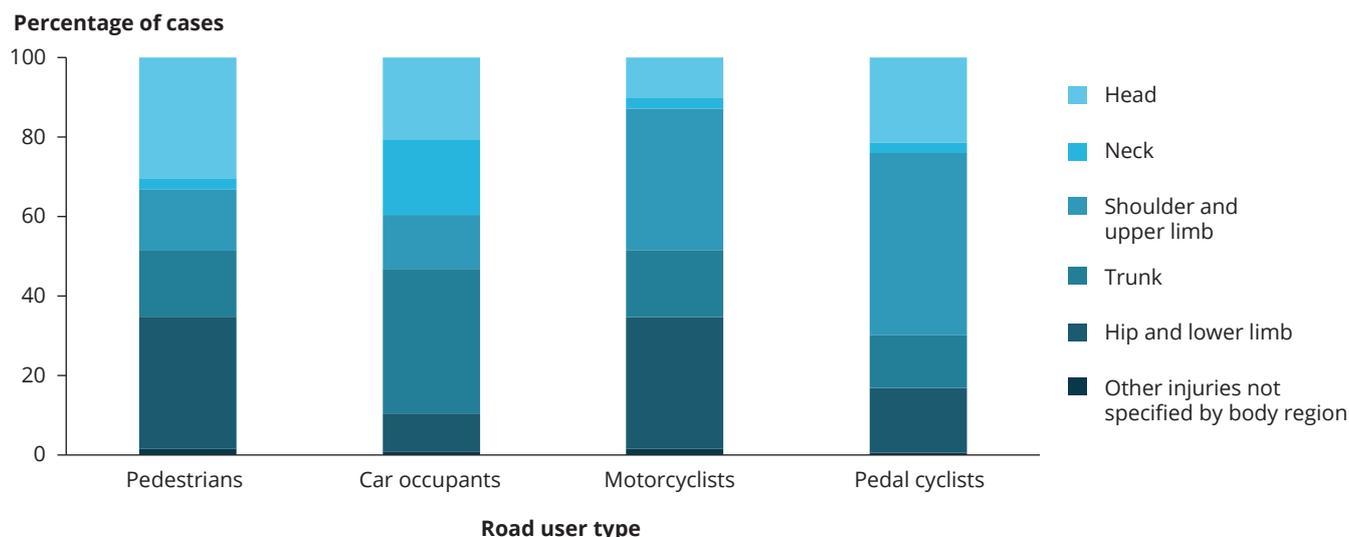


Figure 5: Hospitalised cases of on-road crash-related injury by road user type and main body region affected in 2014–15



How long did people stay in hospital?

Overall, the mean length of stay in hospital was 3.9 days. Males had a slightly higher mean length of stay than females (4.0 and 3.6 days, respectively). In total, on-road crashes resulted in 140,516 days spent in hospital.

In general, the highest mean lengths of stay (MLOS) in hospital for car occupants and motorcyclists were for those in the youngest and oldest age groups (all had a MLOS of 6 days, double the 2–3 days for those aged 5–24). The highest MLOS for pedestrians was for those aged 65+; their MLOS of 9 days compared with 3 for those aged 5–14 and 5 for people aged 25–44. Pedal cyclists had a comparatively shorter MLOS ranging from 2–4 days.

What were the most common mechanisms of injury?

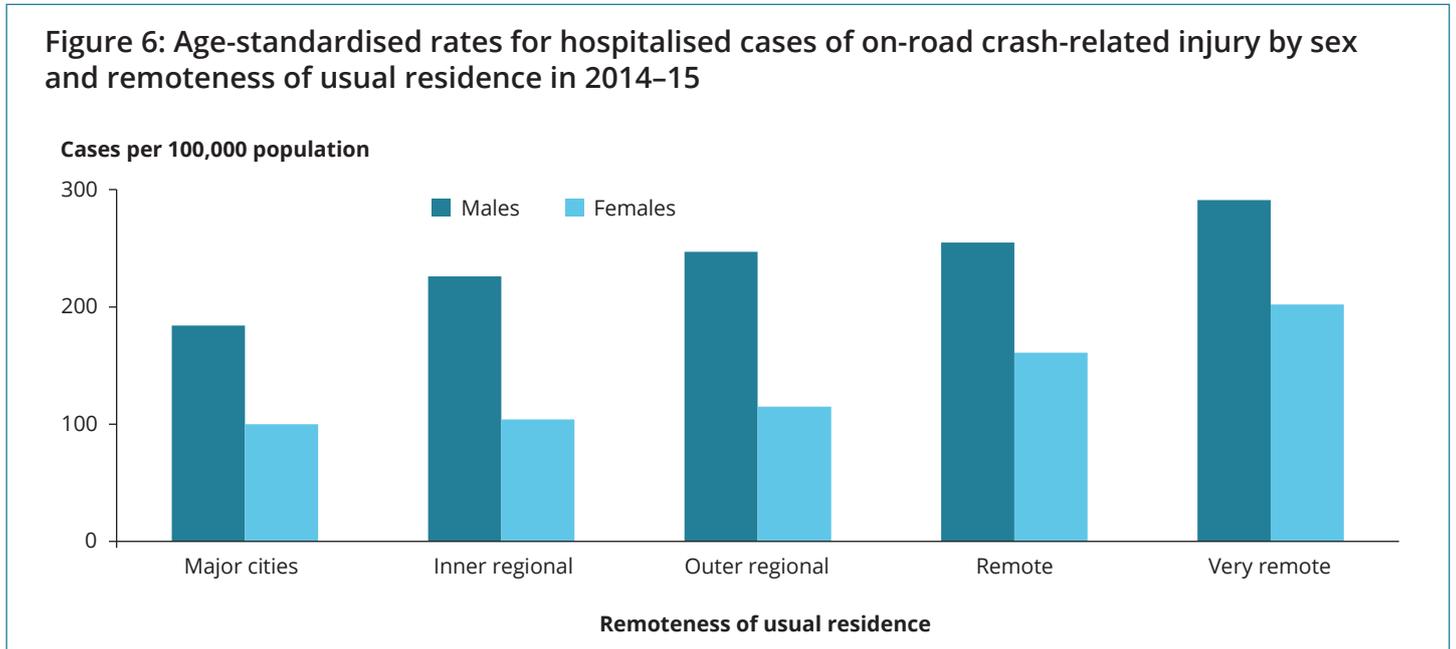
In around one-quarter of cases, a car occupant was injured when their vehicle collided with another car, pick-up truck or van (24%). The next most common mechanism of injury (11%) was of a car colliding with a fixed or stationary object (Table 1).

Table 1: Most common mechanisms of injury in on-road crashes in 2014–15

Road user type	Mechanism	Count	% of all on-road crash cases
Car occupant	Car in collision with car, pick-up truck or van	8,742	24.1
	Car in collision with fixed or stationary object	3,984	11.0
	Car in non-collision transport crash	2,807	7.7
Pedestrian	Pedestrian in collision with a car, pick-up truck or van	2,287	6.3
Motorcyclist	Motorcyclist in non-collision transport crash	3,427	9.4
	Motorcyclist in collision with car, pick-up truck or van	2,116	5.8
	Motorcyclist in other and unspecified transport crash	1,568	4.3
Pedal cyclist	Pedal cycle in non-collision transport crash	3,045	8.4
	Pedal cycle in other and unspecified transport crash	1,452	4.0
Total of most common mechanisms		29,428	81.1

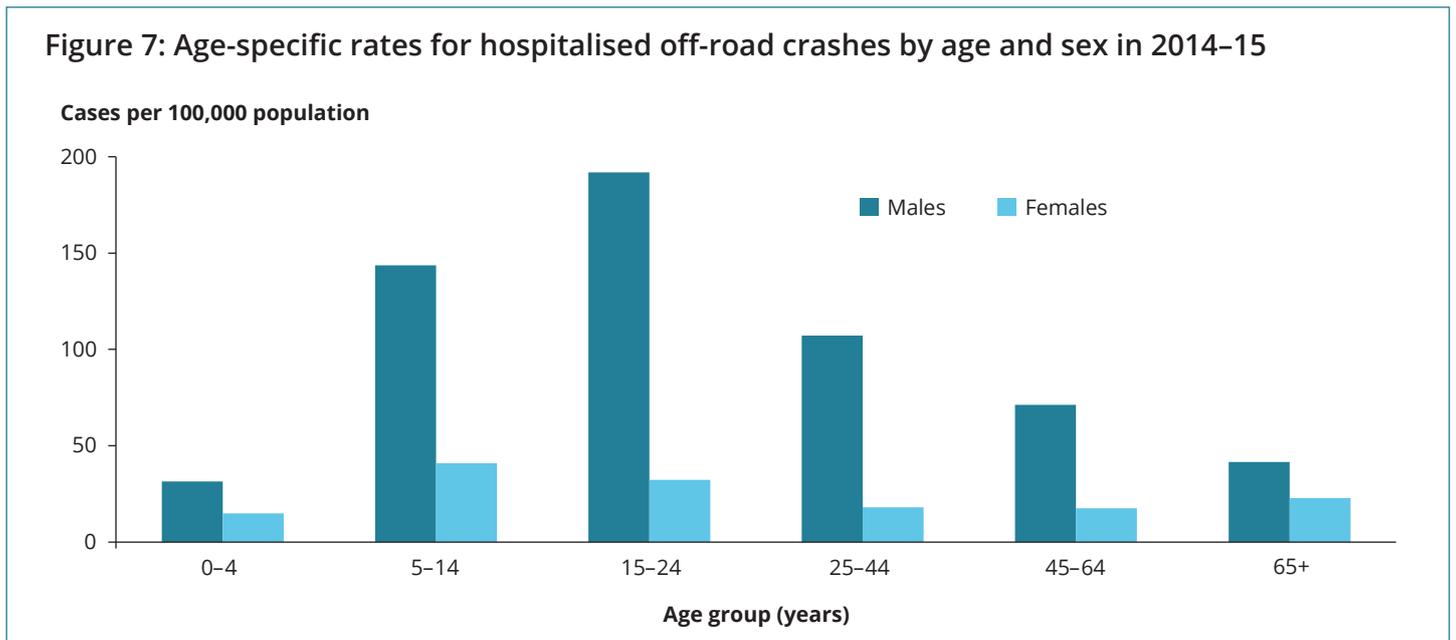
Remoteness of usual residence

Rates of hospitalisation for injuries due to on-road crashes increased for both males and females according to the remoteness of where they live (Figure 6). For males and females combined, the age-standardised rate of 141 cases per 100,000 population in major cities compared with a rate of 252 per 100,000 in very remote areas.



Off-road crashes

Over 14,000 people were hospitalised due to injuries sustained in off-road crashes in 2014–15. Across all ages, males were much more likely than females to be hospitalised due to off-road crashes. Age-standardised rates for males and females were 102 and 23 cases per 100,000 population, respectively. The highest age-specific rate was for males aged 15–24 (192 cases per 100,000 population). The rate for males aged 5–14 was also comparatively high (144 per 100,000) (Figure 7).



What were the most common mechanisms of injury?

The most frequent mechanisms of injury were for motorcyclists and pedal cyclists involved in non-collision crashes (32% and 26%, respectively) (Table 2).

Table 2: Most common mechanisms of injury in off-road crashes in 2014–15

Road user type	Mechanism	Count	% of all off-road crash cases
Car occupant	Non-collision transport crash	462	3.2
	Car in collision with fixed or stationary object	398	2.7
Pedestrian	Pedestrian in collision with car, pick-up truck or van	480	3.3
Motorcyclist	Non-collision transport crash	4,594	31.6
	Motorcycle in collision with fixed or stationary object	824	5.7
	Motorcycle in collision with 2- or 3-wheeled motor vehicle	262	1.8
Pedal cyclist	Non-collision transport crash	3,717	25.6
	Pedal cycle in collision with fixed or stationary object	305	2.1
	Pedal cycle in collision with another pedal cycle	247	1.7
	Total of most common mechanisms	11,289	77.7

In this fact sheet, land transport refers to all types of transport excluding air, water and space. Hospitalisations data have been coded to the International Classification of Diseases (ICD-10-AM). Cases with ICD-10-AM external cause codes indicating that they occurred 'in traffic' are included here as on-road crash cases. A detailed list of the codes used to select cases for the on-road crashes and off-road crashes groups can be found in the AIHW report *Trends in serious injury due to road vehicle traffic crashes, Australia 2001 to 2010. Injury research and statistics series no. 89. Cat. no. INJCAT 165.* <www.aihw.gov.au>.

The data were sourced from the AIHW's National Hospital Morbidity Database for 2014–15, which covers all (admitted) episodes of care in Australian hospitals. Records with a mode of admission reported as a transfer from another hospital were excluded to reduce double-counting of cases. Cases of death that occurred in hospital were also omitted so the estimates are of numbers of non-fatal hospitalised cases.



Where can I find out more about land transport injuries?

AIHW web pages and publications:

<<https://aihw.gov.au/reports-statistics/health-conditions-disability-deaths/injury/overview>>

Bureau of Infrastructure, Transport and Regional Economics (BITRE) website:

<<https://bitre.gov.au/publications/ongoing/hospitalised-injury.aspx>>

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