

OLDER ROAD USERS INVOLVED IN ROAD CRASHES IN SOUTH AUSTRALIA

There are on average (2009 – 2013) 18 road fatalities and 89 serious injuries of persons aged 70 years or above each year. Persons over the age of 70 make up 12% of the population and account for 11% of serious casualties as shown in Figure 1. Table 1 is a breakdown of serious casualties of road users over the age of 70 by year.

Figure 1: Serious casualties by age and population distribution, South Australia, 2009-2013

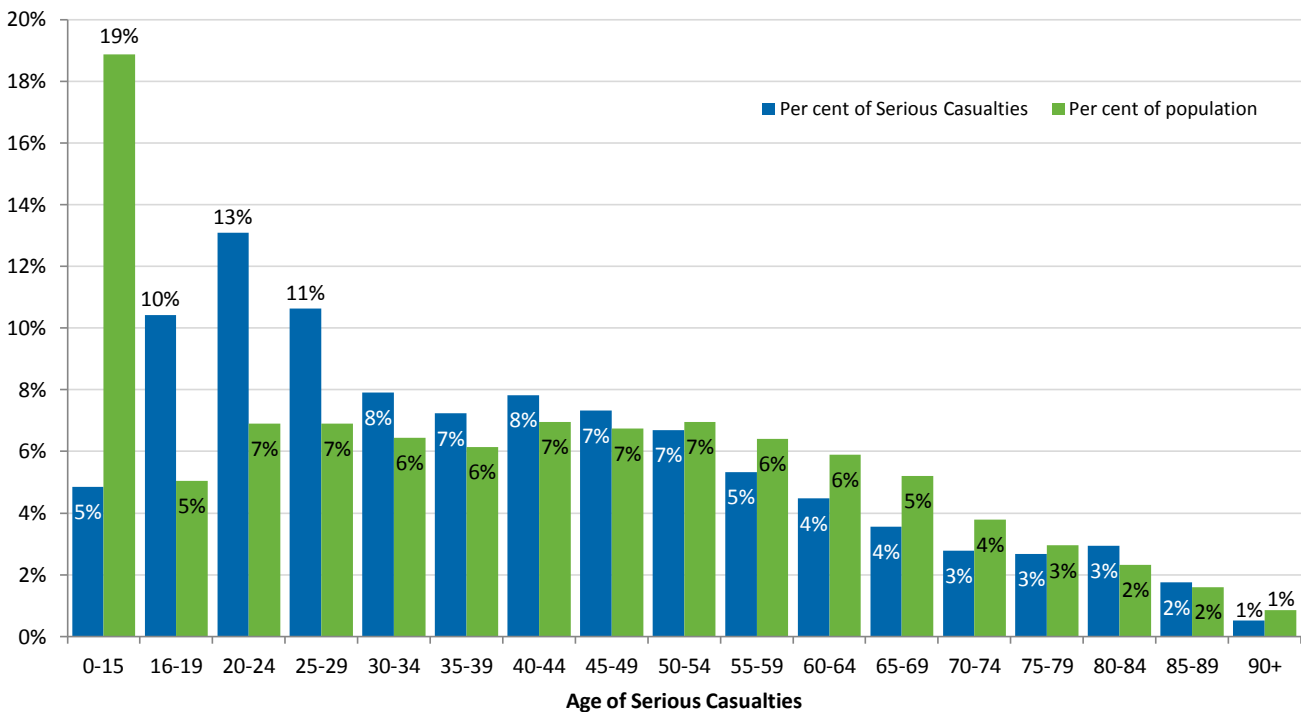


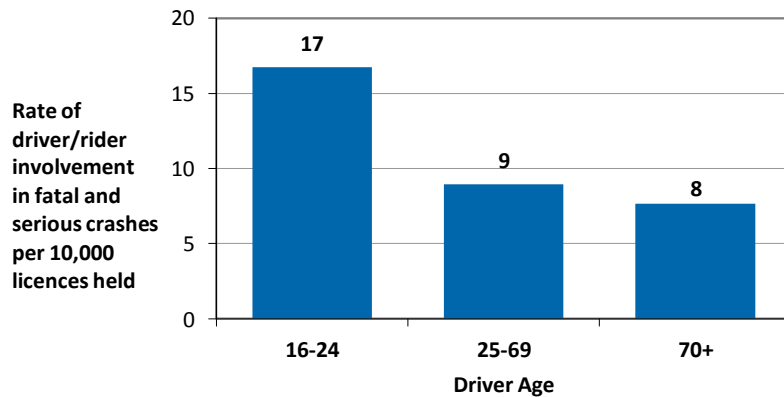
Table 1: Fatalities and serious injuries of road users aged 70 years of age and over, South Australia, 2009-2013

| Year | Fatal | Serious Injury | Total |
|----------------|-----------|----------------|------------|
| 2009 | 12 | 95 | 107 |
| 2010 | 14 | 120 | 134 |
| 2011 | 19 | 73 | 92 |
| 2012 | 22 | 73 | 95 |
| 2013 | 24 | 82 | 106 |
| 5yr Avg | 18 | 89 | 107 |

Older Driver Crash Rates

Older drivers are two times less likely to be involved in a serious casualty crash than younger drivers. For drivers/riders aged 16-24, for every 10,000 licences held, 17 of those drivers/riders per year were involved in a fatal or serious injury crash. The rate of involvement in a serious casualty crash per 10,000 licences held in the 25- 69 year age group was 9, and this dropped to eight for drivers over the age of 70.

Figure 2: Rate of driver/rider involvement in fatal and serious crashes per 10,000 licences held by age, South Australia, 2009-2013



Research has shown that although older drivers are involved in a small number of crashes, these crashes are of higher severity, probably because of the frailty of these older users. Older drivers have been shown to be more cautious and to exhibit less illegal and dangerous driving behaviour than other age groups, and there is evidence that older drivers self-regulate to avoid risky situations and times of day.

Figure 2 can be broken down further to reveal that even though those aged over 70 have a smaller crash involvement rate this rate can go up as a driver ages, as seen in Figure 3.

Figure 3: Rate of driver/rider involvement in fatal and serious crashes per 10,000 licences held by age, South Australia, 2009-2013

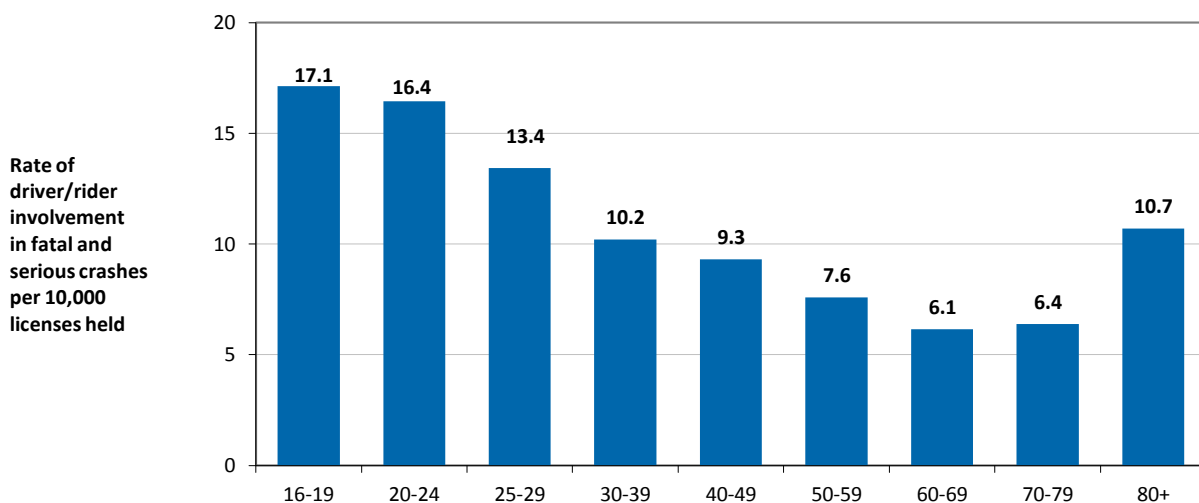


Figure 4: Rate of driver/rider fatal and serious casualties per 10,000 licences held by age, South Australia, 2009-2013

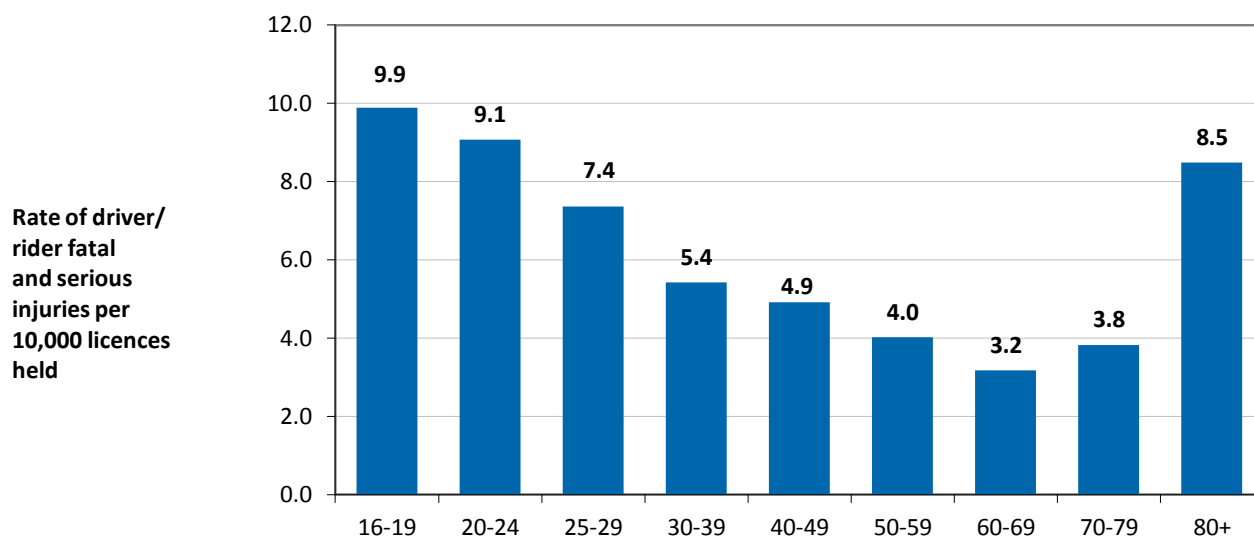


Figure 4 is the rate of drivers/rider serious casualties per 10,000 licences held. Figures 3 and 4 together show that the outcome for older drivers in a crash is likely to be more severe than for younger drivers. Figure 3 shows that per 10,000 licences held on average 17.1 driver/riders aged 16-19 years are involved in serious casualty crashes and figure 4 shows that 9.9 of them also suffer a fatal or serious injury. This equates to 68% of all drivers/riders aged 16 -19 years involved in a serious crash being killed or seriously injured.

In contrast, per 10,000 licences held for drivers aged 80 and over on average 8.5 of these drivers/riders are killed or seriously injured from a total of 10.7 that are involved. This means that drivers/riders aged 80 years and above suffer death or serious injury at a higher rate than younger drivers. This equates to 77% of all drivers/riders aged 80 and over involved in a serious crash being killed or seriously injured.

There are relatively few older drivers on the road compared to their younger counterparts and they tend to travel shorter distances. As noted above, older road users are not major contributors to overall road casualty numbers.

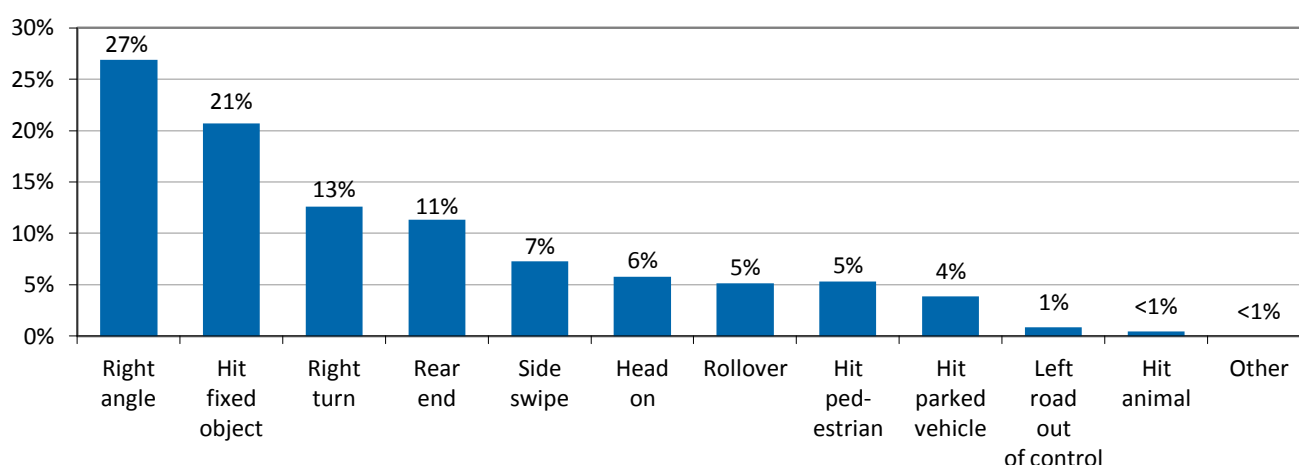
As a driver ages they are more likely to be responsible for the crash they are involved in. In South Australia, on average, drivers aged 60-69 involved in fatal and serious injury crashes were responsible in 57% of cases, drivers aged 70-79 were responsible in 64% of cases and drivers aged 80 years and over were responsible in 85% of cases.

Types of Crashes Involving Older Drivers

Older drivers are more likely to be involved in fatal and serious injury crashes at intersections than other drivers – 50% of older driver crashes occur at intersections, compared to 35% of all serious and fatal crashes generally.

As seen in figure 5, most fatal and serious injury crashes involving older drivers are right angle crashes –27% of them, compared to 14% of fatal and serious crashes generally. Intersections and junctions are complex traffic environments in which the driver has to attend to a variety of information while under time pressures. Common crash types for older drivers are right turn crashes and crashes due to disobeying a traffic signal or sign. A higher rate amongst older drivers could be due to a number of factors, including impaired vision and slower reaction time. Rear end and right turn crashes involving older drivers are also more frequent than fatal and serious injury crashes generally. Older drivers are, however, less likely to be involved in a crash that results in hitting a fixed object (21% compared to 29% for fatal and serious crashes generally).

Figure 5: Types of fatal and serious crashes involving drivers aged 70+ years, South Australia, 2009-2013



Crash Location and Speed Limits

Over half (55%) of fatal and serious injury crashes involving drivers aged 70 and over occur in metropolitan areas. Table 2 shows the breakdown of crashes by speed limits and area. The figures seen are consistent with fatal and serious injury crashes generally.

Table 2: Crash location road speed limits involving drivers aged 70+ years, South Australia, 2009-2013

| Speed Limit | Metropolitan | Rural |
|------------------|--------------|-------------|
| 50km/h and under | 24% | 22% |
| 60km/h | 59% | 11% |
| 70-90km/h | 13% | 15% |
| 100km/h and over | 3% | 51% |
| Total | 100% | 100% |

Older drivers are also more likely than other drivers to be involved in crashes in the locality they reside in (as classified by post code). 39% of older drivers are involved in fatal and serious crashes in their resident locality, compared to 23% of drivers under the age of 70.

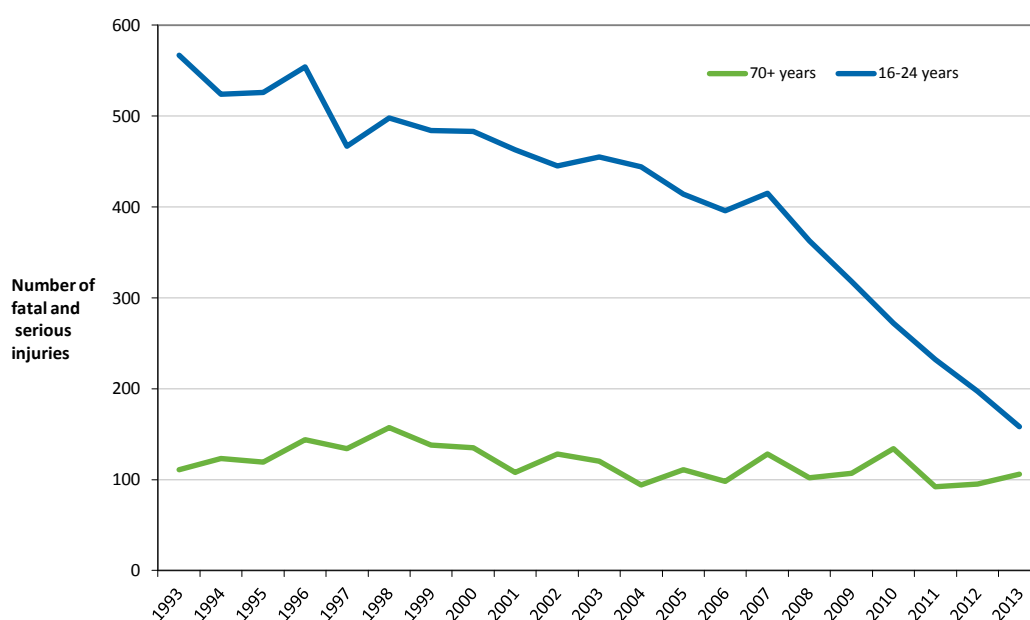
Serious casualty crashes involving older drivers are most likely to occur between the hours of 9am and 5pm – 74% happen during these times. By contrast, only 46% of all fatal and serious crashes happen between these times. The higher proportion for older drivers is to be expected, given that older drivers generally prefer to drive during off peak daylight hours than at night time.

Older road users

The next section discusses older road users in all crashes, this encompasses all road users including drivers/riders, passengers, cyclists and pedestrians.

Figure 6 shows the serious casualty rates for road users aged 16-24 and road users aged 70+. Consistent with fatal and serious injuries generally a decline has been seen in road trauma involving those aged 70 and over. From a total of 111 fatal and serious injuries in 1993, there has been a decline to 106 in 2013 a reduction of 5%. This compares to an overall reduction of 50% for all road fatalities and serious injuries for the same period and 72% reduction for road users aged 16 to 24 years, demonstrating that serious casualties of older road users are declining at a slower rate than the rate for other road users. This is likely to be in part due to increases in the numbers of people aged 70 and over, consistent with South Australia’s ageing population.

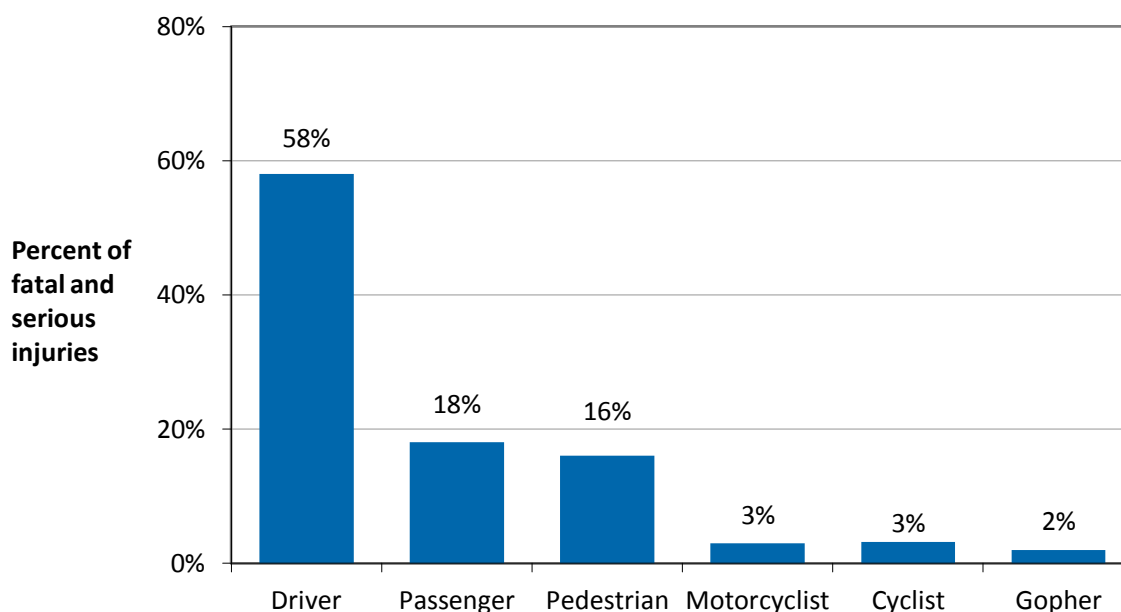
Figure 6: Fatal and serious injuries persons 70+ years and 16-24 years, South Australia, 1993-2013



Older Road User Types

Figure 7 shows that the majority of fatalities and serious injuries among older road users are drivers, passengers and pedestrians. 94% of older road users (including gophers) fall into these categories, compared to 77% for all road users generally.

Figure 7: Road users 70+ years, fatalities & serious injuries, South Australia, 2009-2013



Gender

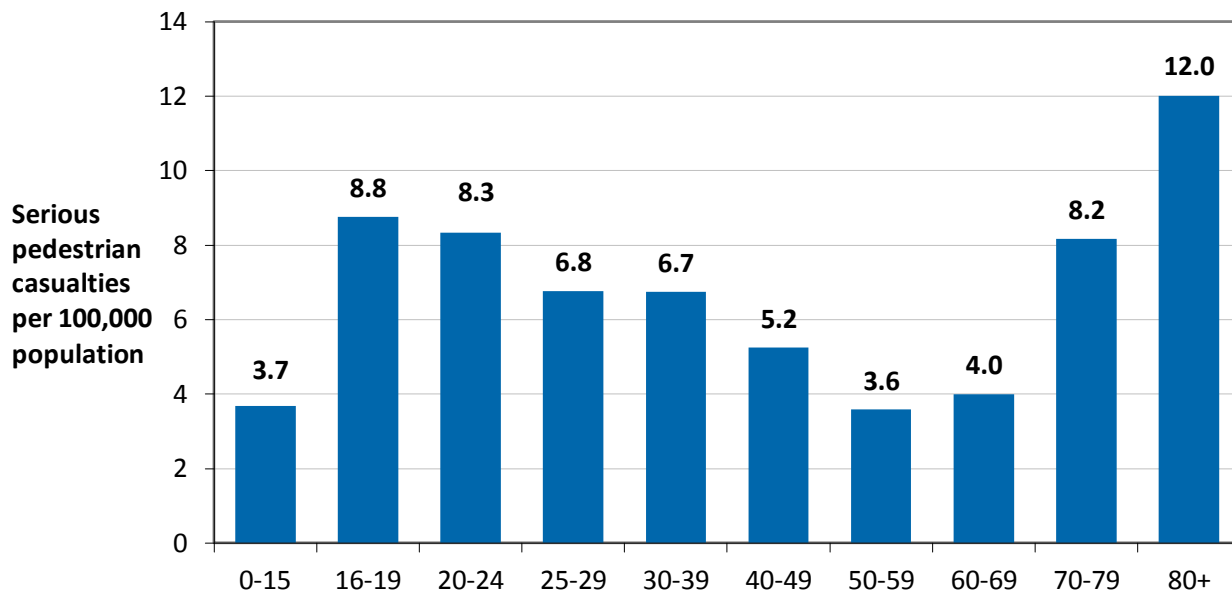
Males generally far exceed females in road user fatalities and serious injuries. Between 2009 and 2013, 64% of serious road casualties were male and 36% female. However, in the older road user population, the gap between male and females is not as large. Over the age of 70, 57% of serious casualties were male and 43% were women. This can be partly explained by the longer life expectancy of females and a reduction in risk taking behaviour in the older male age groups. Older drivers are far less likely than young drivers to be involved in crashes characterised by loss of control, speeding, risky overtaking or drink driving.

Older Pedestrians

Figure 8 shows the number of pedestrian fatalities and serious injuries per 100,000 of population by age group. Elderly pedestrians in particular have a higher risk of collision with road vehicles due to the perceptual, cognitive and physical deterioration associated with ageing. If an older person is hit by a car, the outcome is likely to be more severe, resulting in a fatality rather than an injury. The higher involvement of older people in pedestrian

fatalities is indicative of the relative frailty of older people. Many elderly people also have a greater reliance on walking and are therefore more likely to be exposed to traffic as pedestrians than younger age groups¹.

Figure 8: Average pedestrian serious casualties per 100,000 population, South Australia, 2009-2013



¹ Page 203 'Road Safety in Australia. A publication commemorating World Health Day 2004' Australian Transport Safety Bureau.

Definitions of police reported casualty types:

Casualty Crash - A crash where at least one fatality, serious injury or minor injury occurs.

Casualty – A fatality, serious injury or minor injury.

Fatal Crash - A crash for which there is at least one fatality.

Fatality - A person who dies within 30 days of a crash as a result of injuries sustained in that crash.

Serious Injury Crash - A non-fatal crash in which at least one person is seriously injured.

Serious Injury - A person who sustains injuries and is admitted to hospital as a result of a road crash and who does not die as a result of those injuries within 30 days of the crash.

Minor Injury Crash - A crash for at least one person sustains injury but no person is admitted to hospital or dies within 30 days of the crash.

Minor Injury – A person who sustains injuries requiring medical treatment, either by a doctor or in a hospital, as a result of a road crash and who does not die as a result of those injuries with 30 days of the crash.

Property Damage Only Crash – A crash resulting in property damage in excess of the prescribed amount in which no person is injured or dies within 30 days of the crash.

Data sources

The data presented in this reports was obtained from the Department or Planning, Transport and Infrastructure Road Crash Database. The information was compiled from police reported road casualty crashes only.

Enquiries

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