Pedestrians Involved in Road Crashes in South Australia

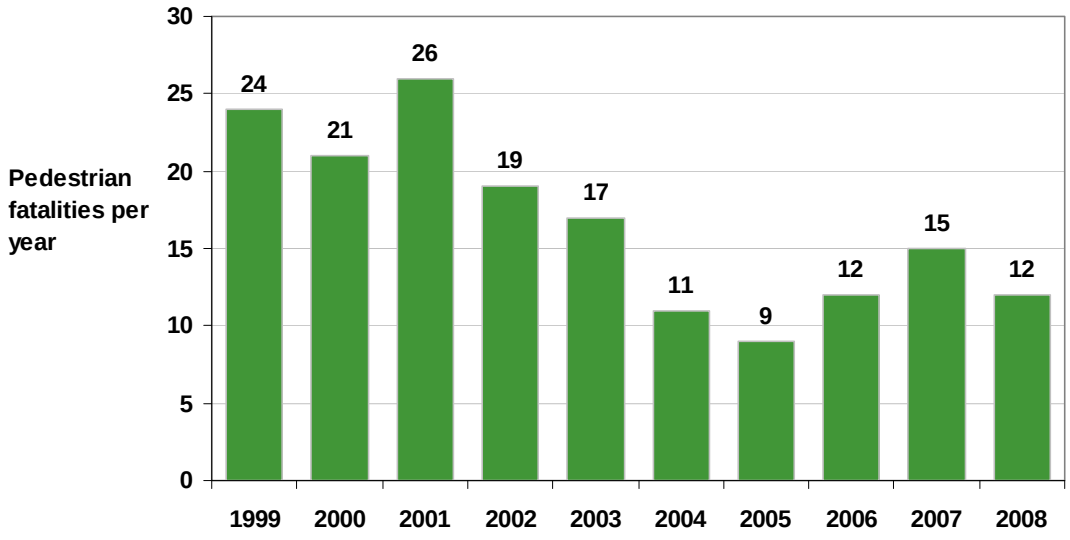
Pedestrian Safety

Over the last five years, nearly 1 in every 10 road deaths in South Australia was a pedestrian. In addition to fatalities, there are on average 113 pedestrians seriously injured and 374 pedestrians who receive minor injuries each year.

Almost everyone is a pedestrian at times and, as such, is a vulnerable road user. Risks to safety are heightened because pedestrians are not surrounded by the protection of a vehicle and, in the event of a crash, are more susceptible to the possibility of death or serious injury.

Figure 1 shows the number of pedestrian fatalities per year for the period 1999-2008. Since 2003 there has been a decrease in the number of pedestrian fatalities per year. The 9 fatalities recorded in 2005 is the lowest number of pedestrian fatalities on record for South Australia in a calendar year.

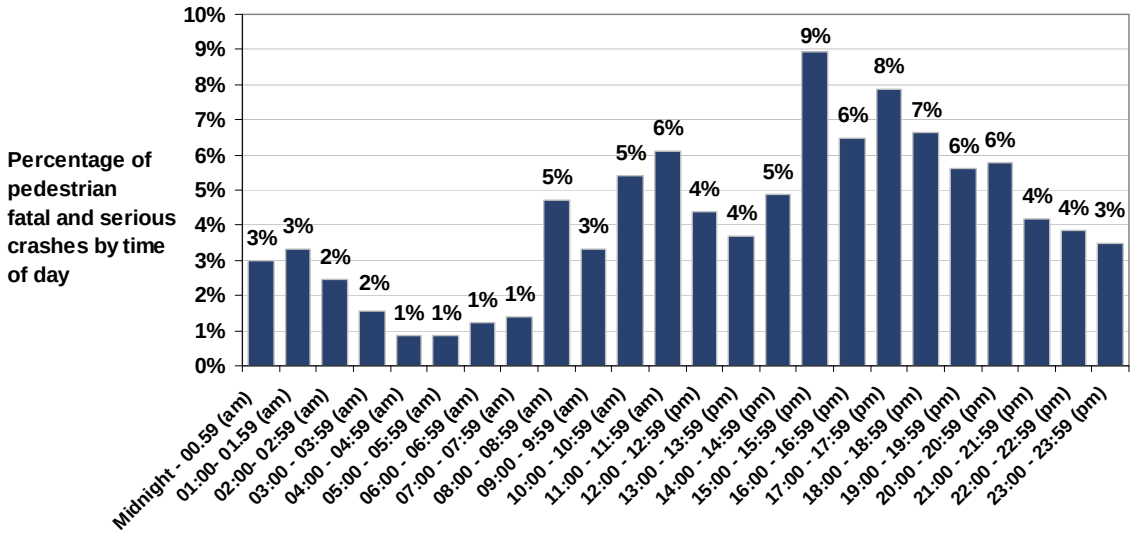
Figure 1 - Pedestrian Fatalities per year, South Australia, 1999-2008



Time of Day

Pedestrian crashes occur during all times of the day, however there are peak times when the number of fatalities is particularly high. Figure 2 below shows that the number of serious pedestrian crashes were highest during the hours of 9am to 5pm, and particularly at 8am to 9am and 3pm to 7pm when most school students and workers are going to and from their destination.

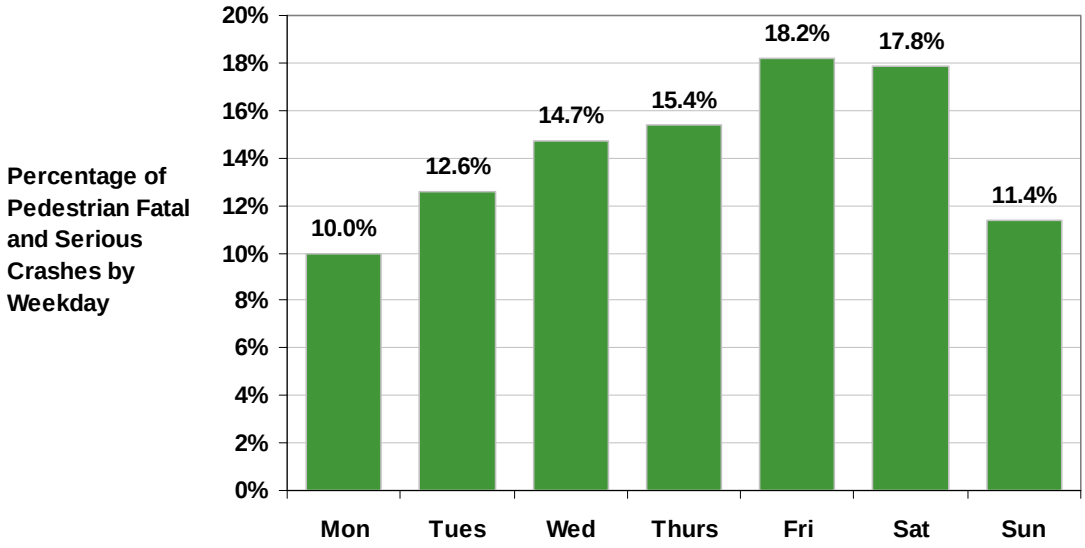
Figure 2 - Percentage of hit pedestrian fatal and serious crashes by time of day, South Australia, 2004-2008



The risk of pedestrian crashes resulting in serious or fatal injuries increases substantially during the hours of darkness, when visibility is lower. On average, 30% of all hit-pedestrian crashes occur during the hours of 6pm to 6am, however 42% of hit pedestrian crashes that result in fatal and serious injury occur between these hours.

Figure 3 shows the frequency of fatal and serious injury pedestrian crashes by weekday and indicates the frequencies increase on Fridays and Saturdays, however they generally remain high across most weekdays when pedestrian traffic is high.

Figure 3 – Percentage of hit pedestrian fatal and serious crashes by weekday, South Australia, 2004-2008



Country versus Metropolitan

In 2004-2008, 82% of all fatal and serious crashes that involved pedestrians in South Australia occurred in metropolitan areas, due to the higher volume of pedestrians and traffic present. Of all fatal and serious crashes that occurred in metropolitan areas, 15% of these involved pedestrians, compared to 3% in country South Australia.

Tables 1 and 2 show the Local Government Areas and roads where the highest number of fatal and serious injury pedestrian crashes occurred.

Table 1 – Top 10 Local Government Areas for fatal and serious injury pedestrian crashes, South Australia, 2004-2008

Local Government Area	Number of fatal or serious injury pedestrian crashes
Adelaide City Council	70
Port Adelaide/Enfield	52
Charles Sturt	37
Onkaparinga	35
Salisbury	31
Unley	27
West Torrens	26
Holdfast Bay	25
Playford	23
Tea Tree Gully	22

Table 2 – Roads with the highest number of hit-pedestrian fatal and serious crashes, South Australia, 2004-2008

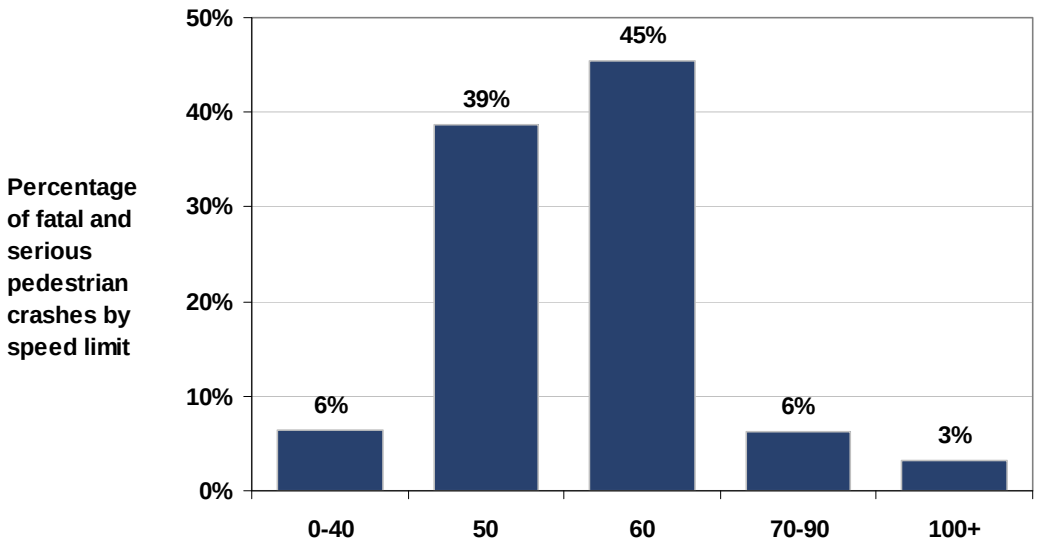
Road	Speed Limit	Pedestrian casualties
South Road	60-80km/h	15
North East Road	60km/h	12
North Terrace	50km/h	11
Main North Road	60km/h	9
Fullarton Road	60km/h	8
Pulteney Street	50km/h	8
Brighton Road	60km/h	8
Prospect Road	50km/h and 60km/h	7
Goodwood Road	60km/h	7
Henley Beach Road	50km/h and 60km/h	7
Marion Road	60km/h	7
Hanson Road	60km/h	6
Tapley's Hill Road	60km/h and 80km/h	6
Anzac Highway	60km/h	6

The above figures reinforce that pedestrian casualties occur most often on metropolitan roads with both high volume vehicle and pedestrian traffic.

Speed Limit of Road

Pedestrian crashes are more common in lower speed limit zones because these zones have the most pedestrian activity.

Figure 4 – Hit pedestrian fatal and serious crashes by speed limit of road, South Australia, 2004-2008



There is evidence that small reductions in urban travel speeds can markedly reduce the number of fatal pedestrian crashes. When Victoria started intensive speed camera

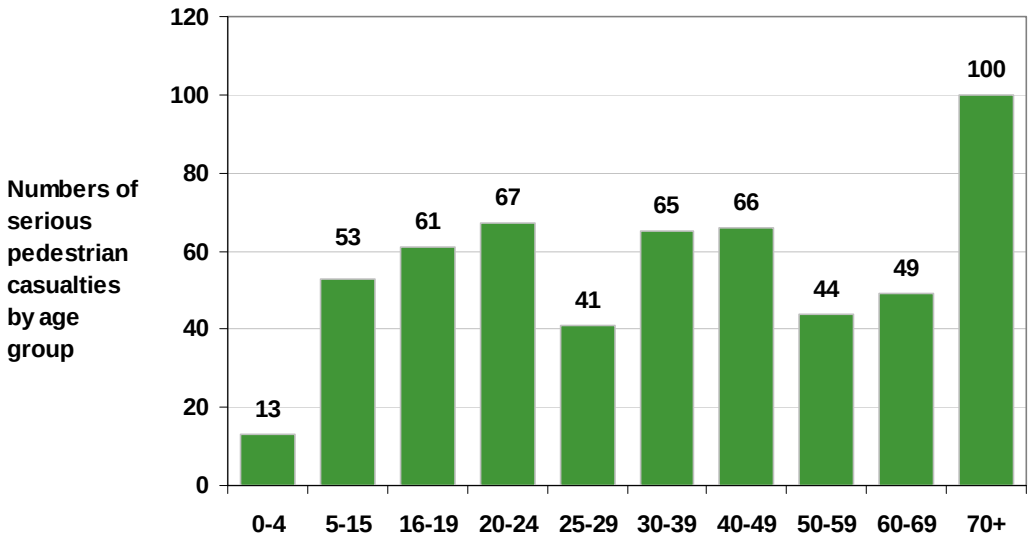
enforcement in conjunction with publicity campaigns, there was a 42% reduction in pedestrian deaths.

On March 1 2003 the default urban speed limit in South Australia was reduced from 60km/h to 50km/h. Initial studies found that on roads where the speed limit was reduced from 60km/h to 50km/h the average travelling speed fell by 2.3km/h and the number of people injured in crashes fell by 24%. The number of hit- pedestrian casualty crashes decreased by nearly 8% on these roads[1].

Age of Pedestrians

Figure 5 shows the number of pedestrians killed or seriously injured by age group. The 70 and over population has a significantly higher risk of being seriously injured as a result of a pedestrian crash. The 16-19 and 20-24 age groups also have high figures when considering that these age brackets contain.

Figure 5 – Serious pedestrian casualties by age group, South Australia, 2004-2008



Figures 6 and 7 show the number of pedestrian fatalities and serious injuries per 100,000 of population in each respective age group.

Older pedestrians have a higher risk of death than injury when comparing Figure 6 and Figure 7. 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.

[1] From the report 'Evaluation of the South Australian default 50km/h speed limit' CN Kloeden, JE Woolley, AJ McLean CASR report serious CASR005, October 2004

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 groups[2]. The graphs also show an elevated risk for the 16-19 age group.

Child pedestrians are smaller, harder for drivers to see and less predictable than other pedestrians. Children are likely to have serious than minor injuries when hit because their whole body is more likely to be hit by the vehicle frontage, compared with adult pedestrians where the legs only are more likely to be hit and the body thrown up onto the bonnet. While the statistics do not show child pedestrian casualties to be a major contributor, the emotive nature of the issue cannot be discounted.

Figure 6 – Pedestrian serious casualties per 100,000 in age groups, South Australia, 2004-2008

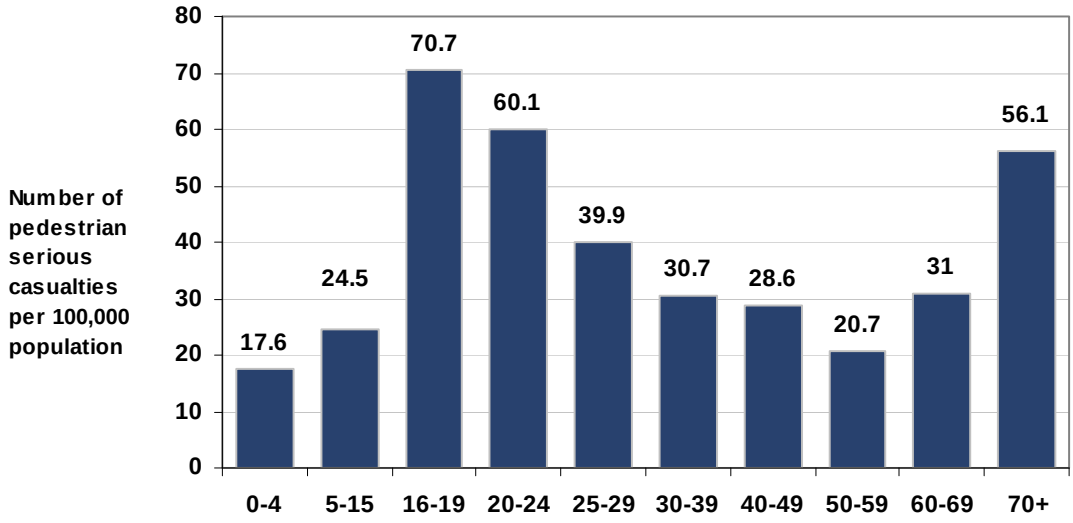
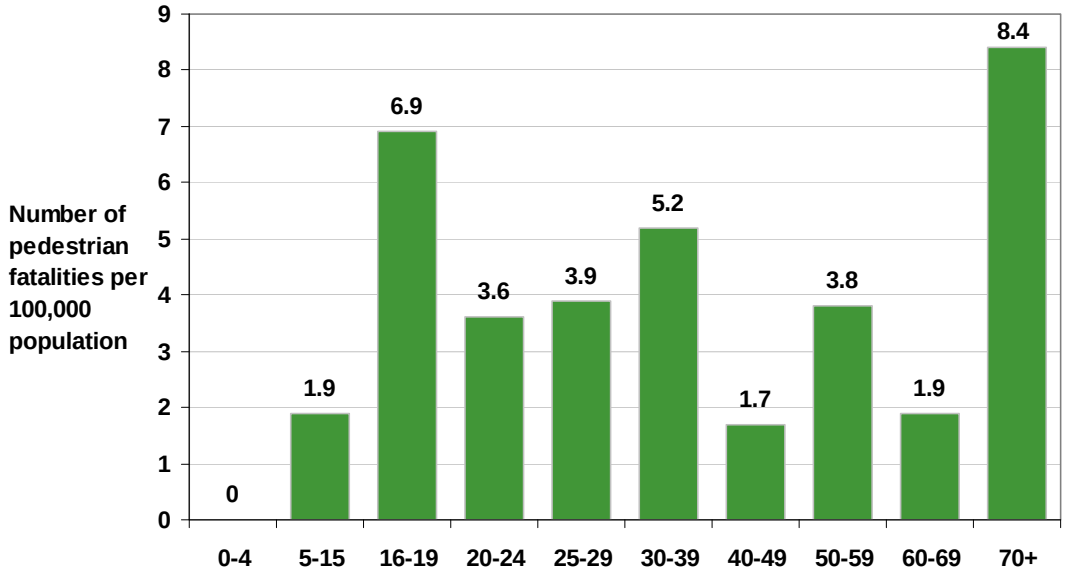


Figure 7 – Pedestrian fatalities per 100,000 in age groups, South Australia, 2004-2008

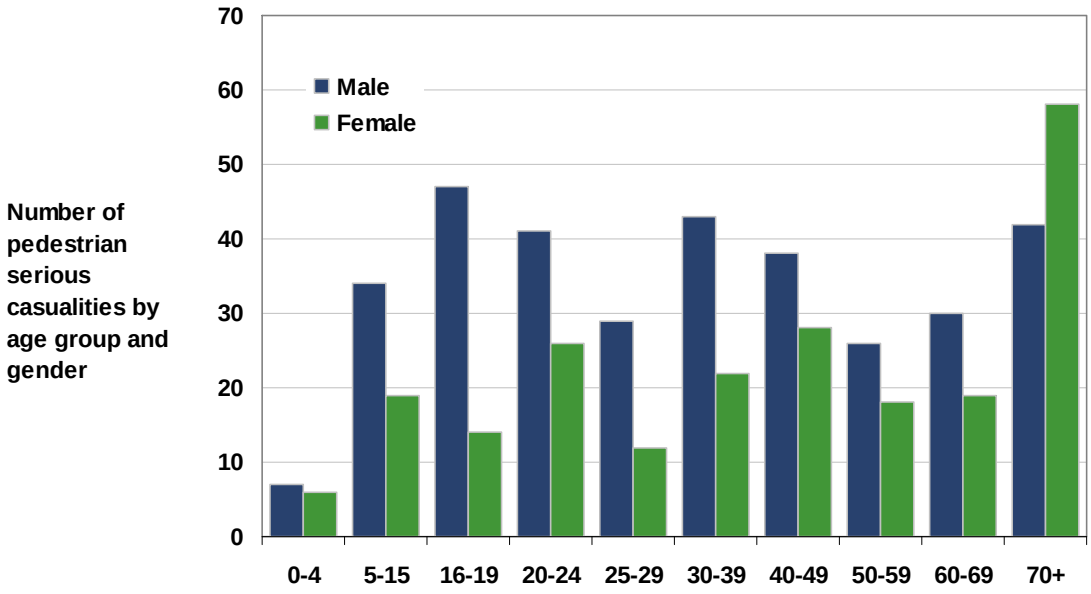
[2] Page 203 'Road Safety in Australia. A publication commemorating World Health Day 2004' Australian Transport Safety Bureau.



Gender of Pedestrians

Over the last five years a higher proportion of male pedestrians have been involved in serious casualty crashes than female. Of the total number of pedestrians killed in 2004-2008, 58% were male. This is indicative of the overall road toll, where males are over represented in more serious crashes.

Figure 8 – Pedestrian serious casualties by age group and gender, South Australia, 2004-2008



Although males represent the majority of serious casualties in pedestrian crashes, in the over 70 age group the involvement of females increases significantly (partly due to the greater longevity of older females there are more of them)

Pedestrian Casualties and Pedestrian Crossings and Traffic Signals

Pedestrian casualties are much higher when *not* at a pedestrian crossing or signalised intersection because such casualties are primarily the result of pedestrians attempting to cross the road where there are no pedestrian facilities or traffic controls. Attempting to cross the road where there is no assisting traffic facilities can be further impaired by the presence of alcohol and drugs or age. Younger and older people are particularly poor at making speed and gap judgements.

On average 28% of pedestrian fatalities and serious injuries occurred at intersections, and 71% at mid-block sections of road (i.e. where there are no intersecting roads). Of those that occurred at intersections, Table 3 shows that 69% of these occurred where there was no traffic signal.

Table 3 - Pedestrian fatalities and serious injuries at intersections, South Australia, 2004-2008

Road Position	Serious Casualties	Percentage
Traffic Signals	49	31%
Stop sign	7	4%
Give way sign	9	5%
No control	90	55%
Roundabout	8	5%
Total	163	100%

Pedestrians Affected by Alcohol and/or Other Drugs

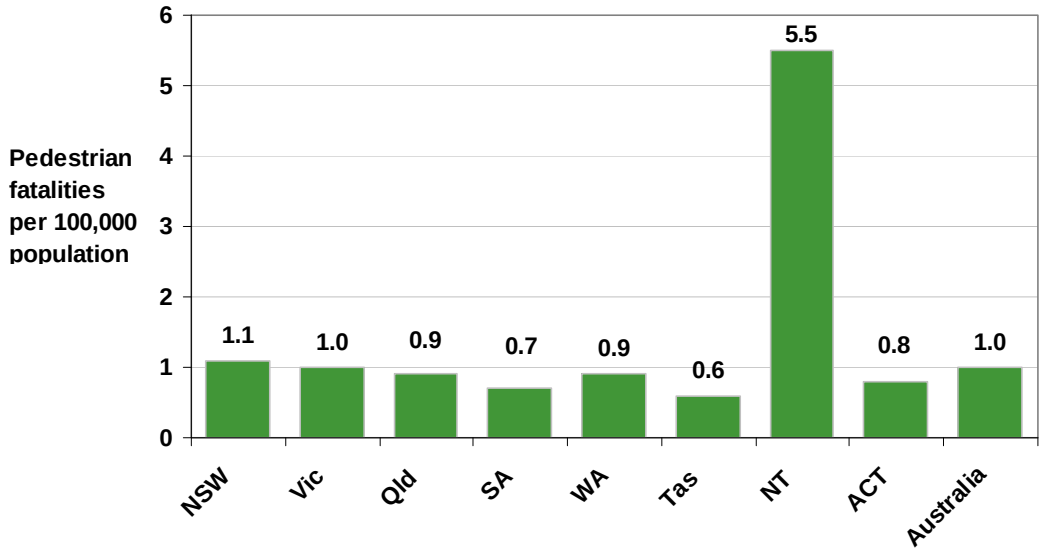
The presence of alcohol or drugs in a pedestrian's system can also impair their ability to safely negotiate roads and traffic. Of the pedestrian fatalities who were tested in 2004-2008, 36% were found to have a blood alcohol content of more than 0.05. A quarter were over 0.20, indicating that a high level of alcohol in a pedestrian's system greatly increases the risk of being involved in a fatal pedestrian crash. On average 16.5% also tested positive to marijuana or methamphetamine or a combination of these drugs.

National Comparison

Figure 9 shows the average fatality rate per 100,000 population in the last 5-year period for Australian States and Territories. South Australia is one of the lowest in Australia (only

Tasmania and the ACT are lower) and is below the national average. The fatality rate has dropped from 0.9 in the 2002-2006 period to 0.73 in 2004-2008.

Figure 9 – Pedestrian fatalities per 100,000 for Australian states and territories, 2004-2008



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 for Transport, Energy and Infrastructure Road Crash Database. The information was compiled from police reported road casualty crashes only

Figures relating to the current year are preliminary and are subject to revision.