Pedestrians Involved in Road Crashes in South Australia

Government of South Australia
Department for Transport, Energy and Infrastructure

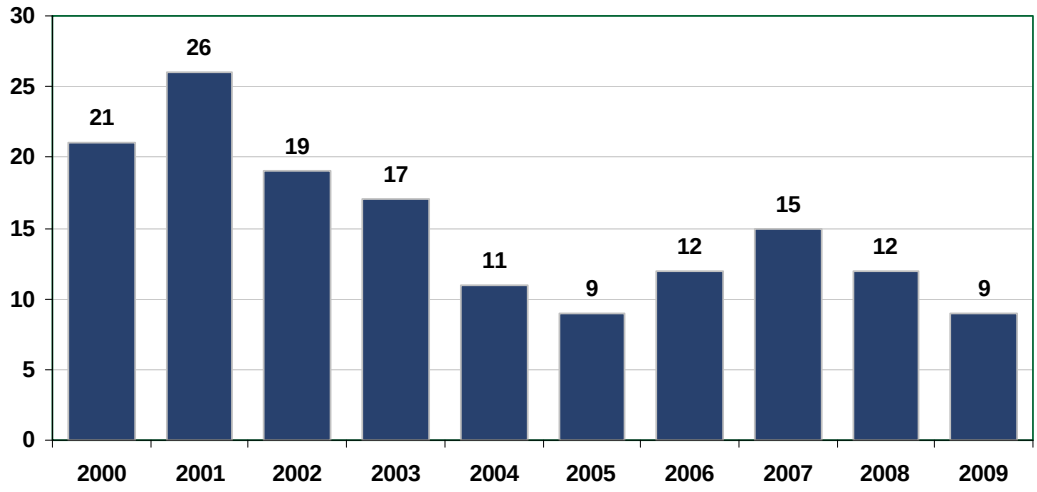
Pedestrian Safety

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 105 pedestrians seriously injured and 329 who received minor injuries on South Australian roads 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 2000-2009. Since 2001 there has been a decrease in the number of pedestrian fatalities per year. Although pedestrian fatalities have increased in some years, the general trend however, is clearly declining

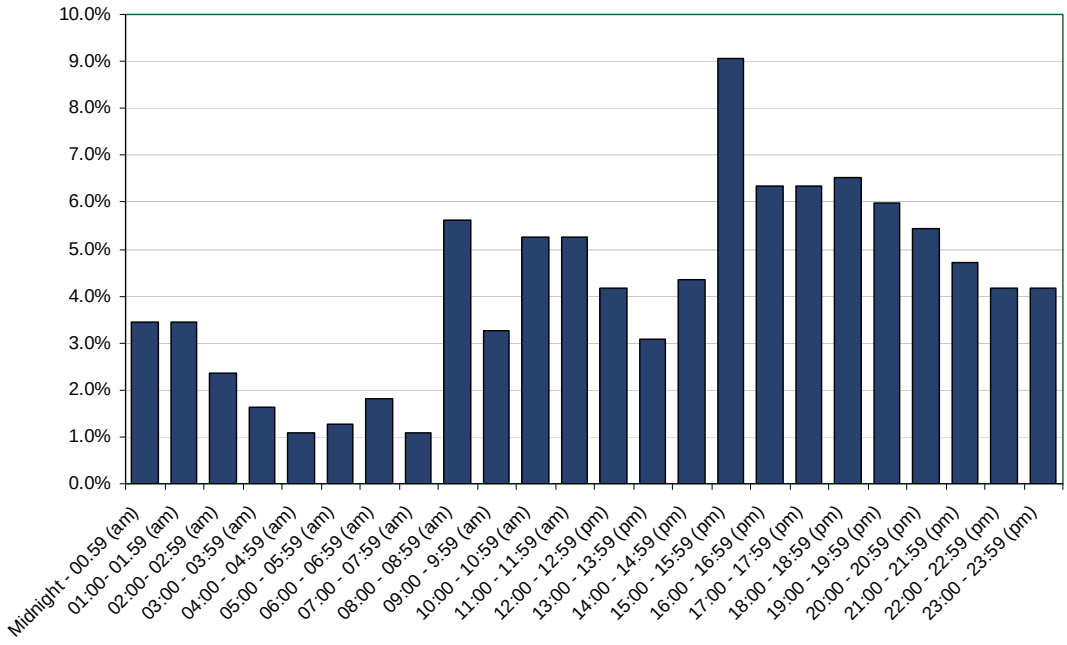
Figure 1 - Pedestrian Fatalities per year, South Australia, 2000-2009



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 shows that 46% of crashes that resulted in a serious or fatal injury of a pedestrian were during the hours of 8am-5pm, peaks occurred between 8am-9am and between 3pm-7pm this is when the majority of school students and workers are going to and from their destination.

Figure 2 - Percentage of crashes in which a pedestrian was killed or seriously injured by time of day, South Australia, 2005-2009



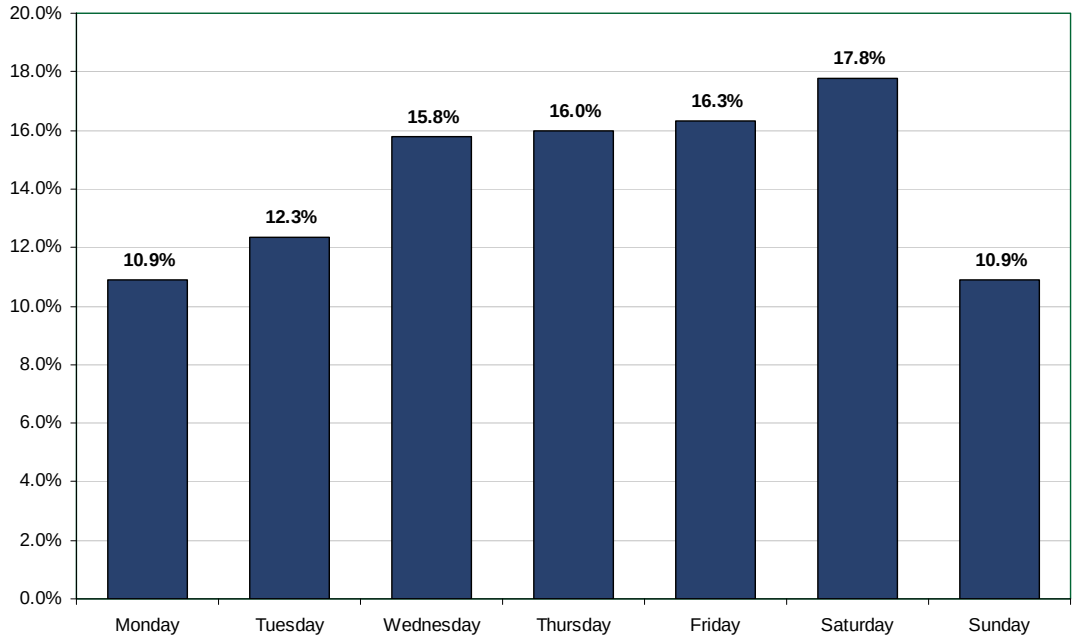
The risk of a crash involving a pedestrian resulting in a serious or fatal injury increases substantially during the hours of darkness. On average, between 2005 – 2009, 30% of all crashes involving a pedestrian being struck occurred between the hours of darkness (6pm – 6am) of these 39% resulted in a serious or fatal injury. A comparison to the daylight hours can be seen in Table 3 where only 21% of crashes involving a pedestrian resulted in a serious or fatal injury.

Table 3 - Percentage of crashes in which a pedestrian was hit by time of day and severity, South Australia, 2005-2009

	Property Damage or Minor injury	Serious or Fatal injury	Total
6am - 6pm	79%	21%	100%
6pm - 6am	61%	39%	100%

Figure 4 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 4 – Percentage of crashes resulting in a fatal or serious injury of a pedestrian by weekday, South Australia, 2005-2009



Country versus Metropolitan

During the years 2005-2009, 82% of all fatal and serious crashes that involved pedestrians in South Australia occurred in metropolitan areas, this is not surprising given 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 4% in country South Australia. Tables 5 and 6 show the Local Government Areas and roads where the highest number of fatal and serious injury pedestrian crashes occurred.

Table 5 – Top 10 Local Government Areas in which fatal and serious injury crashes involving pedestrians occurred, South Australia, 2005-2009

Local Government Area	Number of fatal or serious injury pedestrian crashes
Adelaide	75
Port Adelaide /Enfield	51
Charles Sturt	38
Salisbury	29
Onkaparinga	28
Unley	27
Norwood Payneham St Peters	26
West Torrens	25
Playford	23
Holdfast Bay	22

Table 6 – Roads with the highest number of crashes resulting in a fatal or serious injury of a pedestrian, South Australia, 2004-2008

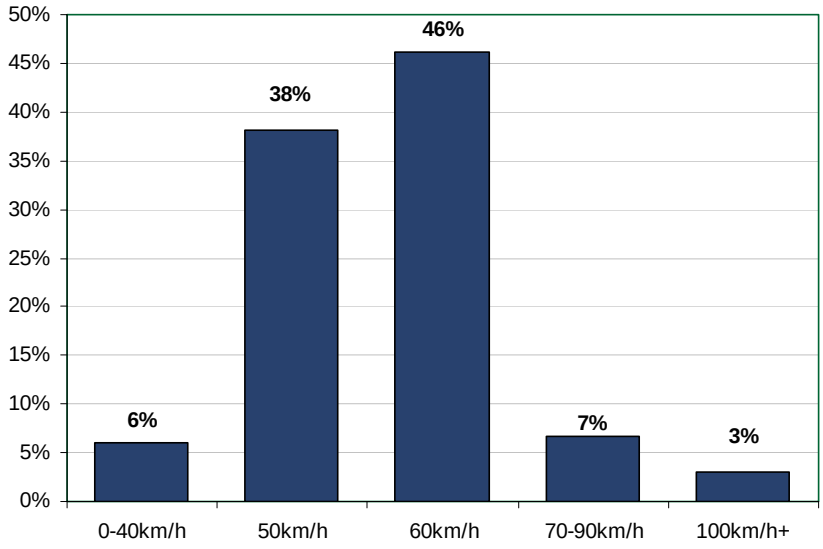
Road	Speed Limit	Pedestrian casualties
South Road	60-80 km/h	16
North East Road	60 km/h	11
North Terrace, Adelaide	50-60km/h	10
Main North Road	60 km/h	10
Pultney Road, Adelaide	50 km/h	9
Goodwood Road	60 km/h	9
Marion Road	60 km/h	9
Hanson Road	60 km/h	8
Tapley's Hill Road	60-80 km/h	7
Brighton Road	60 km/h	7
Port Wakfield Road	60-110 km/h	6
Grand Junction Road	60-80 km/h	6
Prospect Road	50-60km/h	6
Fullarton Road	60 km/h	6
Glen Osmond Road	50-60km/h	6
Henley Beach Road	50-60km/h	6
Seacombe Road	60 km/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 7 – Percentage of crashes resulting in a fatal or serious injury of a pedestrian by speed limit of road, South Australia, 2005-2009



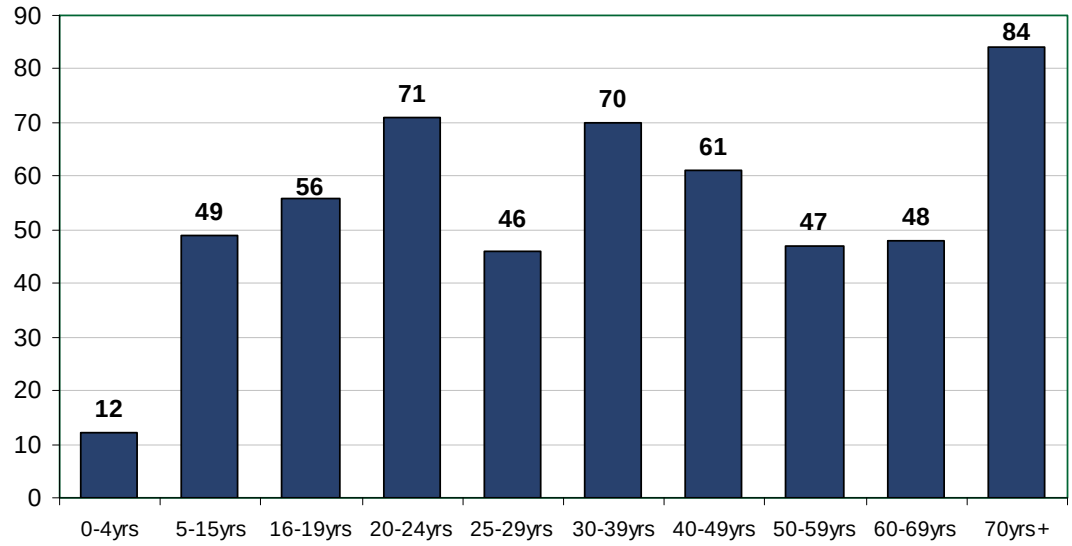
There is evidence that small reductions in urban travel speeds can markedly reduce the number of fatal pedestrian crashes. When Victoria started intensive speed camera enforcement in conjunction with publicity campaigns, there was a 42% reduction in pedestrian deaths.

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 8 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 a smaller percent of the population.

Figure 8 – Serious pedestrian casualties by age group, South Australia, 2005-2009



Figures 9 and 10 show the number of pedestrian fatalities and serious injuries per 100,000 of population in each respective age group.

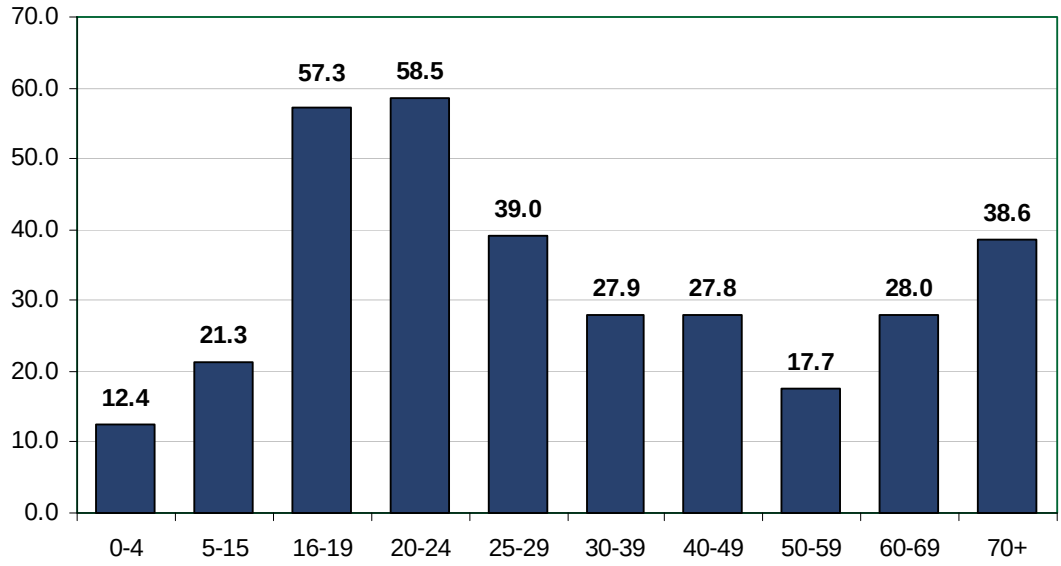
Older pedestrians have a higher risk of death and injury than other age groups when comparing Figure 9 and Figure 10. Elderly pedestrians in particular have a risk of collision with road vehicles due to the perceptual, cognitive and physical deterioration associated with

[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

ageing. If an older person is hit by a car, the outcome is likely to be more severe resulting in a fatality or serious 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 groups[2]. The graphs also show an elevated risk for the 16-24 age groups.

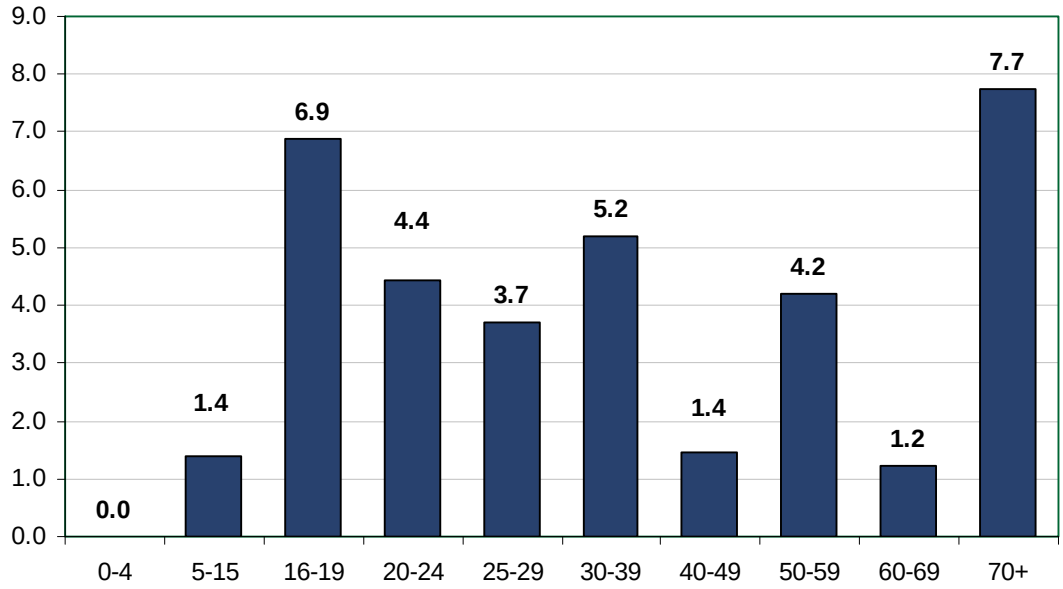
Child pedestrians are smaller, harder for drivers to see and less predictable than other pedestrians. Children are more likely to have serious than minor injuries when hit because their whole body is more likely to be hit by the vehicle frontage, compared with adult pedestrians where the legs only are 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 9 – Pedestrian serious injuries per 100,000 in age groups, South Australia, 2005-2009



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

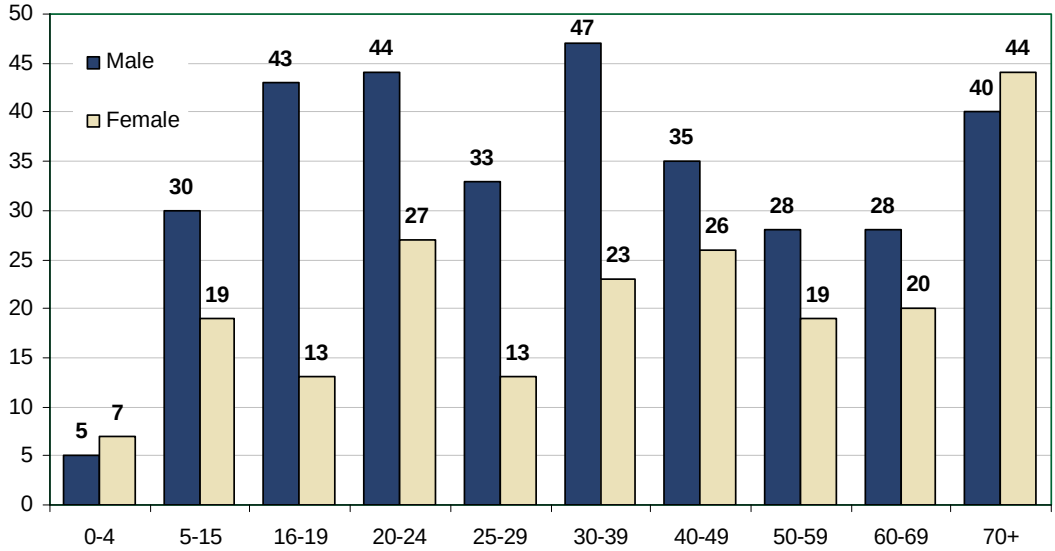
Figure 10 – Pedestrian fatalities per 100,000 in age groups, South Australia, 2005-2009



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 between 2005-2009, 58% were male. This is indicative of the overall road toll, where males are over represented in more serious crashes.

Figure 11 – Number of serious and fatal pedestrian injuries by age group and gender, South Australia, 2005-2009



Males represent the majority of pedestrians seriously injured or killed, this however is not the case in the over 70 age group. Here the involvement of females increases, partly due to a higher proportion of this age group being female.

Pedestrian Casualties and Pedestrian Crossings and Traffic Signals

Pedestrian casualties are much higher when *no* pedestrian crossing or signalised intersection is present, such casualties are primarily the result of pedestrians attempting to cross the road where there are no facilities to aid them in crossing. Attempting to cross the road where there is no assisting traffic facilities can be further impaired by the presence of alcohol and drugs and also by a person's age. Younger and older people are particularly poor at making speed and gap judgements.

On average 30% of pedestrian fatalities and serious injuries occur at intersections and 70% at mid-block sections of road (i.e. where there are no intersecting roads). Of those that occurred at intersections, Table 12 shows that 67% of these occurred where there was no traffic signal.

Table 12 - Pedestrian fatalities and serious injuries at intersections, South Australia, 2005-2009

Road Position	Serious Casualties	Percentage
Traffic Signals	54	33%
Stop sign	7	4%
Give way sign	12	7%
No control	85	52%
Roundabout	6	4%
Total	164	100%

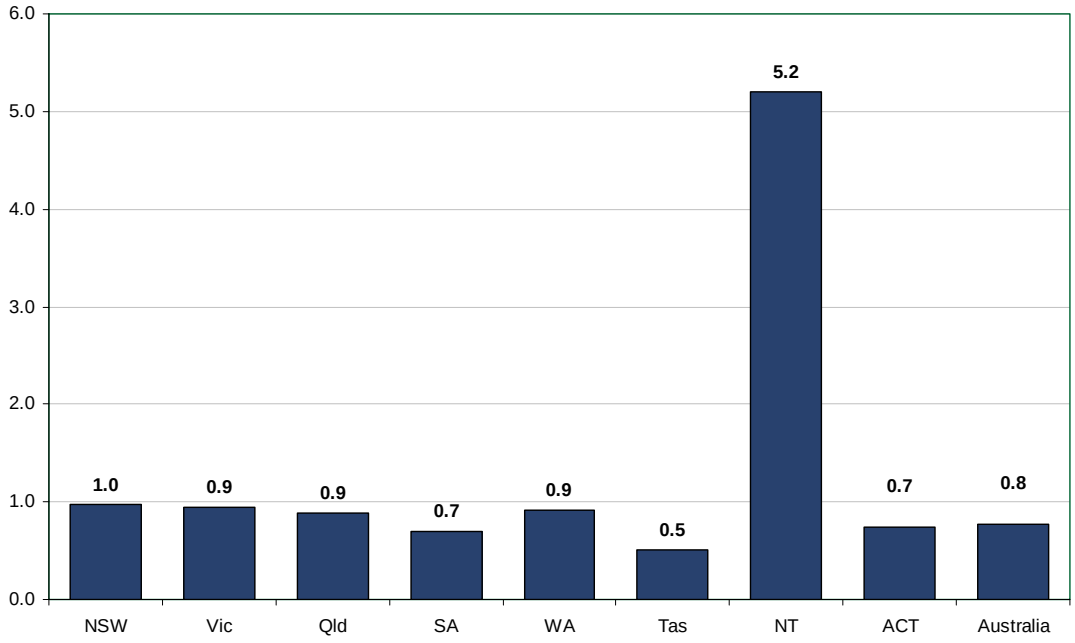
Pedestrians Affected by Alcohol and/or Other Drugs

The presence of alcohol or drugs in a pedestrian's system can impair their ability to safely negotiate roads and traffic. Between 2005 - 2009 of the pedestrian fatalities who were tested 40% were found to have a blood alcohol content of more than 0.05. 27% 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 crash. On average 18% also tested positive to marijuana or methamphetamine.

National Comparison

Figure 13 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 13 – Pedestrian fatalities per 100,000 for Australian states and territories, 2005-2009



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 Casualty Crash – A crash where *at least one* fatality or serious injury occurs

Serious Casualty – A fatality or serious injury.

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.

Enquiries

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