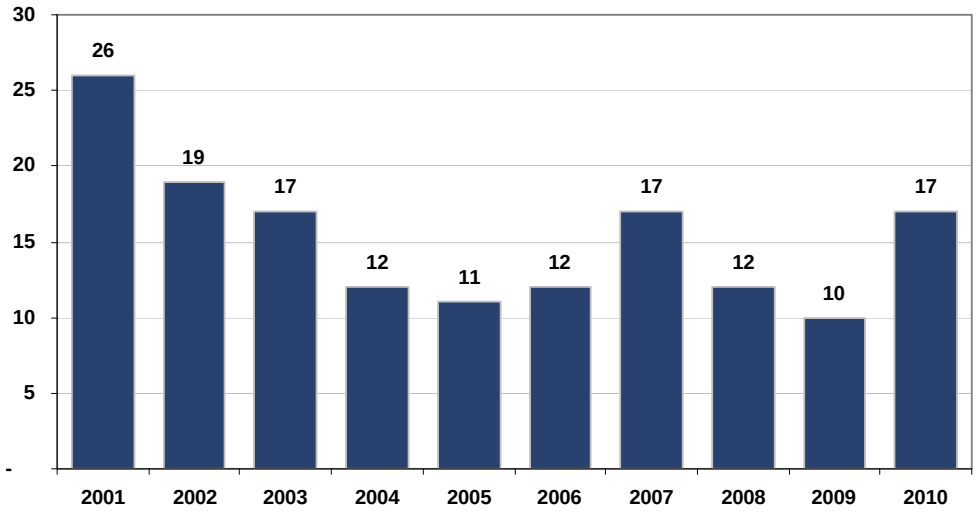
Pedestrians Involved in Road Crashes in South Australia

Over the last five years 2006-2010, nearly 1 in every 8 road deaths in South Australia was a pedestrian. In addition to fatalities, there are on average 106 pedestrians seriously injured and 311 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 2001-2010. Since 2001 there has been a general decrease in the number of pedestrian fatalities per year. Although pedestrian fatalities have increased in some years, the general trend however, is declining

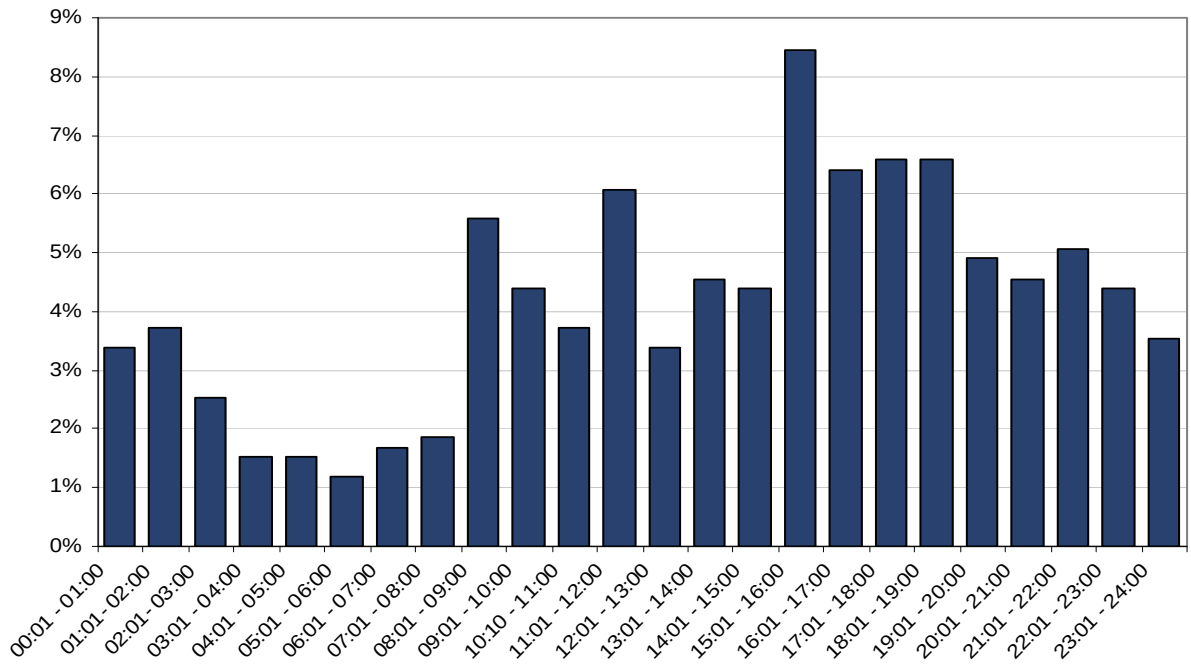
Figure 1 - Pedestrian fatalities per year, South Australia, 2001-2010



Time of Day

Pedestrian serious crashes occur during all times of the day, however there are peak times when the number of serious casualties is particularly high. Figure 2 shows that 55% of crashes that resulted in a serious or fatal injury of a pedestrian were during the hours of 8am - 7pm, a peak occurring between 3 – 7pm.

Figure 2 - Percentage of crashes in which a pedestrian was killed or seriously injured by time of day, South Australia, 2006-2010



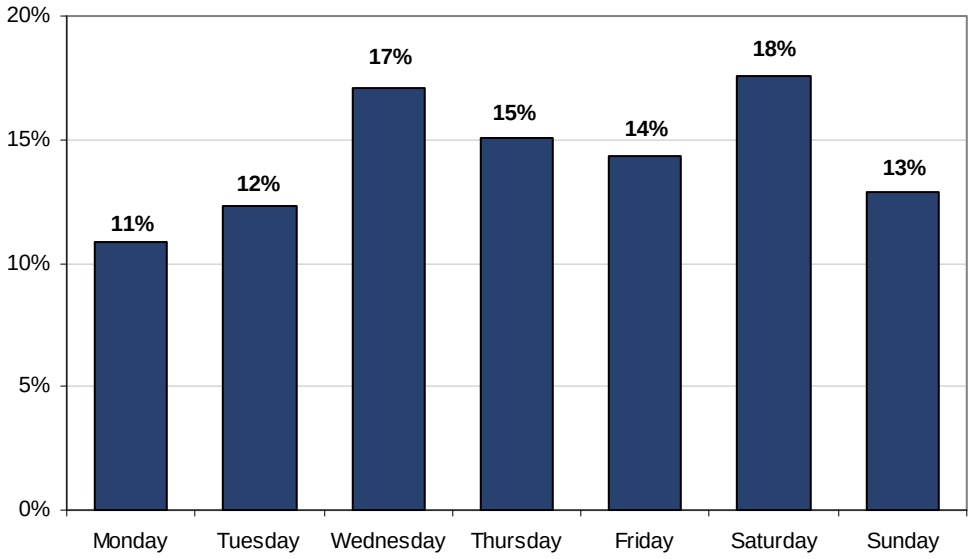
The risk of a crash involving a pedestrian resulting in a serious or fatal injury increases substantially during the hours of darkness. On average, between 2006 – 2010, 30% of all crashes involving a pedestrian being struck occurred between the hours of darkness (6pm – 6am) of these 40% resulted in a serious or fatal injury. A comparison to the daylight hours can be seen in Table 1 where only 23% of crashes involving a pedestrian resulted in a serious or fatal injury.

Table 1 - Percentage of crashes in which a pedestrian was hit by time of day and severity, South Australia, 2006-2010

	Minor injury	Serious or Fatal injury	Total
6am - 6pm	77%	23%	100%
6pm - 6am	60%	40%	100%

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

Figure 3 – Percentage of crashes resulting in a fatal or serious injury of a pedestrian by weekday, South Australia, 2006-2010



Rural versus Metropolitan

During the years 2006-2010, 82% of all crashes that involved a fatality or serious injury of a pedestrian 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, 16% of these involved pedestrians, compared to 4% in country South Australia.

Table 2 shows the Local Government Areas where the highest number of fatal and serious injury pedestrian crashes occurred.

Table 2 – Top 10 Local Government Areas where a crash resulting is a fatal or serious injury to a pedestrian occurred, South Australia, 2006-2010

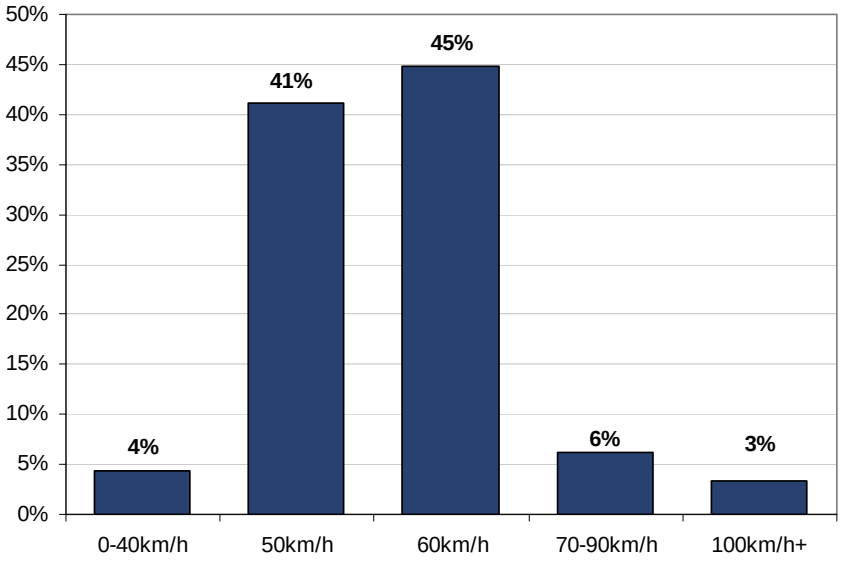
Local Government Area	Number of fatal or serious injury pedestrian crashes
Adelaide	79
Port Adelaide Enfield	55
Charles Sturt	46
Salisbury	31
Playford	28
Unley	28
Holdfast Bay	28
West Torrens	27
Norwood Payneham St Peters	27
Onkaparinga	27

Speed Limit of Road

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].

Figure 4 – Percentage of crashes resulting in a fatal or serious injury of a pedestrian by speed limit of road, South Australia, 2006-2010



Pedestrian Crossings and Traffic Signals

Pedestrian serious 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 can have difficulty at making speed and gap judgements.

[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

On average 28% of pedestrian fatalities and serious injuries occur at intersections and 72% at mid-block sections of road (i.e. where there are no intersecting roads). Of those that occurred at intersections, 63% of these occurred where there was no traffic signal.

Table 3 – Crashes at intersections resulting in the a fatality or serious injury of a pedestrian, and control South Australia, 2006 - 2010

Intersection Control	Serious Casualty Crashes	Percent
Traffic signals	61	37%
Stop sign	8	5%
Give way sign	13	8%
No control	79	48%
Roundabout	5	3%
Total	**166**	**100%**

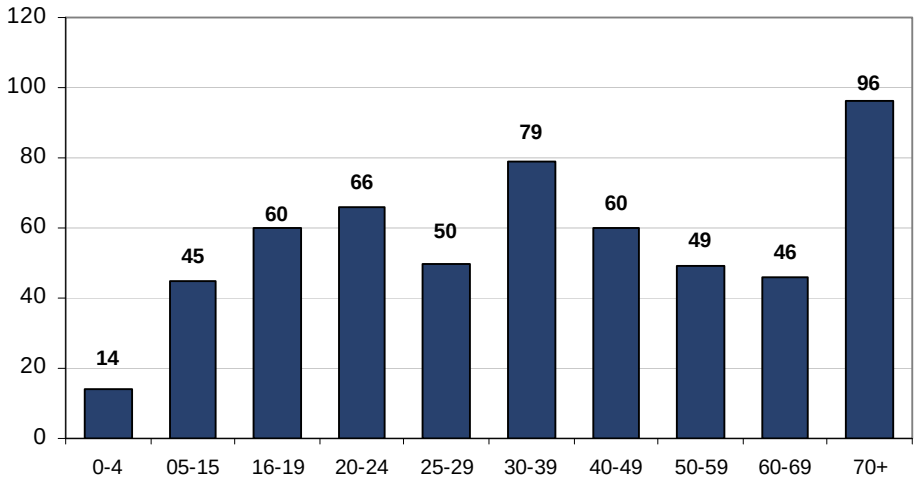
Pedestrians Affected by Alcohol and/or Other Drugs

The presence of alcohol or drugs in a pedestrian's system can impair their ability to safely negotiate roads and traffic. Between 2006 - 2010 of the pedestrian fatalities who were tested 40% were found to have a blood alcohol content of more than 0.05. 24% 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 12% also tested positive to cannabis or methamphetamine.

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 a smaller percent of the population.

Figure 5 – Serious pedestrian casualties by age group, South Australia, 2006-2010

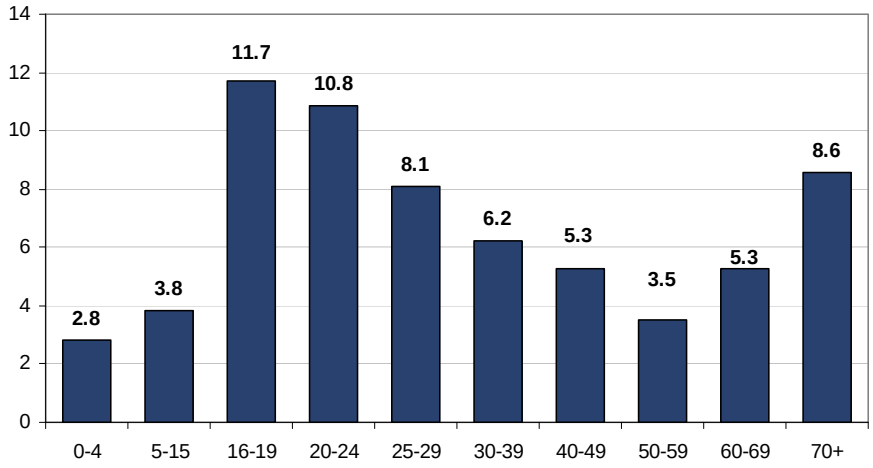


Figures 6 and 7 show the number of pedestrian fatalities and serious injuries per 100,000 of population in each respective age group.

Elderly pedestrians and those aged 16-24 have an elevated risk of injury from a collision. in particular have a 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 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].

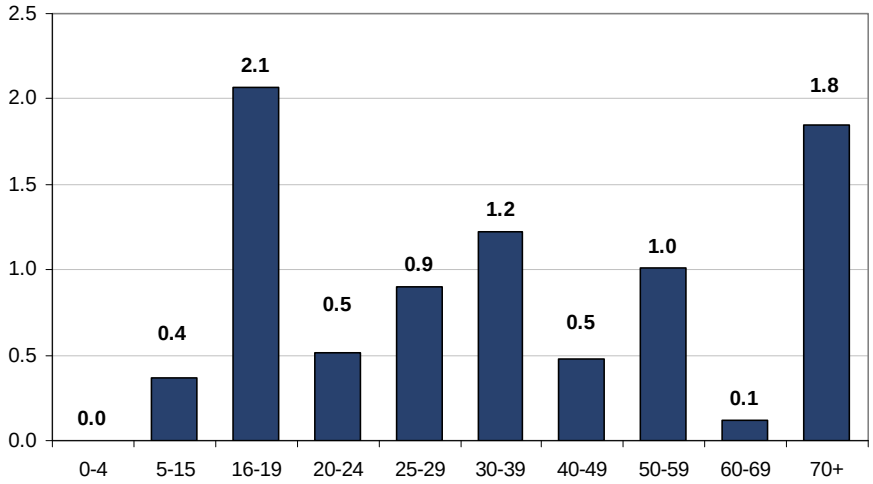
Child pedestrians are smaller, harder for drivers to see and less predictable than other pedestrians. Children are more likely to have serious than minor injuries when hit because their whole body is more likely to be hit by the vehicle frontage, compared with adult pedestrians where the legs only are 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 6 – Pedestrian serious injuries per 100,000[3] by age, South Australia, 2006-2010



[2] Page 203 'Road Safety in Australia. A publication commemorating World Health Day 2004' Australian Transport Safety Bureau.
[3] Australian Bureau of Statistics, Population by Age and Sex, June 2010, Cat no. 3201.6

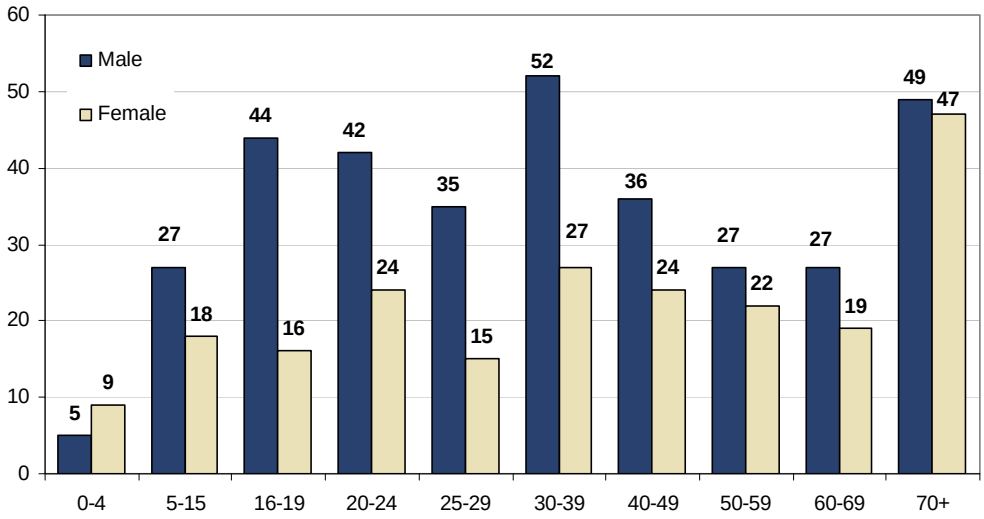
Figure 7 – Pedestrian fatalities per 100,000 in age groups, South Australia, 2006-2010



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 and seriously injured between 2006-2010, 61% were male. This is indicative of the overall road toll, where males are over represented in more serious crashes.

Figure 8 – Number of serious and fatal pedestrian injuries by age group and gender, South Australia, 2006-2010

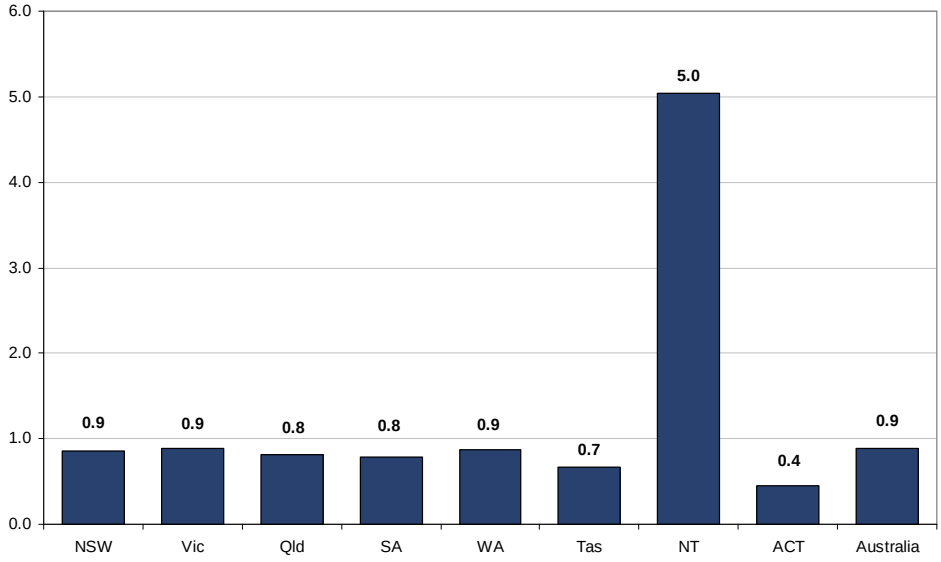


Males represent the majority of pedestrians seriously injured or killed, this however is not the case in the over 70 age group. Here the involvement of females increases, partly due to a higher proportion of this age group being female.

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 below the national average. The fatality rate dropped from 0.9 in the 2002-2006 period to 0.7 in 2004-2008, but has risen slightly to 0.8 for the 5 year period between 2006-2010.

Figure 9 – Pedestrian fatalities[4] per 100,000[5] for states and territories, 2006-2010



[4] Bureau of Infrastructure, Transport and Regional Economics, Road Deaths Australia – 2010 Statistical Summary

[5] Australian Bureau of Statistics, Australian Demographic Statistics, December 2010

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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