

## PEDESTRIANS

### INVOLVED IN ROAD CRASHES IN SOUTH AUSTRALIA

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 - Pedestrian fatalities per year, South Australia, 2004-2013**

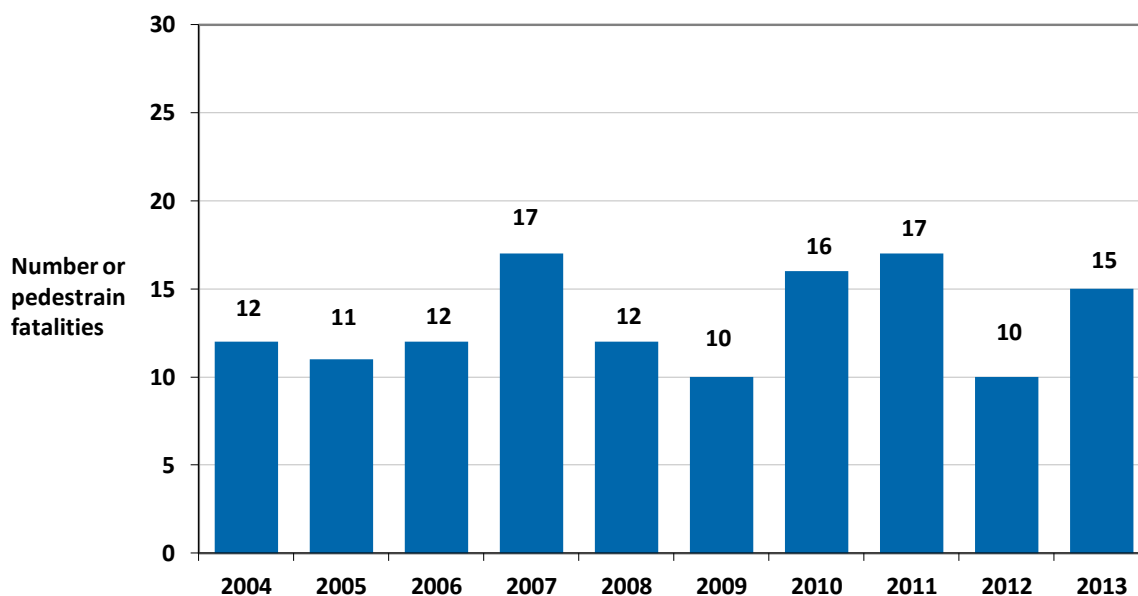


Figure 1 shows the number of pedestrian fatalities per year for the period 2004-2013. Whilst in the last ten years pedestrian fatalities have been fluctuating, last year 15 pedestrians were killed and this is up on the previous 5 year average of 13 fatalities for the 2008-2012 period.

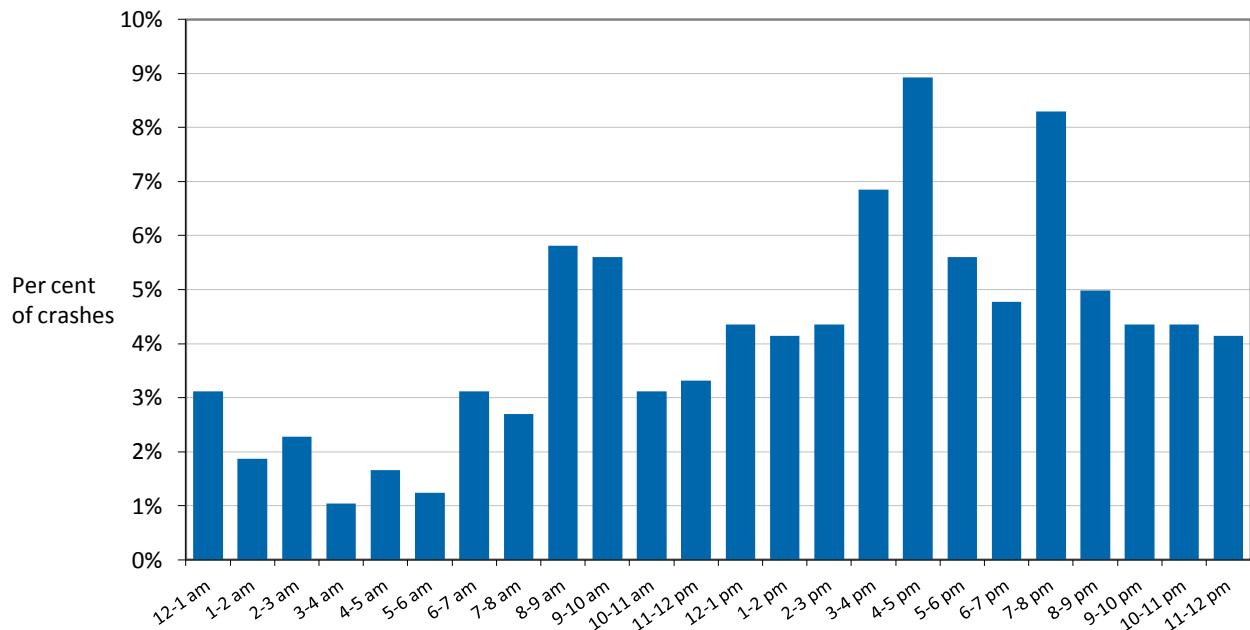
Over the last five years (2009-2013), 1 in every 8 road deaths in South Australia was a pedestrian. In addition to fatalities, there are on average 87 pedestrians seriously injured and 262 who received minor injuries on South Australian roads each year.



## 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. 60% of crashes that resulted in a serious or fatal injury of a pedestrian were during the hours of 7am - 7pm, a peak occurring between 4 – 5pm.

**Figure 2 - Percentage of crashes in which a pedestrian was killed or seriously injured by time of day, South Australia, 2009-2013**



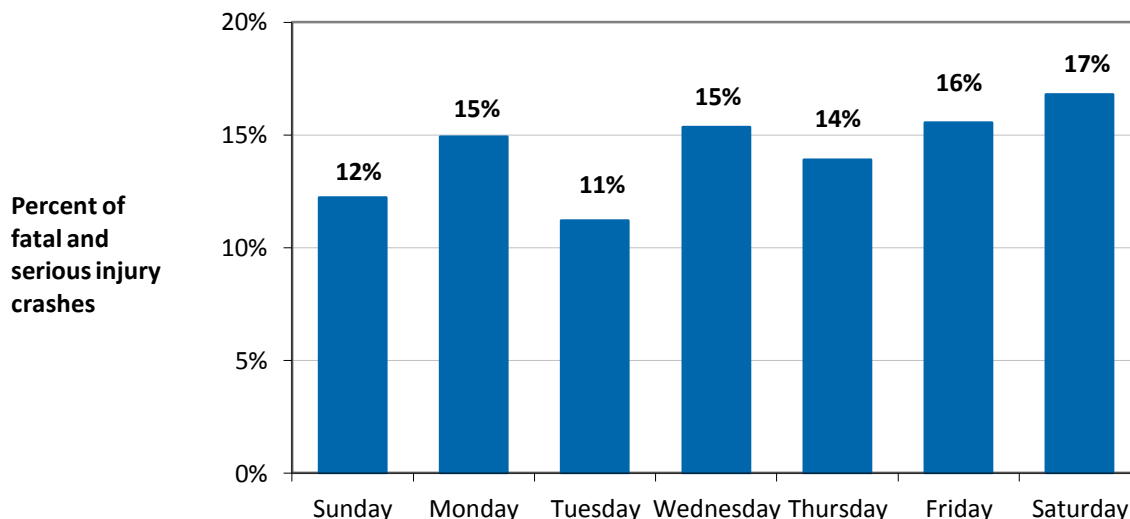
The risk of a crash involving a pedestrian resulting in a serious or fatal injury increases substantially during the hours of darkness. Although only 32% of casualty crashes occurred during the hours of 6 pm to 6 am, when they did occur 37% of them resulted in a fatal or serious injury. By comparison of the casualty crashes that occurred during 6 am to 6 pm, 23% of them resulted in a fatal or serious injury as illustrated in Table 1.

**Table 1 - Percentage of crashes in which a pedestrian was hit by time of day and severity, South Australia, 2009-2013**

Time	Minor injury crash	Serious or fatal injury crash	Total
6am - 6pm	77%	23%	100%
6pm - 6am	63%	37%	100%

Figure 3 shows the frequency of fatal and serious injury pedestrian crashes by weekday and indicates the frequencies increase slightly on Fridays & Saturdays, the spread across weekdays is however somewhat even.

**Figure 3 – Percentage of crashes resulting in a fatal or serious injury of a pedestrian by weekday, South Australia, 2009-2013**



### Rural versus Metropolitan

During the years 2009-2013, 81% 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. 17% of all serious and fatal crashes in the metropolitan area involved a pedestrian, this compares to 4% in rural South Australia.

Table 2 shows the Local Government Areas where the highest number of fatal and serious injury pedestrian crashes occurred. These crashes represent 66% of all pedestrian crashes.

**Table 2 – Top 10 Local Government Areas where a crash resulting is a fatal or serious injury to a pedestrian occurred, South Australia, 2009-2013**

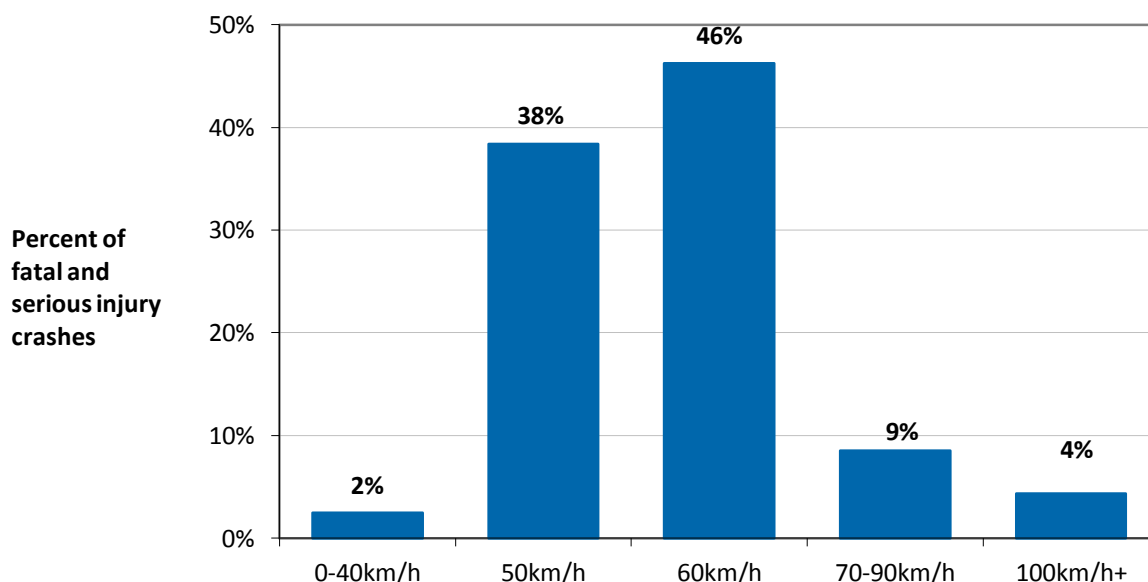
Local Government Area	Fatal or serious injury pedestrian crashes
Adelaide	61
Port Adelaide Enfield	42
Onkaparinga	35
Charles Sturt	34
Playford	33
Salisbury	33
Norwood Payneham St Peters	27
West Torrens	21
Marion	18
Mitcham	15

## 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<sup>1</sup>.

**Figure 4 – Percentage of crashes resulting in a fatal or serious injury of a pedestrian by speed limit of road, South Australia, 2009-2013**



During the years 2009-2013, 38% of all crashes that involved a fatality or serious injury of a pedestrian in South Australia occurred on roads with a 50 km/h speed limit and a further 46% were on roads with a 60km/h speed limit.

<sup>1</sup> 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

### 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 making speed and gap judgements.

On average 29% of pedestrian fatality and serious injury crashes occur at intersections and 71% at mid-block sections of road (i.e. where there are no intersecting roads). Of those that occurred at intersections, 60% of these occurred where there was no traffic signal.

**Table 3 – Crashes at intersections resulting in a fatality or serious injury of a pedestrian, by control South Australia, 2009 – 2013**

Intersection Control	Serious Casualty Crashes	Percent
Traffic signals	57	40%
Stop sign	6	4%
Give way sign	26	18%
No control	48	34%
Roundabout	5	4%
<b>Total</b>	<b>142</b>	<b>100%</b>

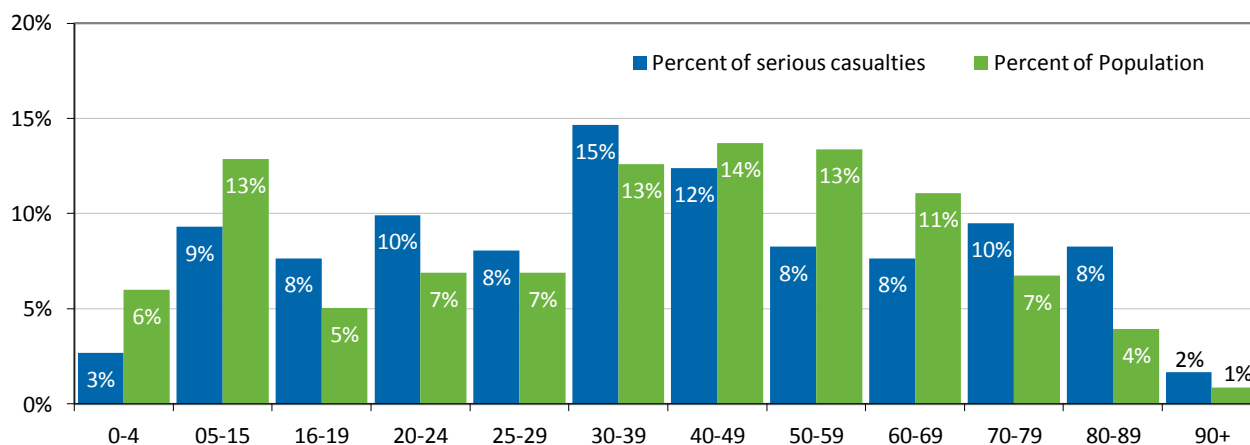
### Pedestrians Affected by Alcohol and/or Other Drugs

The presence of alcohol or drugs in a pedestrian's system can impair their ability to safely negotiate roads and traffic. Between 2009 and 2013, of the pedestrian fatalities that were tested 37% were found to have a blood alcohol content of more than 0.05. 19% 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 10% tested positive to cannabis, MDMA, methamphetamine or a combination of these drugs.

### Age of Pedestrians

Figure 5 shows the percent of pedestrians killed or seriously injured by age group along with the percent of the population they represent. This indicates that the most over-represented age groups are the 16 – 24 year olds and the 70+ age group.

**Figure 5 – Percent of serious pedestrian casualties by age group and population, South Australia, 2009-2013**



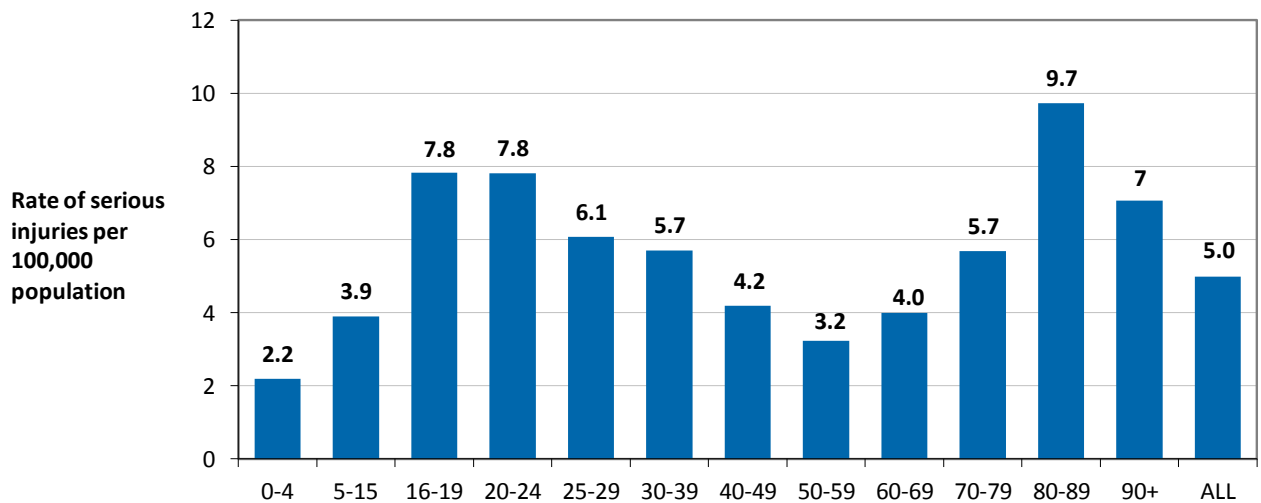
Elderly pedestrians and those aged 16-24 have an elevated risk of injury from a collision, in particular with road vehicles. Due to the perceptual, cognitive and physical deterioration associated with ageing, if an older person is hit by a car, the outcome is likely to be more severe resulting in a fatality 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<sup>2</sup>.

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.

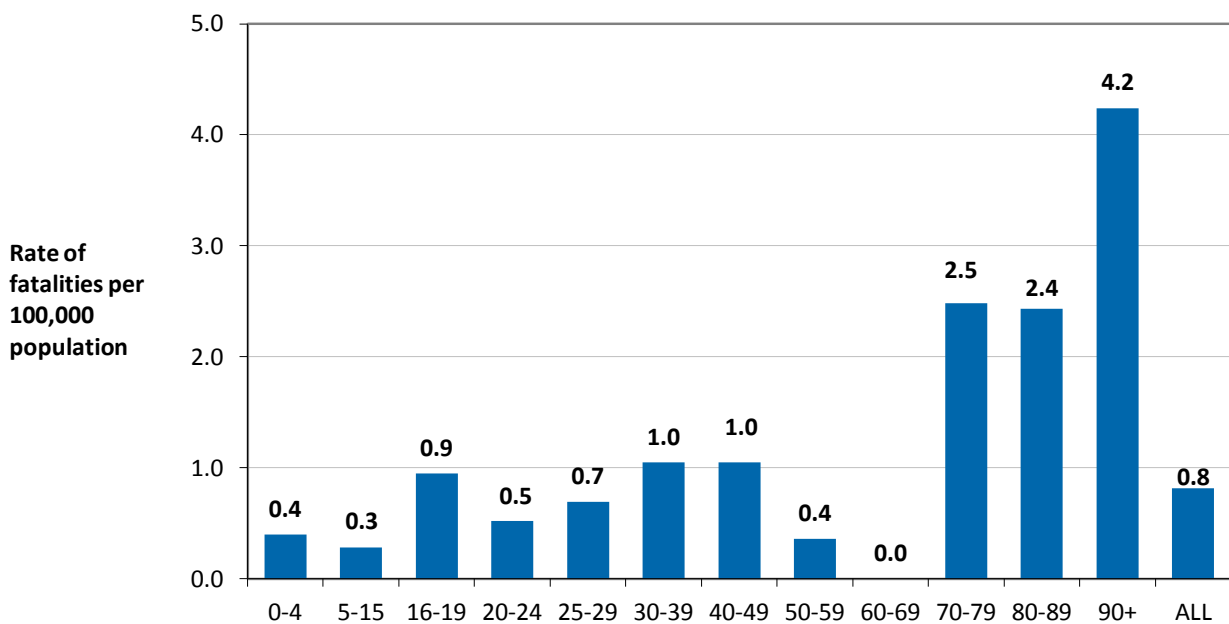
Figures 6 and 7 show the number of pedestrian fatalities and serious injuries per 100,000 of population in each respective age group.

<sup>2</sup> Page 203 'Road Safety in Australia. A publication commemorating World Health Day 2004' Australian Transport Safety Bureau.

**Figure 6 – Pedestrian serious injuries per 100,000<sup>3</sup> population by age, South Australia, 2009-2013**



**Figure 7 – Pedestrian fatalities per 100,000 population by age groups, South Australia, 2009-2013**

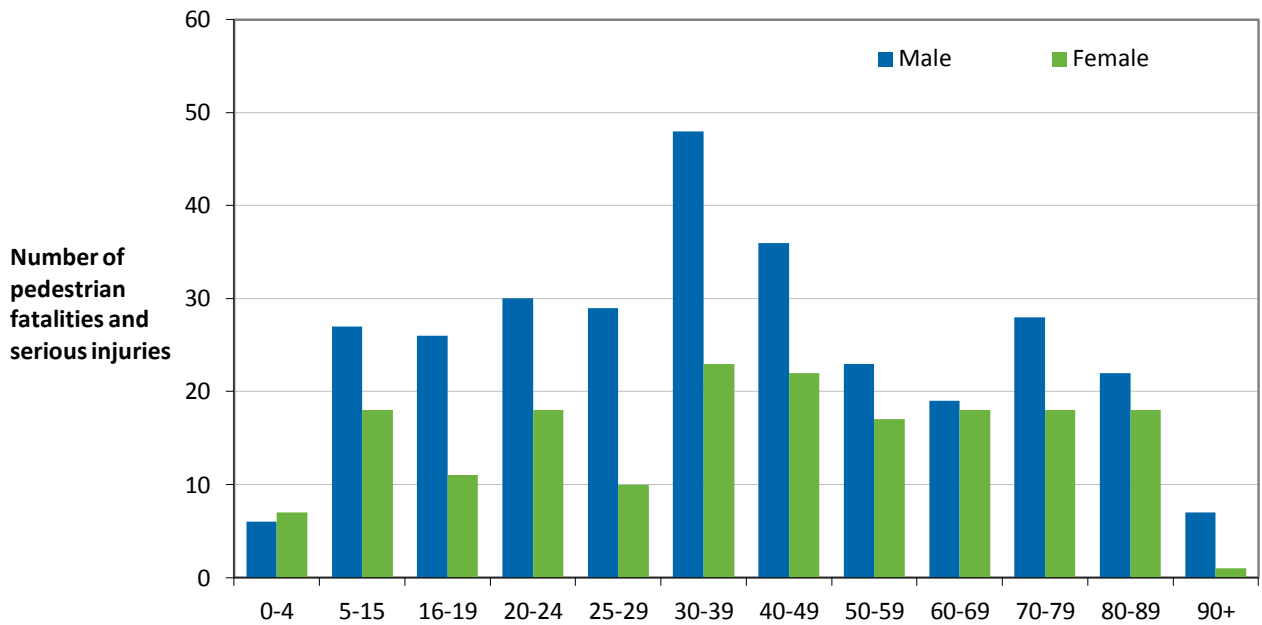


### Gender of Pedestrians

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 2009 and 2013, 62% were male. This is indicative of the overall road toll, where males are over represented in more serious crashes.

<sup>3</sup> Australian Bureau of Statistics, Australian Demographic Statistics, Cat no. 3101.0

**Figure 8 – Serious and fatal pedestrian injuries by age group and gender, South Australia, 2009-2013**

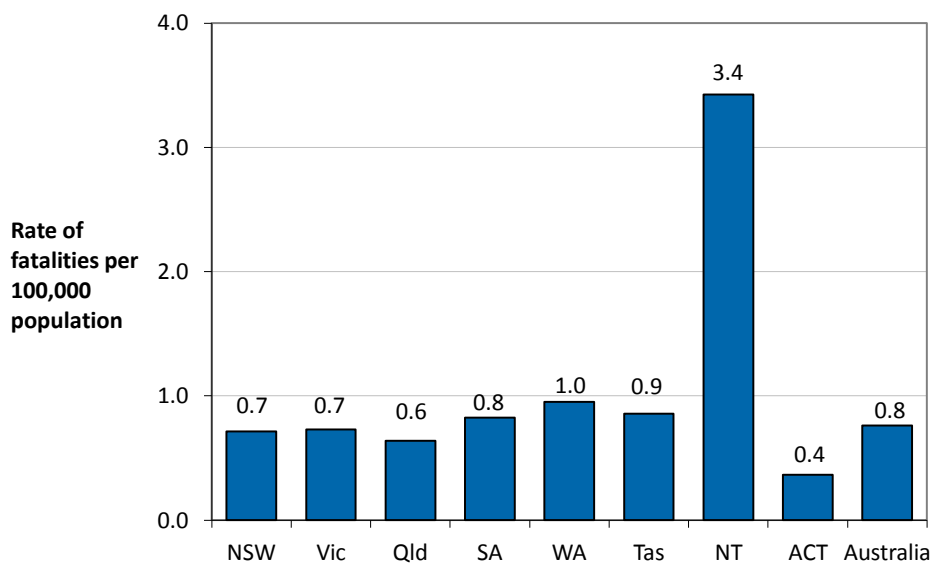


Males represent the majority of pedestrians seriously injured or killed, however this difference is less prominent in the older age groups and the very young.

### National Comparison

Figure 9 shows the average fatality rate per 100,000 population in the last 5-year period for Australian States and Territories. 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 2009-2013.

**Figure 9 – Pedestrian fatalities<sup>4</sup> per 100,000 for states and territories, 2009-2013**



<sup>4</sup> Bureau of Infrastructure, Transport and Regional Economics, Road Deaths Australia – 2012 Statistical Summary



## 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 of Planning, Transport 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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