

RURAL ROAD CRASHES IN SOUTH AUSTRALIA

August 2014

Broadly defined, the Adelaide metropolitan region extends as far as Gawler Municipality to the north, Adelaide Hills District Council in the east (Bridgewater) and as far south as Onkaparinga Municipality (Sellicks Beach). The rural region extends outwards from this area and covers the rest of the local government areas within South Australia.

Historically, there have always been more fatalities recorded in rural South Australia than Adelaide. Although the majority of *minor* injuries resulting from road crashes occur in the Adelaide metropolitan area, during 2009 - 2013, 61% of fatalities, 46% of serious injuries and 17% of minor injuries occurred in rural areas.

Figure 1 – Number of fatalities by area, South Australia, 1994-2013

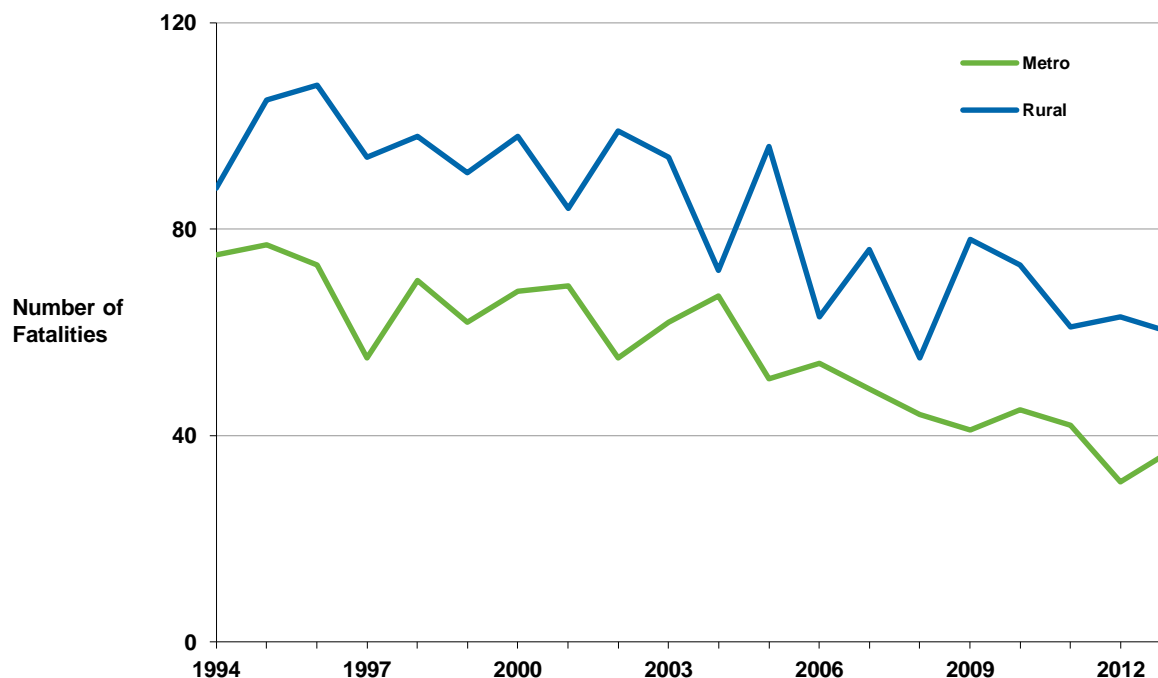


Figure 1 shows that fatalities in rural areas are declining along the same trend as fatalities in metropolitan Adelaide, however the percentage decline is not quite as steep. Since 1994 metro fatalities have trended downwards by 4.2% per year and rural fatalities have decreased by 3.5% per year.

In 2013, 61% of all fatalities in South Australia occurred in rural areas. This is same as the 61% of fatalities occurring in rural areas for the past 5 years (2009-2013). There has been an increase in the proportion of rural fatalities since the early 1980s where it was around 54%.

Table 1 – Percentage of fatalities by area, South Australia, 2009-2013

Year	Urban	Rural
2009	35%	65%
2010	42%	58%
2011	43%	57%
2012	34%	66%
2013	39%	61%
Average	39%	61%

Involvement in rural crashes by place of residence

The following pie chart (Figure 2) shows the involvement of rural drivers and riders killed or seriously injured in rural crashes. The proportions shown are estimates based on the recorded residential postcodes of fatal and seriously injured drivers and riders involved in rural crashes.

Figure 2 – Drivers and riders killed or seriously injured in rural areas by place of residence, South Australia, 2009-2013

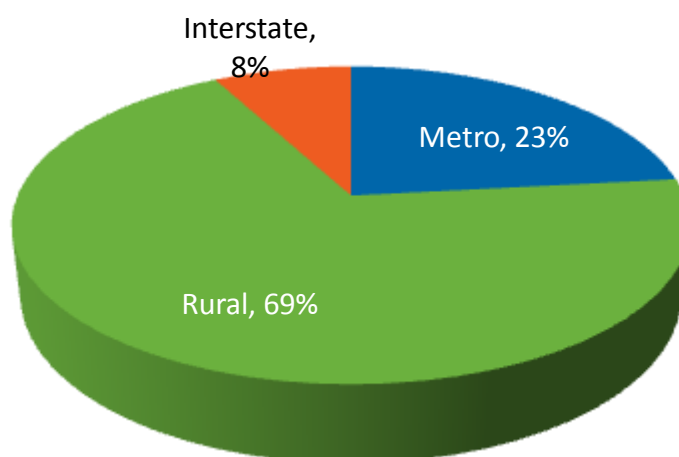


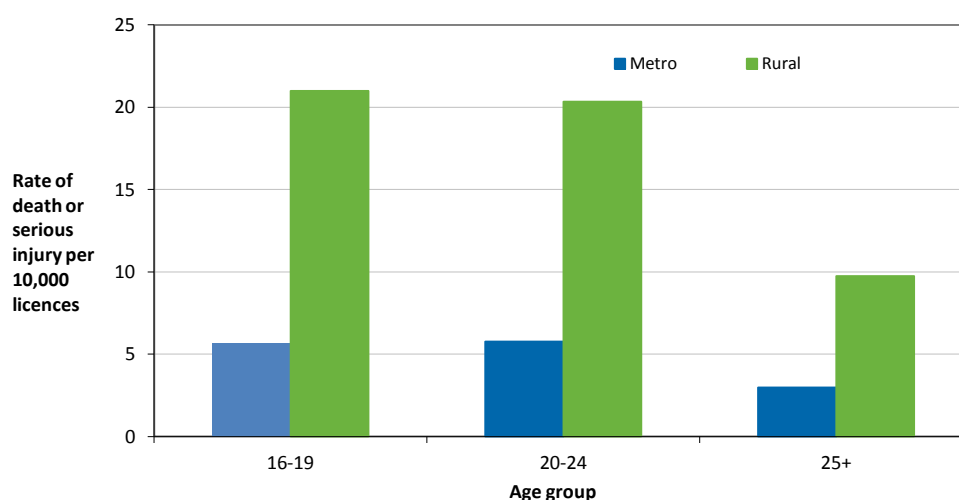
Figure 2 illustrates that of the known driver residence postcodes, the vast majority, 69% of driver/rider serious casualties in rural areas live in rural areas, while 23% reside in Adelaide the remaining 8% were interstate residents.

Rural and urban fatal and serious casualty rates by age group

Comparisons between urban and rural residents show that rural driver and rider casualties in all age groups have higher fatality involvement rates per head of population. Young drivers and riders aged 16 – 24 in rural

South Australia are 3 times more likely to or be seriously injured in a crash than those who live in the metro area.

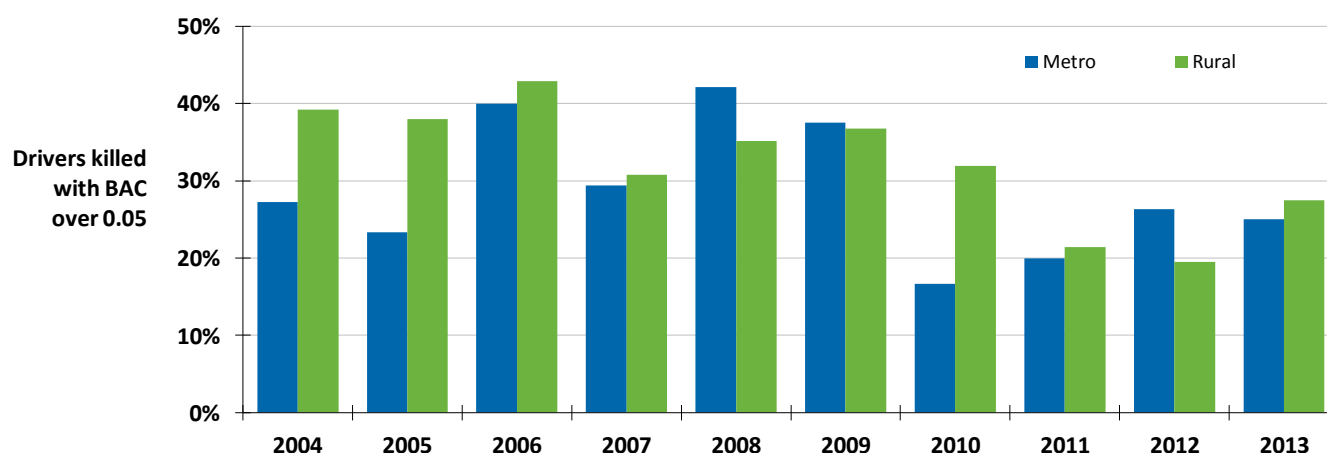
Figure 3 – Rate of death or serious injury per 10,000 licences held for drivers/riders by residence 2009-2013



Alcohol and drugs in urban/rural fatal crashes

Figure 4 is the percent of drivers and riders killed that were tested for BAC and had a BAC above .05 by the area they crashed. The percentage between the two has changed over time. The percent of drivers/riders killed in the metro area with an illegal BAC has gone from over 40% in 2008 to a low of 17% in 2010, rising again to 25% in 2013. The per cent of rural driver/rider fatalities with an illegal BAC peaked at 43% in 2006, last year 28% of drivers/riders killed in rural areas had an illegal BAC. During 2009 to 2013, 21% of drivers and riders killed, and tested, in rural areas tested positive to either methamphetamine, MDMA, or cannabis (THC) compared to 22% in Adelaide metro areas.

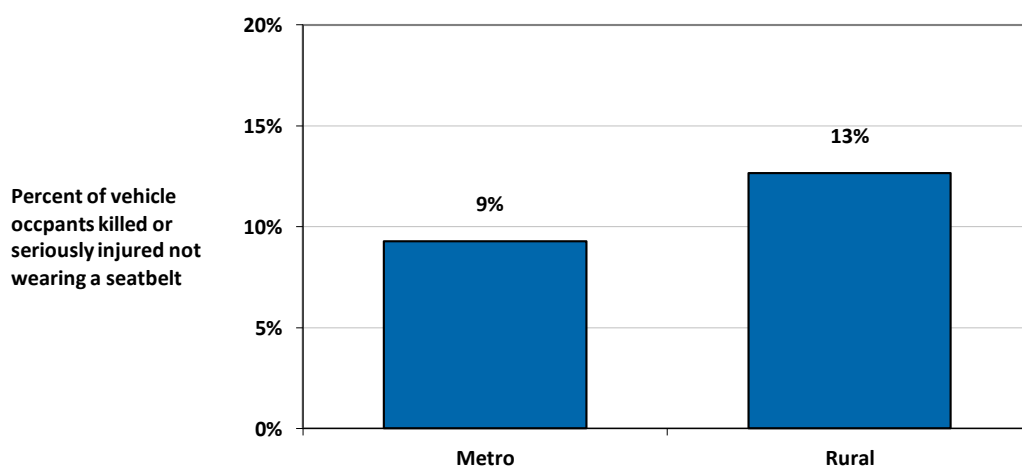
Figure 4 - Percentage of drivers/riders who were killed and tested with a BAC of over .05 by area, South Australia, 2004-2013



Seatbelt wearing in urban and rural crashes

Figure 5 compares seat belt usage between urban and rural area crashes. The graph shows that a higher proportion (13%) of fatal and serious road casualties in rural areas were known not to have worn a seat belt compared to 9% in metro areas. Failure to wear a seatbelt or child restraint in cars travelling on higher speed roads can increase the chances of a fatality or serious injury if involved in a crash. On road observational studies suggest that seatbelt wearing rates are quite high in South Australia and have increased over time.

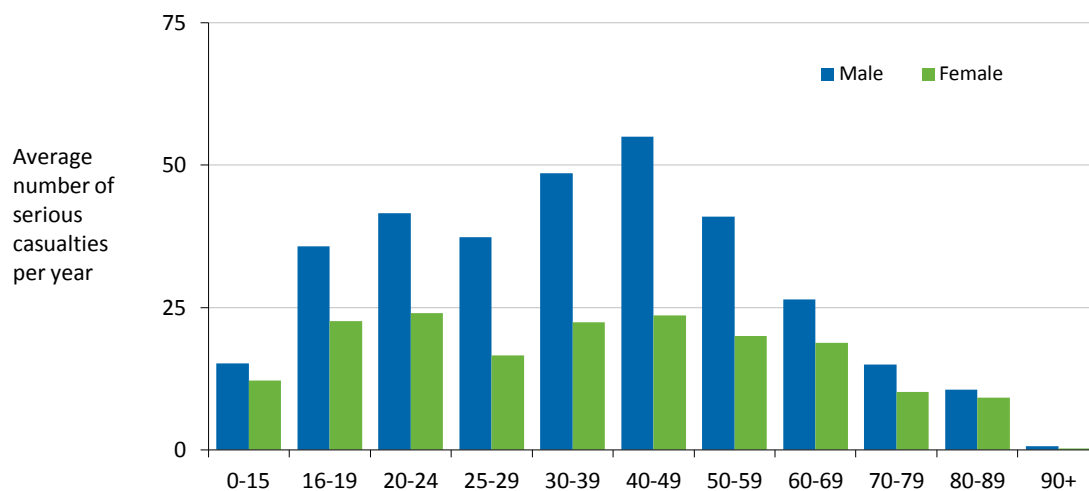
Figure 5 - Percentage of vehicle occupants killed or seriously injured and known not to have worn a seatbelt by area, South Australia, 2009-2013



Gender and age distributions of crashes in rural areas

Figure 6 shows the average number of fatal and serious casualties in rural areas over the 5-year period, 2009-2013 by age and gender. It highlights that males aged between 30-49 years sustain the highest number of fatal and serious injuries than any other age group.

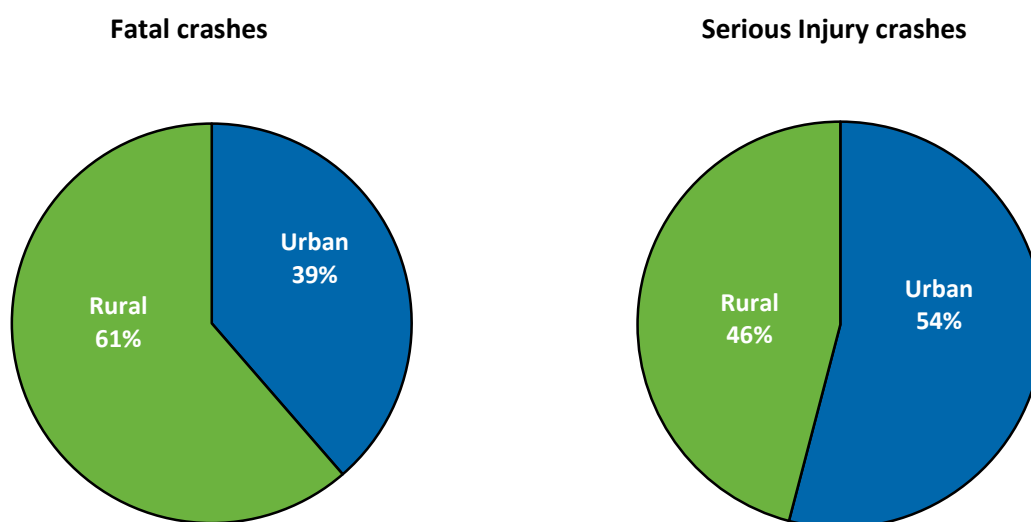
Figure 6 – Average age and gender distribution of serious casualties, Rural South Australia, 2009-2013



Urban-rural distribution of South Australian road crashes

The following pie charts (figure 7) show the distribution of fatal and serious crashes in South Australia.

Figure 7 – Distribution of fatal and serious injury road crashes by region, South Australia, 2009-2013



Greater proportions (61%) of fatal crashes occur in rural areas compared to urban areas. In comparison, 46% of serious injury crashes occur rurally, the majority (54%) occur in urban areas.

Figure 8 – Annual fatal and serious injury crashes, South Australia, 1994-2013

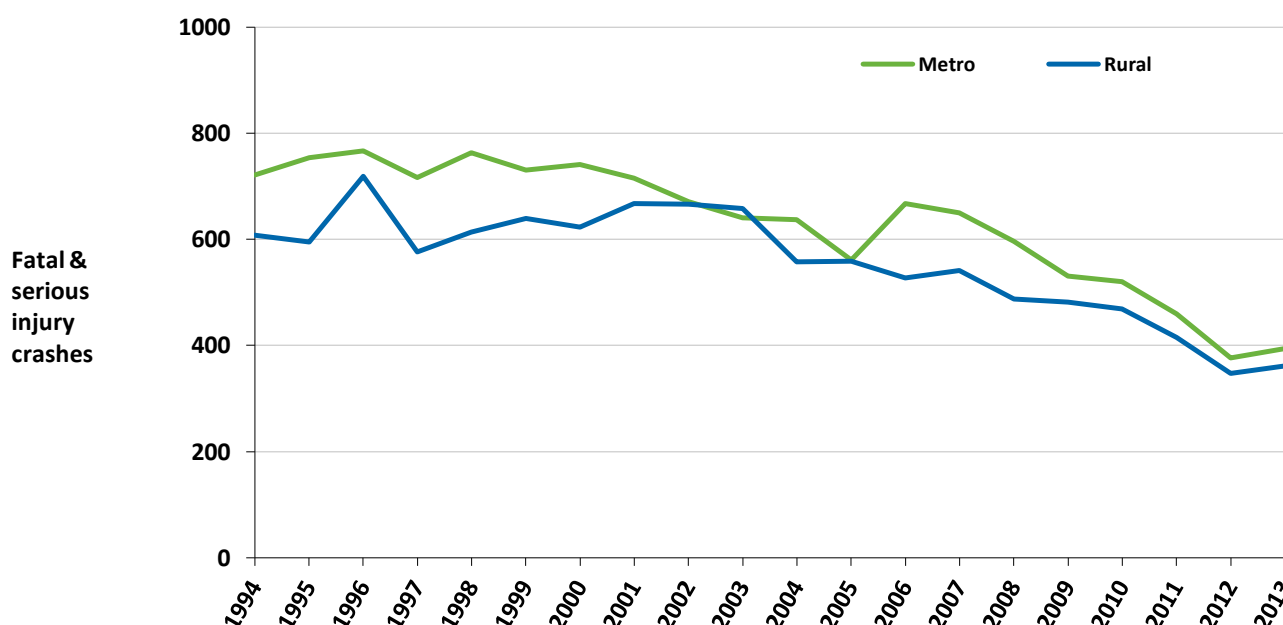


Figure 8 is a time series graph comparing the decline in fatal and serious crashes between urban and rural areas. It shows that since 1994 that fatal and serious injury crashes in rural areas are declining along the same trend as fatal and serious crashes in metropolitan Adelaide. 2003 is the only year in the past 20 years where the number

of rural crashes was higher, coming close in 2005. Last year there were 394 serious and fatal crashes in metropolitan Adelaide and 361 in rural areas.

Type of vehicle involved in crashes

Table 2 shows, as would be expected, rural crashes involve a higher percentage of heavy vehicles (8%) than in urban areas (5%) due to an increased presence on rural roads.

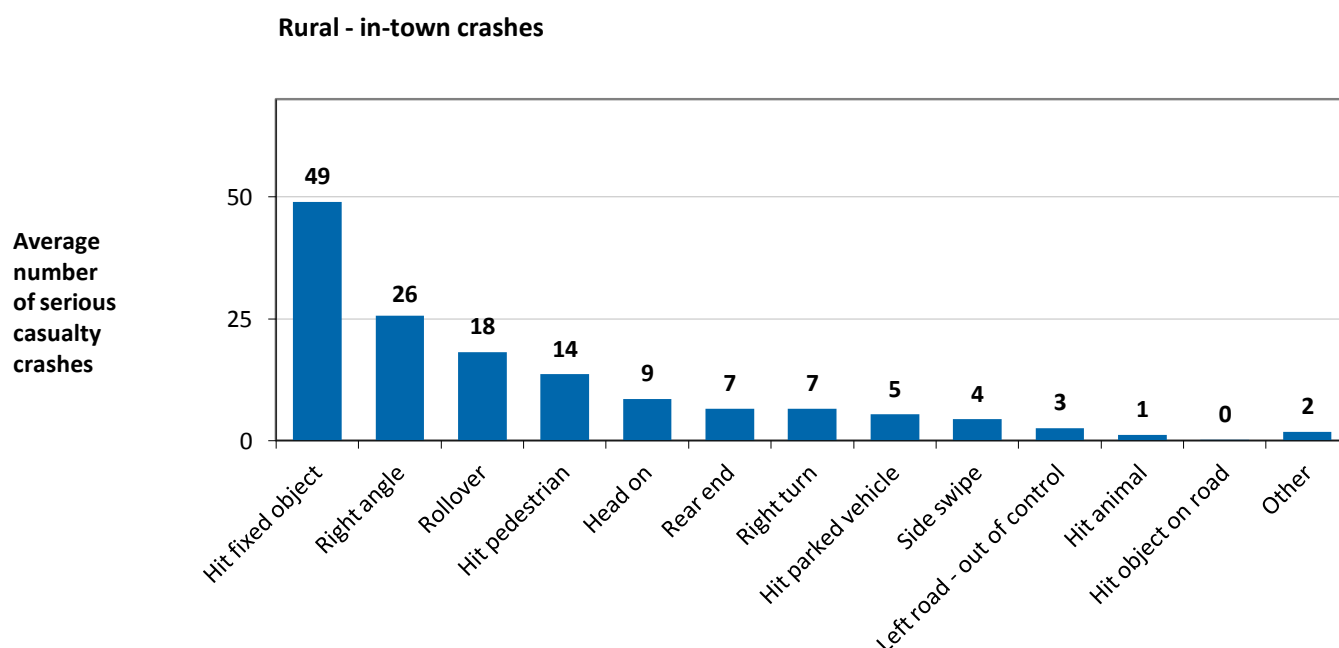
Table 2 – Percentage of vehicle types in serious casualty crashes, South Australia, 2009-2013

Vehicle Type	Rural	Metro
Light Cars and Light Trucks	78%	82%
Heavy Vehicles	8%	5%
Motorcycles	14%	13%

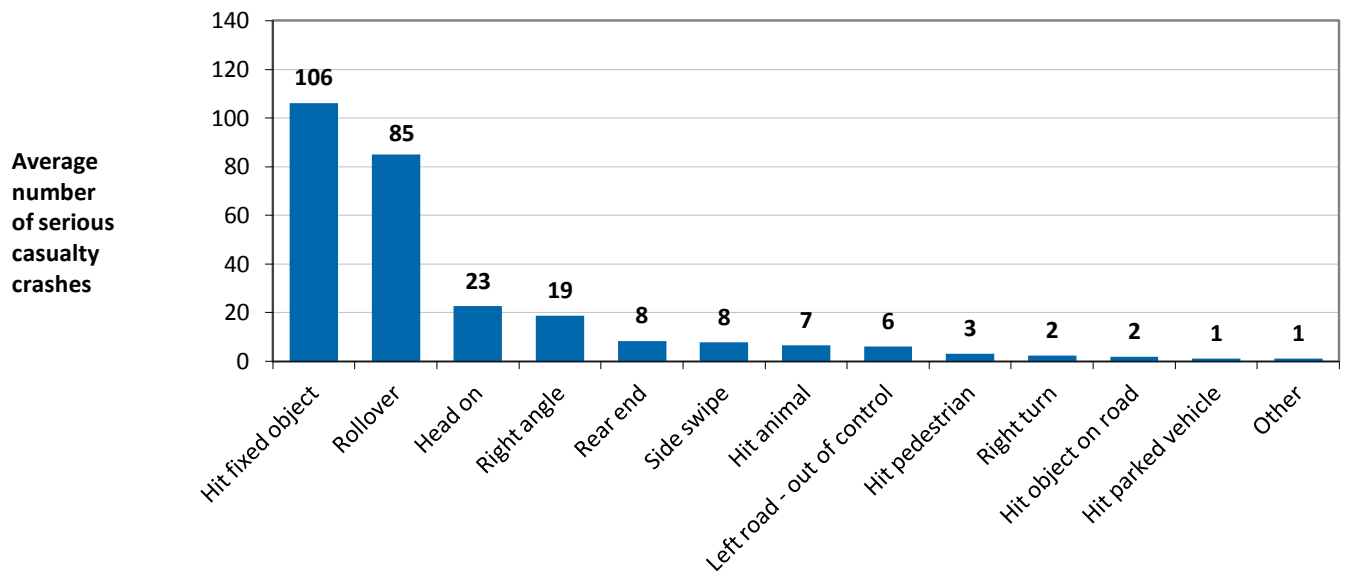
Characteristics of rural crashes

Figure 9 shows the types of crashes occurring in and outside of rural towns. Rural in-town crashes are those occurring in speed zones of 80 km/h or less. Out-of-town crashes are those occurring in speed zones greater than 80 km/h.

Figure 9 –Average number of fatal and serious injury crashes per year in-town and out-of-town crashes by crash type, Rural South Australia, 2009-2013



Rural - out-of-town crashes



The most common crash type for both in and out of town crashes is when a vehicle hits a fixed object. For out of town crashes the next most common type of crash is rollover, together they account for 71% of all out of town crash types. For in town crashes, the next most common is a right angle crash.

Single and multi vehicle fatal and serious crashes

Figure 10 - Proportion of single and multi-vehicle fatal and serious injury crashes occurring by speed limit, Rural South Australia 2009-2013

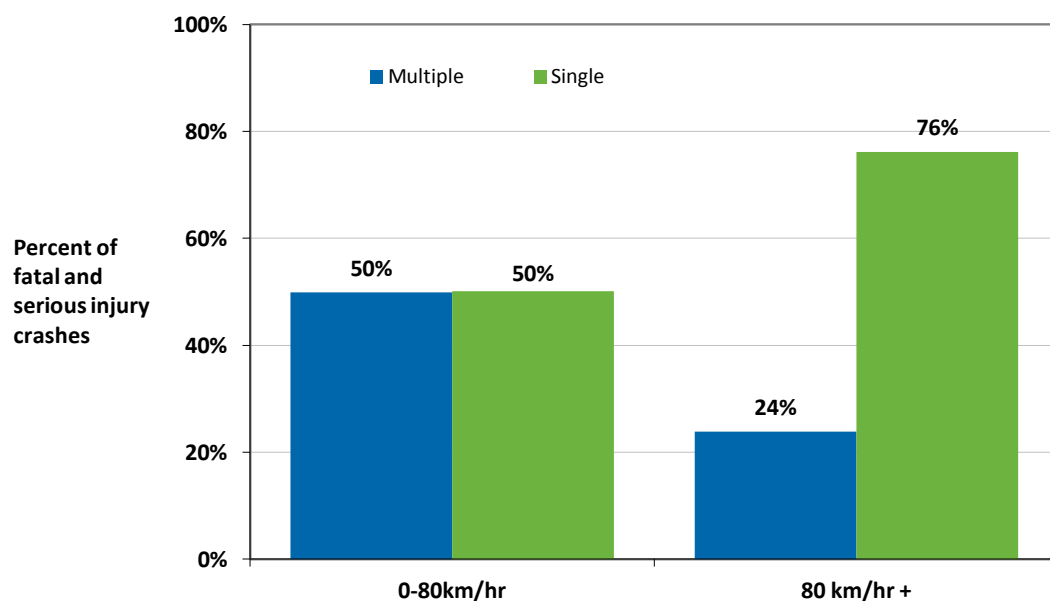
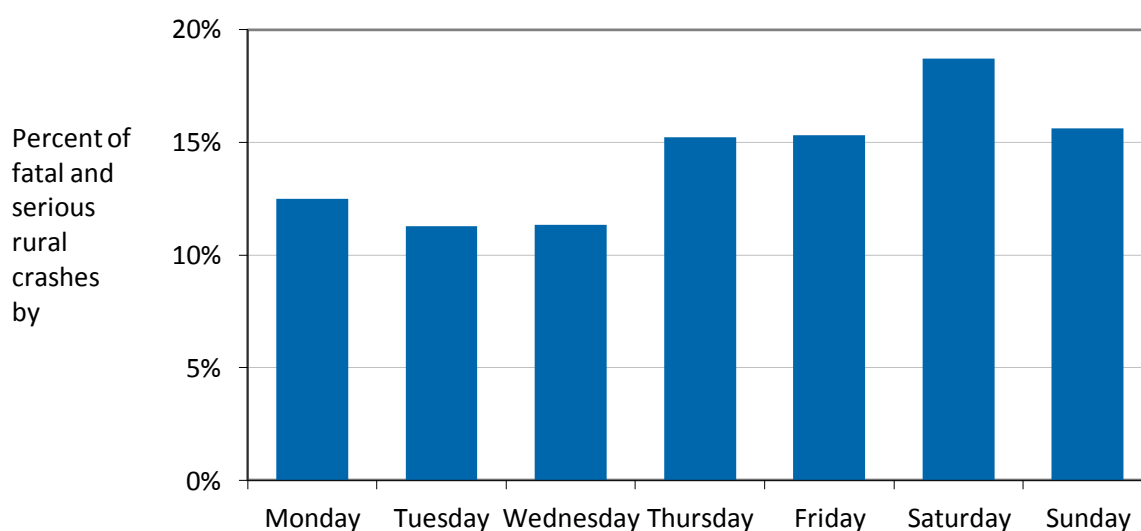


Figure 10 illustrates that the majority (76%) of fatal and serious crashes occurring outside of rural towns are single vehicle type crashes. This is consistent with the most common crash types that occur on higher speed roads – hitting fixed objects and rollovers. Single vehicle crashes in this report relate to crashes that involve hitting a fixed object, animal or a parked vehicle, either on or off the road, a roll over and crashes where the vehicle leaves the road out of control.

Rural crashes by weekday

It can be seen in Figure 11 that there is an increase in the frequency of rural crashes on weekends (Friday through Sunday). Half of rural crashes occur on one of these days, this is a similar proportion to what is observed in metro crashes.

Figure 11 – Percent of fatal and serious casualty rural crashes by day, SA, 2009-2013



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.

Data sources

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

Enquiries

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