OVERVIEW
Over the past years there were more fatalities recorded in rural South Australia than metro Adelaide. Although the majority of serious and minor injuries resulting from road crashes occur in the Adelaide metropolitan area. Statistics for 2012–2016 show that 59% of fatalities, 44% of serious injuries and 16% of minor injuries occurred in rural areas. Serious casualty crashes in the rural area are mostly single vehicle type crashes on high speed roads and are more likely to involve a driver or rider living in rural parts of SA. Rates of driver and rider serious casualties are much higher in the rural area as compared to metropolitan Adelaide, two and a half times for younger drivers and riders. Vehicle occupants not wearing a seatbelt has higher prevalence in the rural areas.

Broadly defined, the Adelaide metropolitan region extends as far as Roseworthy to the north, to Sellicks Hill in the south and Harrogate in the east. The rural region extends outwards from this area and covers the rest of the local government areas within South Australia. These boundaries have grown larger over time. What is considered ‘metropolitan’ now may have had a different landscape back then. So while Figure 1 extends back 20 years, direct comparisons to today need to consider this.

Figure 1 – Number of serious casualty crashes by area, South Australia, 1997-2016

1 Rural and metro boundaries changed on 1 January 2013 to align with new ABS Greater Adelaide City Statistical Area boundaries, new boundaries have been used in calculations and will not be comparable with previous editions of this report.
While the total number of road deaths has trended down slightly across South Australia over the past five years, this is balanced by a trend decline of fatalities in the metropolitan area and a slight trend increase in fatalities in rural areas. On average over the past 5 years, fatalities in rural areas have increased by 1.7% per year compared to metro areas declining by 5.0% per year. Serious injuries have declined overall in the last 5 years, the trend change is declining at a faster rate in the metro area compared to the rural areas. On average over the past 5 years, serious injuries have declined by 3.1% per year in Metropolitan Adelaide and by 1.2% in rural South Australia.

Table 1: Number of fatalities and serious injuries by area, South Australia, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatalities</th>
<th>Serious Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metro</td>
<td>Rural</td>
</tr>
<tr>
<td>2012</td>
<td>44</td>
<td>50</td>
</tr>
<tr>
<td>2013</td>
<td>43</td>
<td>54</td>
</tr>
<tr>
<td>2014</td>
<td>38</td>
<td>70</td>
</tr>
<tr>
<td>2015</td>
<td>43</td>
<td>59</td>
</tr>
<tr>
<td>2016</td>
<td>34</td>
<td>52</td>
</tr>
<tr>
<td>Avg trend change</td>
<td>-5.0%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

As can be seen in Table 2, the distribution of serious injuries by area has remained fairly stable over the past 5 years, 44% of them having occurred in the rural area. The distribution of fatalities has changed some over the last 5 years, the majority however has always been in the rural area.

Table 2: Percent distribution of fatalities and serious injuries by area, South Australia, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatalities</th>
<th>Serious Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metro</td>
<td>Rural</td>
</tr>
<tr>
<td>2012</td>
<td>47%</td>
<td>53%</td>
</tr>
<tr>
<td>2013</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>2014</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>2015</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>2016</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>2012-16</td>
<td>41%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Involvement in rural crashes by place of residence

The following pie chart (Figure 2) shows the involvement of 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, 2012-2016

Figure 2 illustrates that of the known driver residence postcodes, the vast majority, 61% of driver/rider serious casualties in rural areas live in rural areas, while 30% reside in Adelaide and the remaining 9% 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 living in rural South Australia are more than 2½ times more likely, and those aged over 25 are twice as likely to be killed or seriously injured in a crash as those who live in the metro area as outlined in Figure 3.

Figure 3: Rate of death or serious injury per 10,000 licences held for drivers/riders by residence, 2012-2016
Alcohol and drugs in urban/rural fatal crashes

Figure 4 shows the percent of drivers and riders killed that had their blood alcohol concentration (BAC) tested and it was above .05 by the area they crashed. The majority of drink driving fatalities occur in the rural area. On average 26% of drivers and riders killed in rural South Australia had an illegal BAC level compared to 15% of drivers/riders killed in metro areas had an illegal BAC.

Figure 4: Percentage of drivers/riders who were killed and tested with a BAC over .05 by area, South Australia, 2012-2016

Seatbelt wearing in urban and rural crashes

Figure 5 compares seatbelt usage between urban and rural area crashes. The graph shows that a higher proportion (30%) of fatal and road casualties in rural areas were known not to have worn a seatbelt compared to 19% 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 and known not to have worn a seatbelt by area, South Australia, 2012-2016
Sex and age distributions of serious casualties in rural areas

Figure 6 shows the average number of fatal and serious casualties in rural areas over the 5 year period, 2012-2016 by age and gender. It highlights that males in all groups sustain the highest number of fatal and serious casualties in the rural area, consistent with overall crash rates in South Australia where males are over-represented.

Figure 6: Average age and gender distribution of serious casualties, Rural South Australia, 2012-2016

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, 2011-2015

Greater proportions (56%) of fatal crashes occur in rural areas compared to 44% in metro areas. In comparison, 41% of serious injury crashes occur rurally, the majority (59%) occur in metro areas.
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. 71% of rural crashes are 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 65% of all out-of-town crash types. For in-town crashes, the next most common is a right angle crash and together they represent 51% of in-town crashes.

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, 2012-2016
Type of vehicle involved in crashes
Table 3 shows, as would be expected, rural crashes involve a higher percentage of heavy vehicles (8%) than in urban areas (4%) due to an increased presence on rural roads.

Table 3: Percentage of vehicle types in serious casualty crashes, South Australia, 2012-2016

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Metro</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger vehicles</td>
<td>81%</td>
<td>78%</td>
</tr>
<tr>
<td>Heavy Vehicles</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>15%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Single and multi-vehicle fatal and serious crashes

Figure 10: Proportion of single, multi-vehicle and hit pedestrian fatal and serious injury crashes occurring by speed limit, Rural South Australia, 2012-2016

Figure 10 illustrates that the majority (73%) 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 or animal, 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). Almost 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, Rural South Australia, 2012-2016
Definitions of police reported casualty types:

**Casualty Crash** – 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 for a duration of at least 24 hours 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 in which 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 within 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 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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