OLDER ROAD USERS INVOLVED IN ROAD CRASHES IN SOUTH AUSTRALIA

OVERVIEW During the 5 year period 2015-2019, on average there were 23 older road users fatalities and 94 serious injuries each year. Persons aged 70 or above are overrepresented in road fatalities, whereby they make up 13% of the population yet account for 23% of fatalities and 13% of serious injuries. Research shows that although older drivers are involved in a small number of crashes, these crashes are often higher severity, probably because of the frailty of older road users. Older drivers are generally more cautious and tend to exhibit less illegal and dangerous driving behaviour than other age groups, and older drivers typically control their exposure to risk when driving by avoiding driving at night or in peak hours.

Older drivers are more likely to be involved in fatal and serious injury crashes at intersections involving right angle crashes, and as they get older they are also more likely to be responsible for crashes they are involved in. The rate of involvement in serious casualty crashes (determined by number of licence holders) for 70-79 year old drivers is lower than younger drivers, but the 90+ age group has the highest serious casualty crash rate.

Table 1 provides a breakdown of older road user casualties by year. The number of road users killed aged 70 and over has increased by an average of 0.4% per year over the past 5 years. Serious injuries also have increased on average by 2.1% per year and minor injuries increased by 0.4%. Older road user crashes are likely to continue to increase in future years due to the growing number of people in the 70+ age cohort.

Table 1: Fatalities, serious- and minor injuries of road users aged 70 years of age and over, South Australia, 2015-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatal</th>
<th>Serious Injury</th>
<th>Minor Injury</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>23</td>
<td>80</td>
<td>431</td>
<td>534</td>
</tr>
<tr>
<td>2016</td>
<td>23</td>
<td>87</td>
<td>438</td>
<td>548</td>
</tr>
<tr>
<td>2017</td>
<td>25</td>
<td>110</td>
<td>438</td>
<td>573</td>
</tr>
<tr>
<td>2018</td>
<td>15</td>
<td>83</td>
<td>425</td>
<td>523</td>
</tr>
<tr>
<td>2019</td>
<td>29</td>
<td>109</td>
<td>446</td>
<td>584</td>
</tr>
<tr>
<td>5yr Avg</td>
<td>23</td>
<td>94</td>
<td>436</td>
<td>552</td>
</tr>
</tbody>
</table>

Figure 1a & b highlight the differences in the distribution of fatalities and serious injuries amongst age groups. 70+ road users are under-represented in serious injuries, yet they are over represented in fatalities.
Older Driver Crash Rates

Older drivers are much less likely to be involved in a serious casualty crash than younger drivers. For 16-24 year old drivers/riders the rate of involvement in a fatal or serious injury crash was 11.4 per 10,000 licence holders per year. The rate of involvement in a serious casualty crash for the 25-69 year age group was 6.8, and this dropped to 5.7 for drivers aged 70 and over as indicated in figure 2.
Figure 2: Rate of driver/rider involvement in fatal and serious crashes per 10,000 licences held by age, South Australia, 2015-2019

Older drivers are generally more cautious and exhibit less illegal and dangerous driving behaviour than other age groups. Figure 3 shows that the rate of involvement in a casualty crash for older drivers increases as a driver ages whereby licence holders aged 90+ represent less than 1 per cent of all licence holders, whilst their rate of involvement in a fatal or serious injury crash was 16.1 per 10,000 licence holders per year on average over the past 5 years.

Figure 3: Rate of driver/rider involvement in fatal and serious crashes per 10,000 licences held by age, South Australia, 2015-2019

As a driver ages they are more likely to be responsible for the crash they are involved in. In South Australia, over the past 5 years, 54% of drivers aged 60-69 involved in fatal and serious injury crashes were responsible, drivers aged 70-79 were responsible in 74% of cases and drivers aged 80 years and over were responsible in 79% of cases.

In 2015-2019, drivers aged 70+ were considered responsible in 84% of fatal crashes they were involved in.
Types of Crashes Involving Older Drivers

Older drivers are more likely to be involved in fatal and serious injury crashes at intersections than other drivers. 46% of older driver crashes occur at intersections, compared to 39% of all serious and fatal crashes generally. As seen in Figure 4, 24% of fatal and serious injury crashes involving older drivers are right angle crashes. This compares to 18% of fatal and serious crashes for all road users. Intersections and junctions are complex traffic environments, in which the driver has to attend to a variety of information while under time pressures. Personal conditions that may impair driving ability include: diminished hearing and eyesight, slower decision-making, slower reflexes, reduced agility, and reduced muscle strength. Other common crash types for older drivers include hit fixed object, right turn and head on crashes but older drivers are less likely to be involved in roll over crashes compared to serious casualty crashes for the population in general.

Figure 4: Types of fatal and serious crashes involving drivers aged 70+ years, South Australia, 2015-2019

Crash Location and Speed Limits

The majority of fatal and serious injury crashes involving drivers aged 70 and over occur in metropolitan areas. Table 2 shows the breakdown of crashes by speed limits and area and these figures are consistent with fatal and serious injury crashes for all South Australian road users.

Table 2: Crash location\(^2\) & speed limits involving drivers aged 70+ years, South Australia, 2015-2019

<table>
<thead>
<tr>
<th>Speed Limit</th>
<th>Metropolitan</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 km/h and under</td>
<td>29%</td>
<td>18%</td>
</tr>
<tr>
<td>60 km/h</td>
<td>49%</td>
<td>9%</td>
</tr>
<tr>
<td>70-90 km/h</td>
<td>17%</td>
<td>8%</td>
</tr>
<tr>
<td>100 km/h and over</td>
<td>6%</td>
<td>66%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

\(^1\) Percentages are rounded and made up to a total of 100%
\(^2\) Rural and metropolitan 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.
Research shows that older drivers typically control their exposure to risk when driving by avoiding driving at night or in peak hours whereby 73% of crashes in the past 5 years occurred between the hours of 9am and 5pm. Older drivers are also more likely to take short trips in familiar areas. In the past 5 years, 32% of older drivers crashed in their resident locality, compared to 21% of drivers under the age of 70.

Trend over the past 20 years
In 1999, the fatal and serious injuries for the 16-24 age group was significantly higher than the 70+ age group. Over the past 20 years, fatal and serious injuries for the 16-24 age group has decreased at a rate of 7.1%. For the 70+ age group there has also been a moderate decrease at a rate of 0.6% during the same time.

Figure 5: Fatal and serious injuries, persons 70+ years and 16-24 years, South Australia, 1999-2019

Road User Types
Figure 6 shows that for the 5 year period 2015-2019, 75% of older road user fatalities and serious injuries were drivers or passengers, 14% were pedestrians, and 11% were either a motorcyclist (5%), cyclist (4%) or mobility device user (2%). Excluding motorcyclists and cyclists 91% of older road user casualties were either a driver, passenger or pedestrian (including mobility devices), compared to 73% for all road users groups.

Figure 6: Road users 70+ years, fatalities and serious injuries, South Australia, 2015-2019
Sex
For the 5 year period 2015-2019, 66% of South Australian road user serious casualties were male and 34% female. However, for the older road user population, the difference was much smaller whereby 52% of serious casualties were male and 48% were female. This can be partly explained by the longer life expectancy of females and a reduction in risk taking behaviour by older males. Older drivers are far less likely than young drivers to be involved in crashes characterised by loss of control, speeding, risky overtaking or drink driving.

Older Pedestrians
Figure 7 shows the number of pedestrian fatalities and serious injuries per 100,000 population by age group. Elderly pedestrians have a higher 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 rather than an injury. 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 groups³.

Figure 7: Average pedestrian serious casualties per 100,000 population, South Australia, 2015-2019

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 for Infrastructure and Transport Road Crash Database. The information was compiled from police reported road casualty crashes only.

Enquiries

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