



Transport
for NSW

Centre for Road Safety



Older driver trauma trends

Report

Disclaimer

This report is available for information purposes only. All persons accessing the information contained in it do so at their sole risk and are responsible for assessing its relevance, accuracy, quality, operability or otherwise verifying all content accessed. The information provided in the report is correct at the time of publication and may be subject to change due to ongoing quality improvement and data enhancement.

The NSW Government and Transport for NSW do not accept responsibility or liability for any loss, damage, cost or expense you might incur as a result of the use of or reliance upon information in this report.

Date:	February 2017
Version:	1
Reference:	Centre for Road Safety – Older Driver Trauma Trends Report
Division:	Freight, Strategy and Planning, Transport for NSW

Contents

Disclaimer.....	2
1 Trends for fatal and serious injury crashes involving older drivers since 2008.....	4
1.1 Driver involvement in fatal crashes, age group	4
1.2 Driver involvements in fatal crashes per 10,000 licences, 2014 to 2016p average, age group.....	5
1.3 Driver involvements in serious injury crashes, 2013 to 2015p average, age group	6
1.4 Driver involvements in serious injury crashes per 10,000 licences 2013 to 2015 average, age group.....	6
1.5 Older drivers involved in fatal crashes 2008 to 2016p, age group.....	7
1.6 Older drivers involved in fatal crashes, percentage of all drivers involved in fatal crashes, 2008 to 2016p, age group	7
1.7 Older drivers involved in serious injury crashes 2008 to 2015, age group	8
1.8 Older drivers involved in serious injury crashes, percentage of all drivers involved in serious injury crashes 2008 to 2015, age group	8
1.9 Older drivers licences 2008 to 2016, age group.....	9
1.10 Older drivers licences, percentage of all driver licences 2008 to 2016, age group	9
1.11 Projected NSW population increases, age group 2016 to 2021 and 2021 to 2031	10
1.12 Percentage of drivers involved in serious casualty crashes who were killed 2008 to 2015, age group.....	11
1.13 Gender	12
1.14 Urbanisation	13
1.15 Road classification.....	14
1.16 Vehicle type.....	14
1.17 Behavioural factors.....	15
1.18 Crash type	16
1.19 Crash occurs in the same LGA of residence.....	17
1.20 Day of week.....	17
1.21 Time of day.....	17
1.22 Age of cars in crashes involving older drivers	18

1 Trends for fatal and serious injury crashes involving older drivers since 2008

The following overview of older driver involvement in NSW road trauma is limited to the most recent available data. For fatal crashes this covers the calendar years 2008 to 2016p, where the 2016 data are preliminary and subject to change. For serious injury crashes this covers the calendar years 2008 to 2015 – data for the calendar year 2016 data were incomplete at the time of this report and therefore not included. There is a short discussion regarding total hospitalisations but generally only the matched serious injury data were used in the analysis since detailed crash characteristics are not available for the unmatched serious injuries.

An older driver is defined as a driver of a motor vehicle aged 60 years or more and specifically excludes motorcycle riders. The older driver age group is further disaggregated into the 60 to 74 years, 75 to 84 years and 85 years and over age groups.

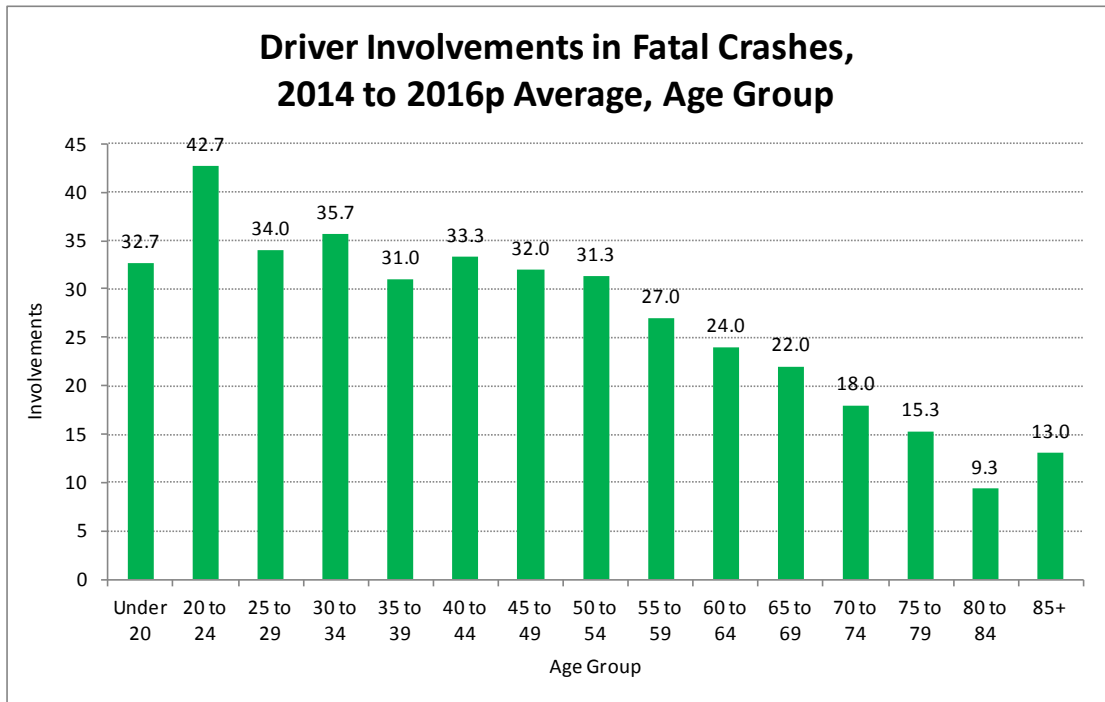
A fatal crash is a road traffic crash which results in at least one person dying within 30 days of the crash as a result of injuries from the crash. A serious injury crash is a road traffic crash which involved at least one person admitted to hospital (and matched to a person in a Police crash report), but there were no fatalities from the crash.

1.1 Driver involvement in fatal crashes, age group

From 2008 to 2016 there were a total of 835 older drivers involved in fatal crashes – 534 (64 per cent) were aged 60 to 74 years, 213 (26 per cent) aged 75 to 84 years and 88 (11 per cent) aged over 85 years. Most of the fatalities from elderly driver crashes (aged 85 years or more) were the elderly driver or one or more of their vehicle occupants.

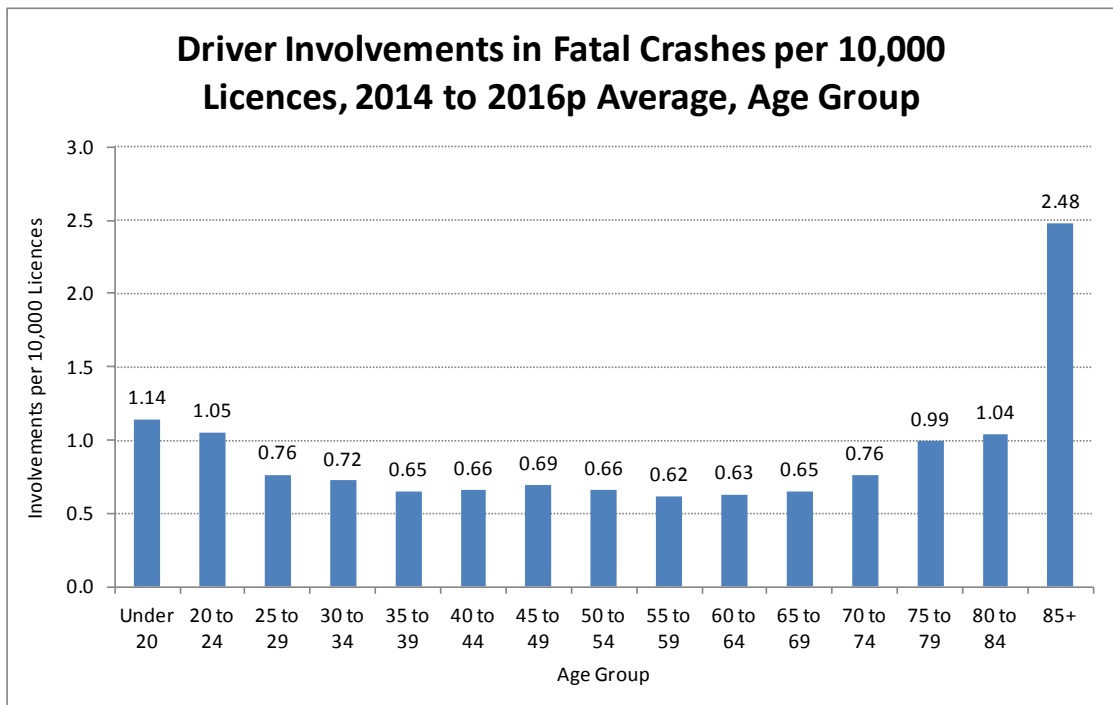
Between 2008 to 2015 there were a total of 10,608 older drivers involved in matched serious injury crashes – 7,189 (64 per cent) were aged 60 to 74 years, 2,590 (24 per cent) were aged 75 to 84 years and 829 (8 per cent) were aged over 85 years.

The following chart shows that the highest numbers of driver involvements in fatal crashes occur amongst the younger age groups. Note that the two lowest driver involvements are among the 80 to 84 and the 85+ age groups.



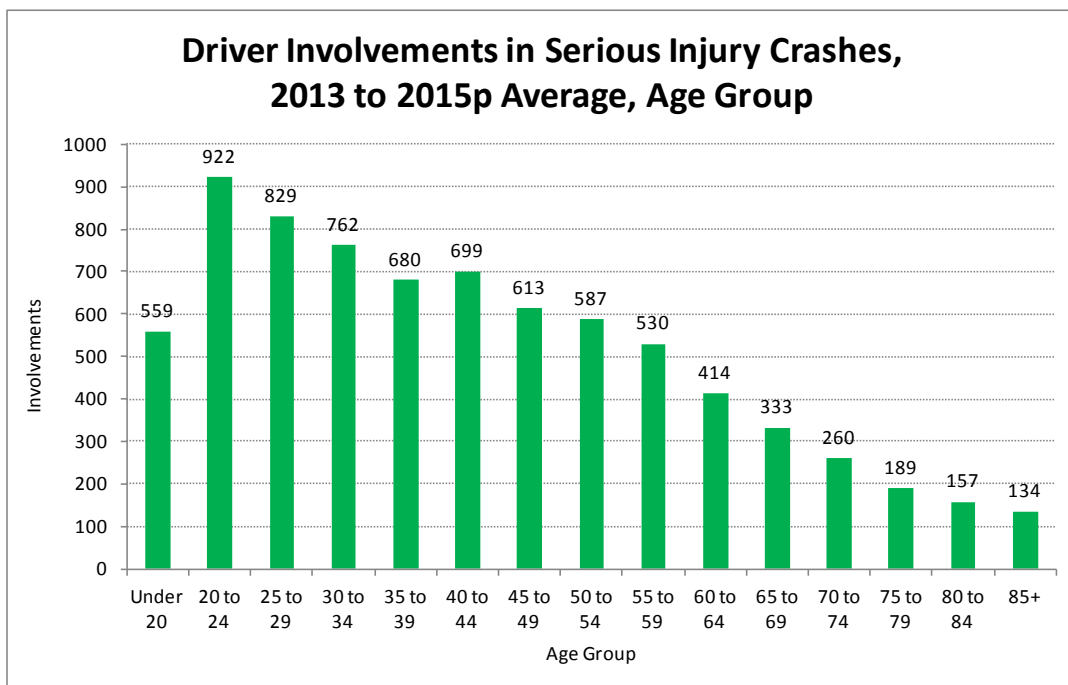
1.2 Driver involvements in fatal crashes per 10,000 licences, 2014 to 2016p average, age group

However, the chart below shows a U shape for involvement rates per licences across age groups. The highest rates are for the oldest, particularly those aged 85 years or more, and for the youngest drivers.



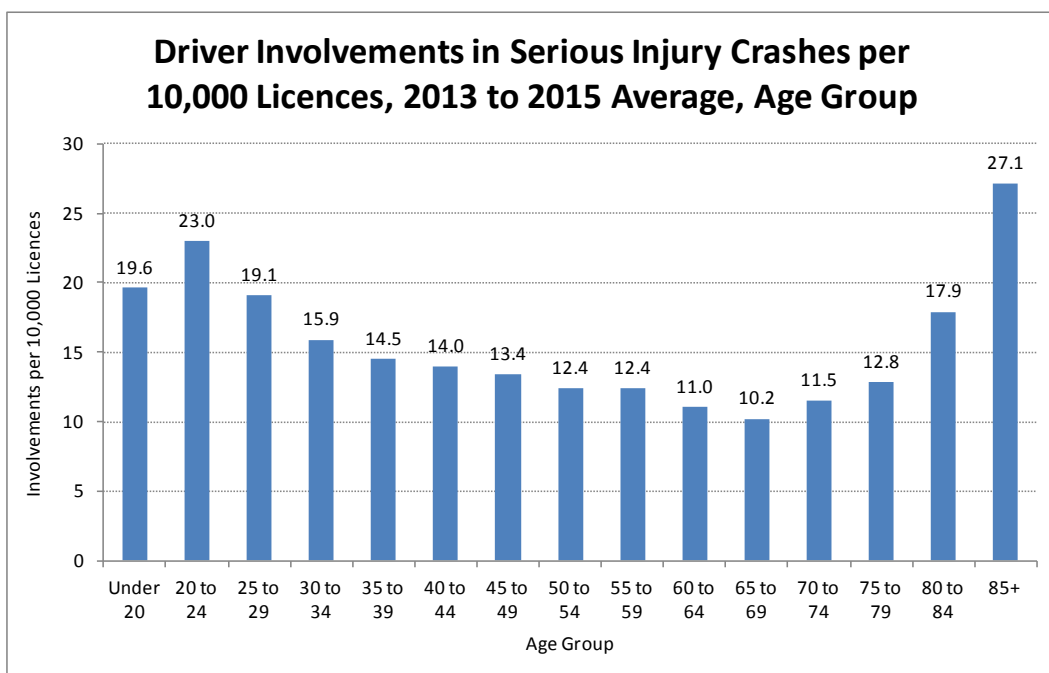
1.3 Driver involvements in serious injury crashes, 2013 to 2015p average, age group

In terms of the number of driver involvements in serious injury crashes the younger age groups clearly have the highest numbers. Relatively few driver involvements in serious injury crashes involve those aged 75 years or more.



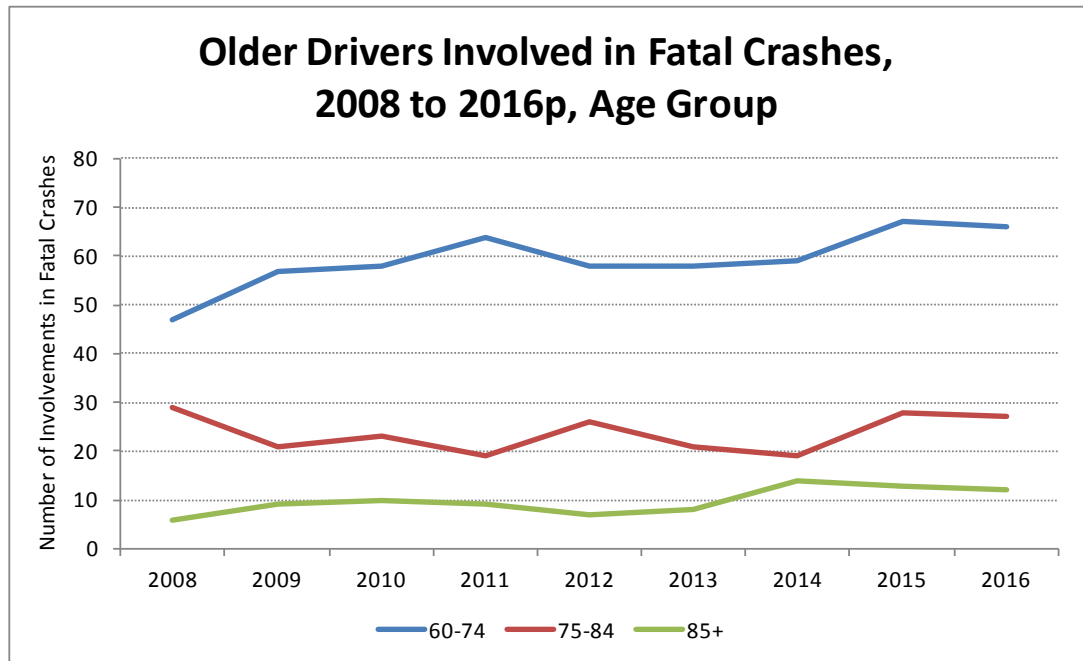
1.4 Driver involvements in serious injury crashes per 10,000 licences 2013 to 2015 average, age group

However, the serious injury crash involvement rates per licence also follow the U shape trend with the highest rates experienced by young drivers aged under 30 years and those older drivers aged 80 years or older. Note that drivers in the 60 to 69 year age group have the lowest involvement rates.



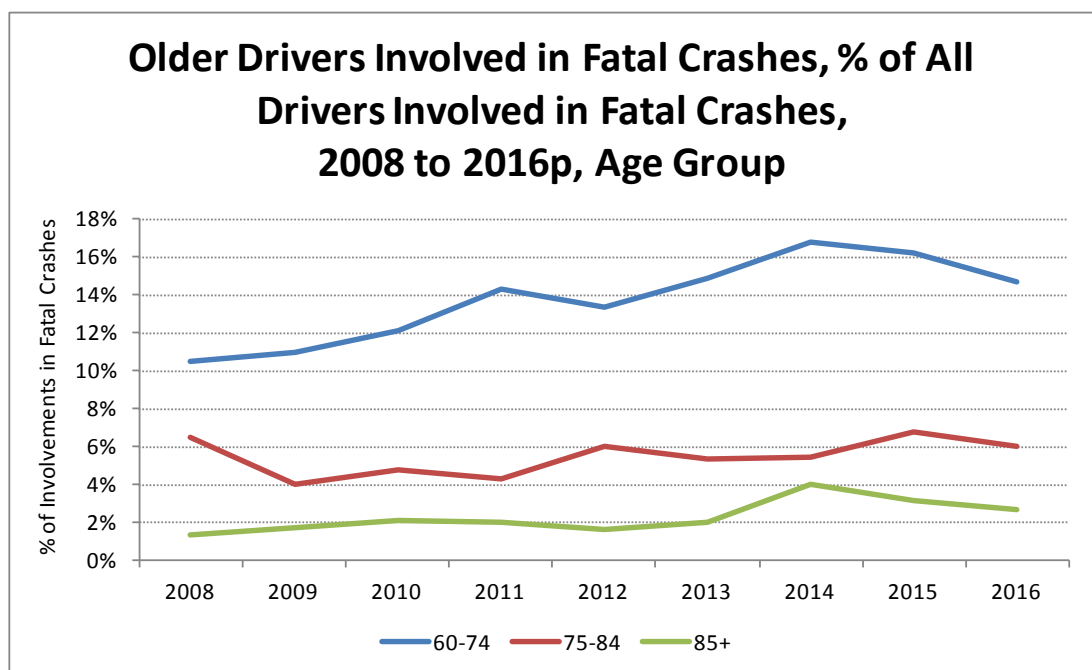
1.5 Older drivers involved in fatal crashes 2008 to 2016p, age group

Since 2008 there has been an increasing trend for older drivers involved in fatal crashes – up by 28 per cent from 2008 to 2016, with those aged 60 to 74 years increasing by 40 per cent.



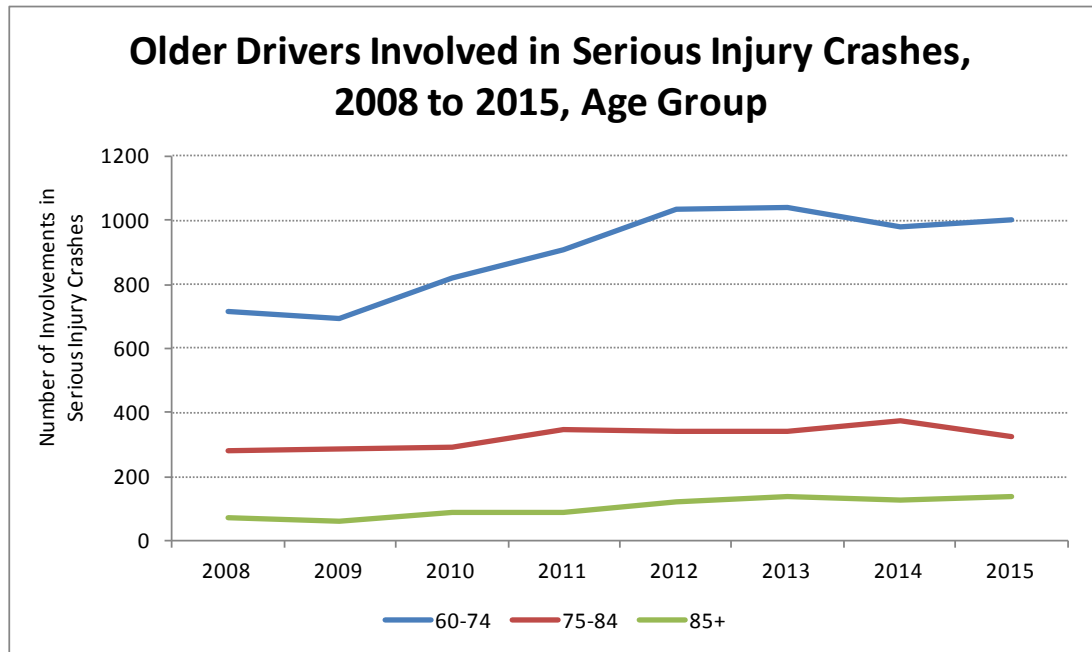
1.6 Older drivers involved in fatal crashes, percentage of all drivers involved in fatal crashes, 2008 to 2016p, age group

Consequently the 60 to 74 years age group has accounted for an increasing percentage of all drivers involved in fatal crashes.



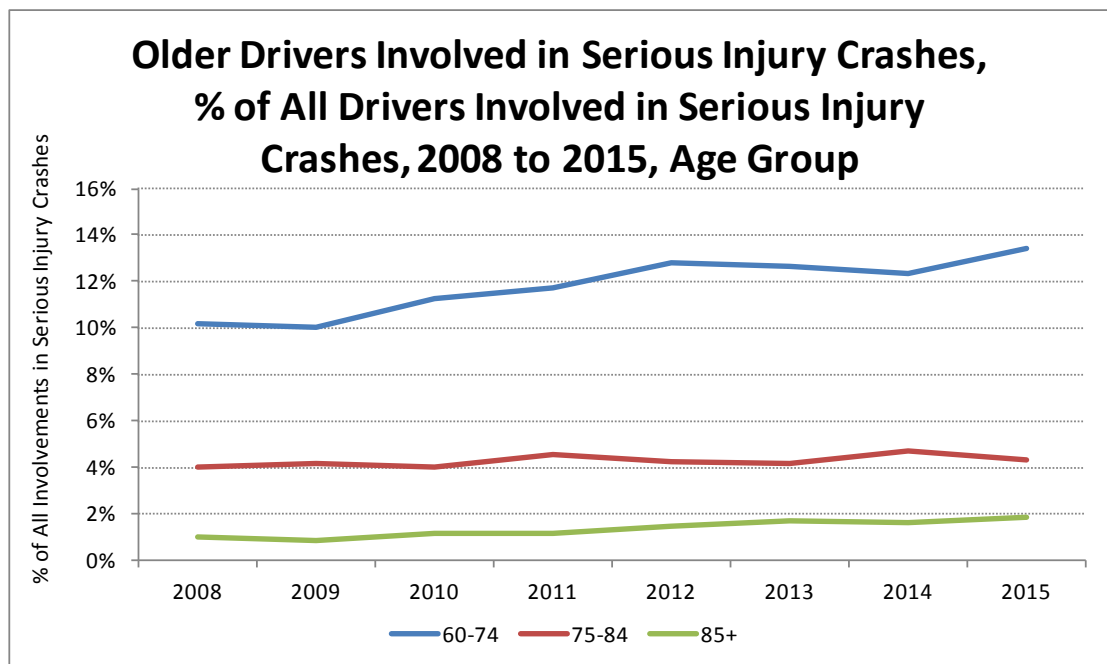
1.7 Older drivers involved in serious injury crashes 2008 to 2015, age group

Similarly, between 2008 and 2015 older driver involvements in serious injury crashes have increased by 37 per cent with those aged 60 to 74 years increasing by 40 per cent and those aged 85 years or more increasing by 97 per cent.



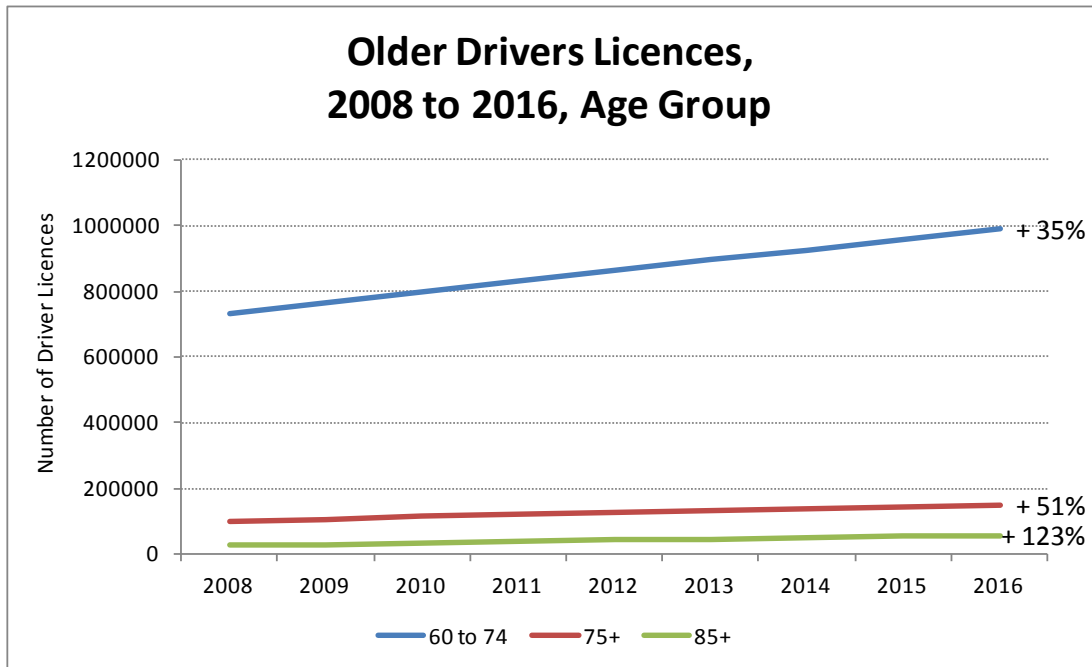
1.8 Older drivers involved in serious injury crashes, percentage of all drivers involved in serious injury crashes 2008 to 2015, age group

Again the 60 to 74 year age group and the 85 years or more age groups now account for an increasing proportion of drivers involved in serious injury crashes.



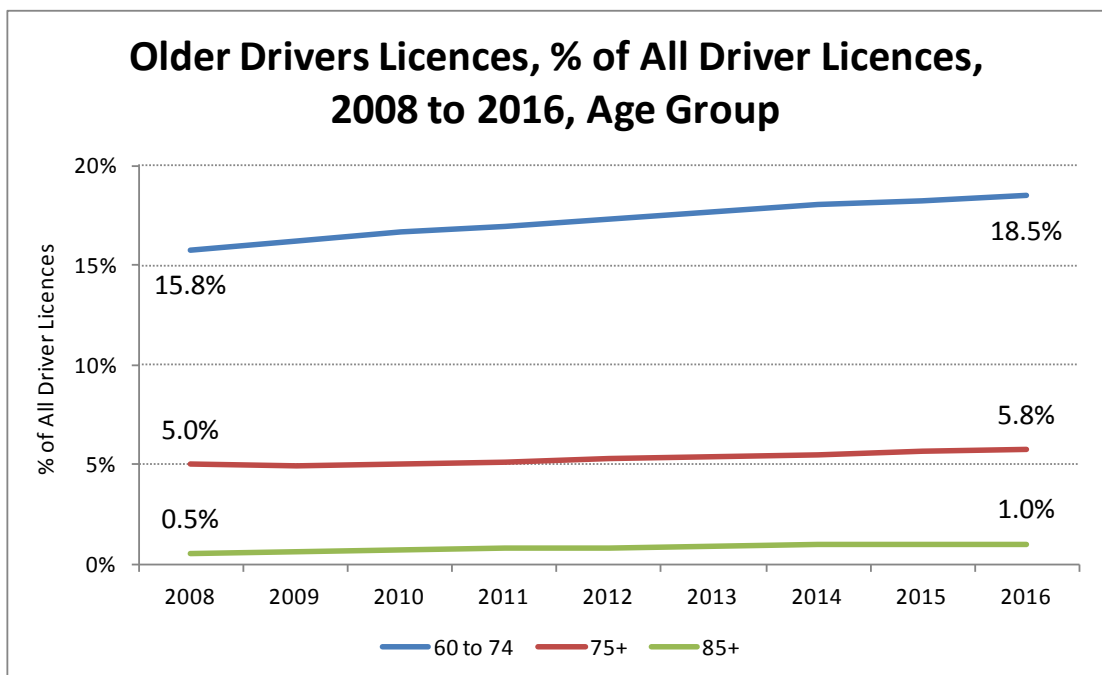
1.9 Older drivers licences 2008 to 2016, age group

It must be noted that NSW has an “aging” population and this is reflected in the growth of licences for the older age groups. Increases for the older driver age groups have been particularly strong since 2008 and clearly are contributing to the increased numbers of older drivers involved in serious casualty crashes.



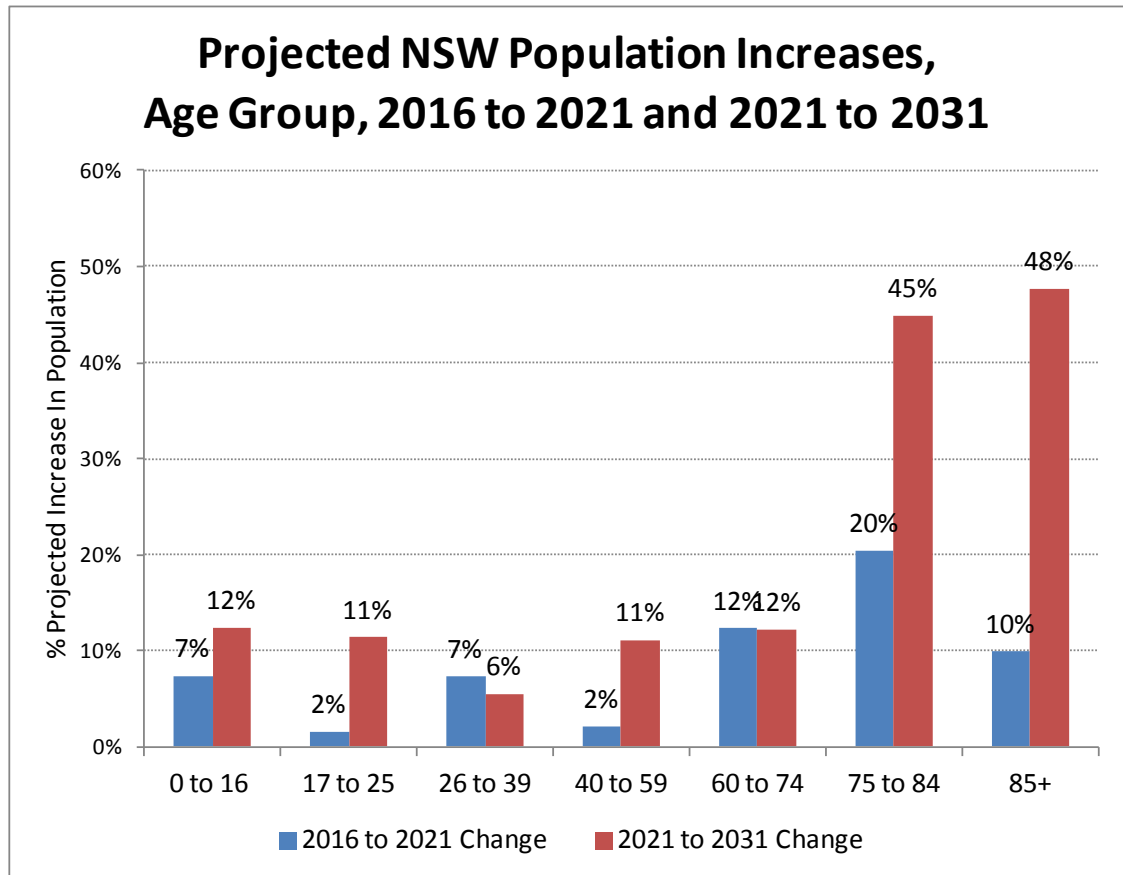
1.10 Older drivers licences, percentage of all driver licences 2008 to 2016, age group

As a percentage of all driver licences the 60 to 74 year age group accounts for more than 18 per cent of all driver licence whilst the 85 years or more age group has doubled (though only to 1 per cent of all driver licences).



1.11 Projected NSW population increases, age group 2016 to 2021 and 2021 to 2031

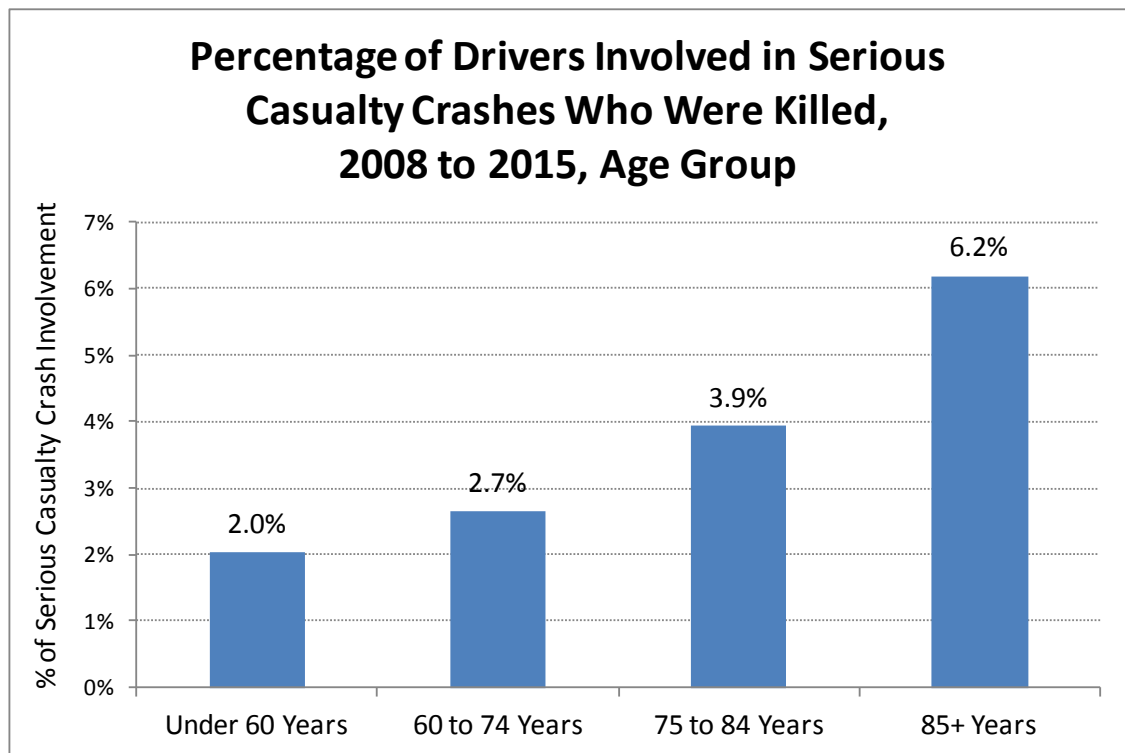
Population projections from the Australian Bureau of Statistics (Series B) suggest that the older driver age groups will experience the largest population growth over the next five years (2016 to 2021) but the next decade will experience substantial increases in those persons aged 75 years or more.



1.12 Percentage of drivers involved in serious casualty crashes who were killed 2008 to 2015, age group

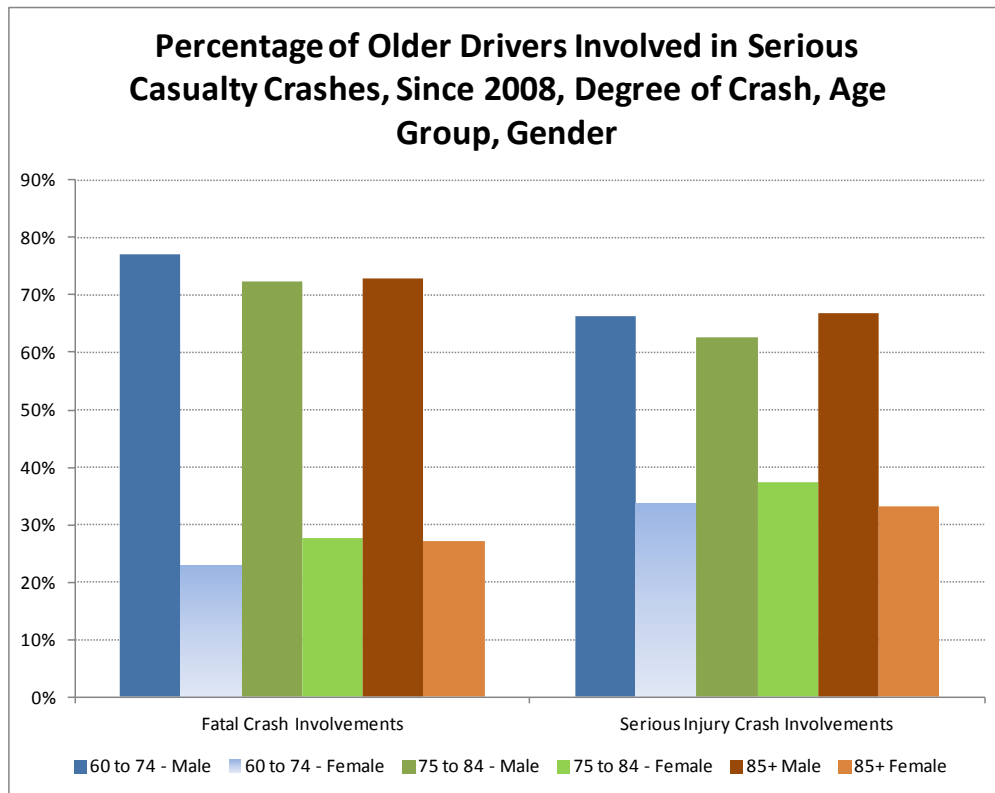
Another potential factor behind the underlying increased involvement in fatal crashes is the frailty of older persons, particularly the elderly. For road safety this means that a crash which is generally survivable for a young to middle aged person may not be for an elderly frail driver.

The casualty crash data in the chart below highlight this issue. Around 2.0 per cent of younger drivers aged less than 60 years involved in a serious casualty crash are killed but this percentage increases with age. For 60 to 74 year old drivers it is 2.7 per cent, 75 to 84 year old drivers it is 3.9 per cent and for 85 plus years it is 6.2 per cent – more than three times the fatality risk for a driver aged less than 60 years.



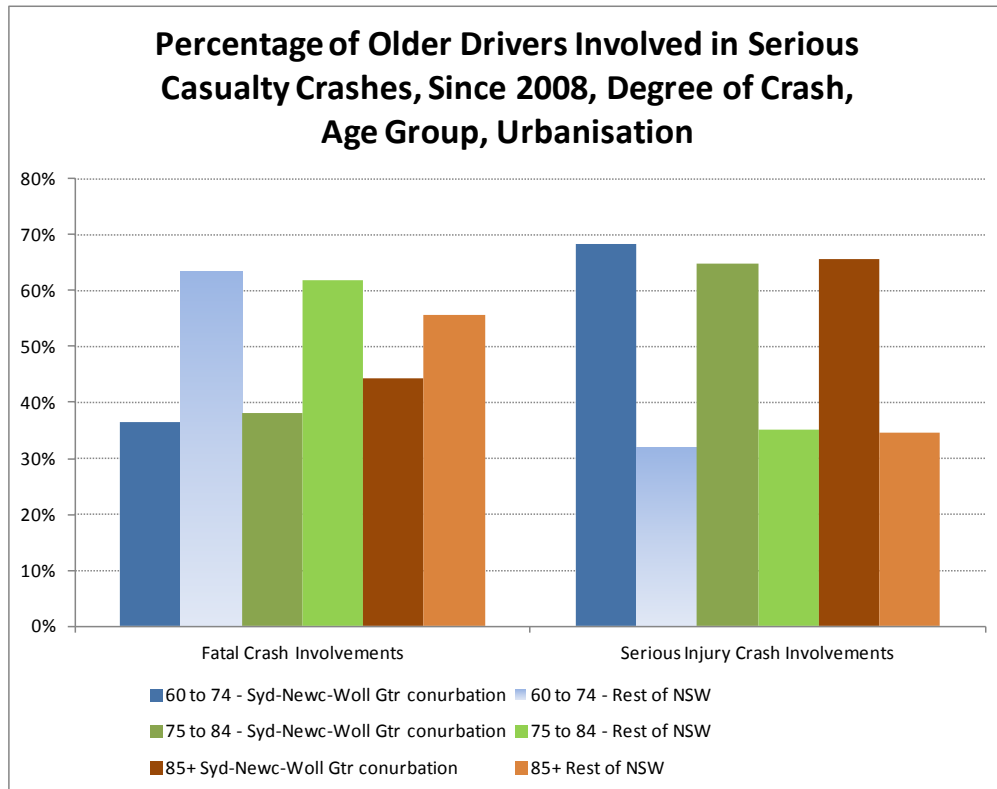
1.13 Gender

The older driver age groups show a similar distribution of crash involvements by gender, predominately male for fatal crashes as is the case with younger age groups.



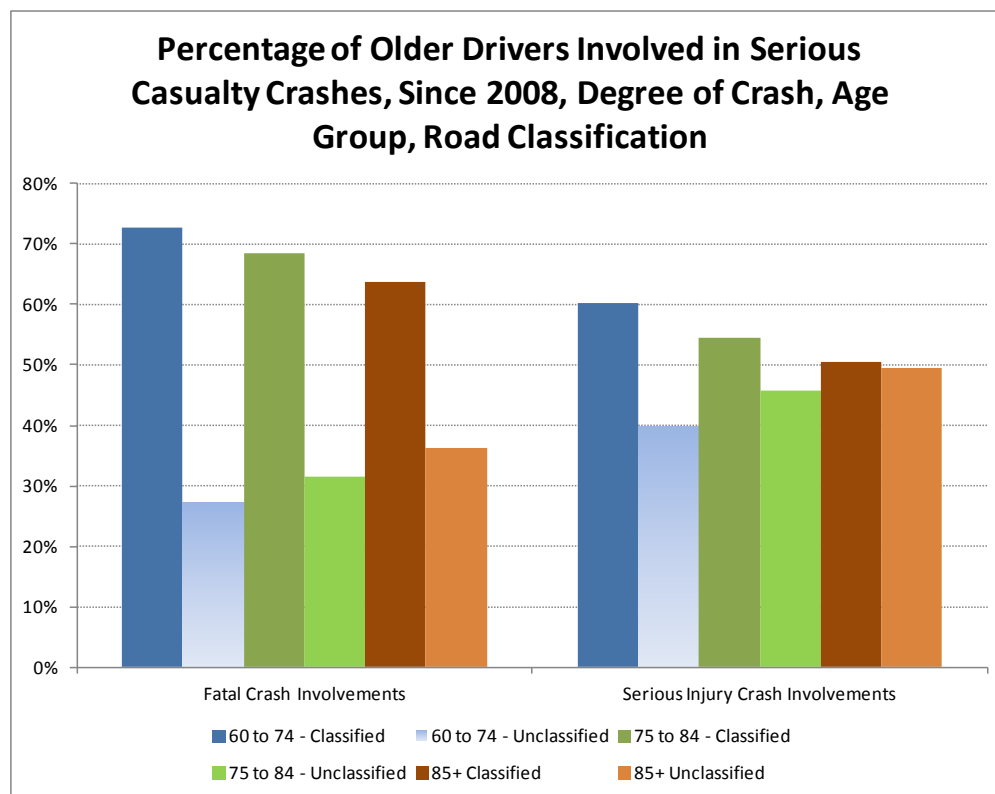
1.14 Urbanisation

Again there is a similar distribution across urbanisation for older drivers, though it is slightly stronger for the elderly driver group in the Sydney, Newcastle and Wollongong Greater Conurbation and urban rest of NSW.



1.15 Road classification

There is an increasing proportion of crash involvements for older drivers on unclassified roads but this proportion decreases as crash severity increases. Older drivers aged 85 years or more the most likely to crash on unclassified roads. This may be a reflection of differing travel patterns within the older driver age groups.



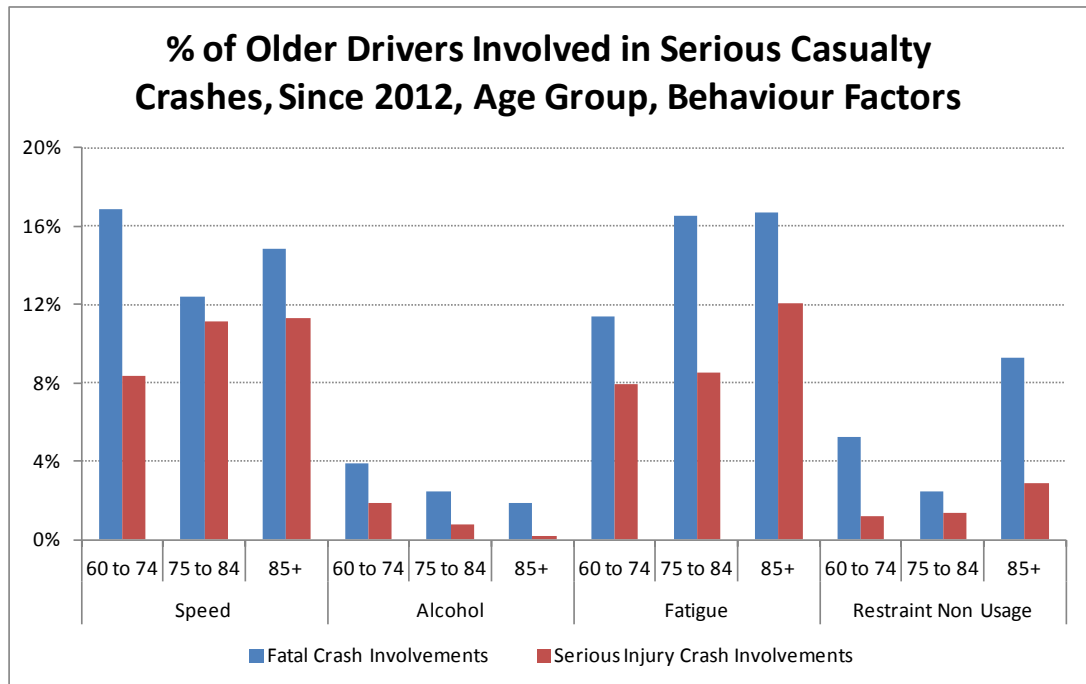
1.16 Vehicle type

As you would expect, the majority of vehicles driven by crash involved older drivers are car/car derivatives. Apart from 60 to 74 year old drivers of heavy vehicles in fatal crashes, the second most common vehicle involved is a light truck.

Older drivers involved in serious casualty crashes since 2008			
Age group	Vehicle type	Fatal crashes	Serious injury crashes
60 to 74	Car/car derivative	66%	82%
	Light truck	14%	10%
	Heavy vehicle	17%	6%
	Total	100%	100%
75 to 84	Car/car derivative	91%	94%
	Light truck	8%	4%
	Heavy vehicle	0%	0%
	Total	100%	100%
85+	Car/car derivative	85%	94%
	Light truck	7%	2%
	Heavy vehicle	0%	0%
	Total	100%	100%

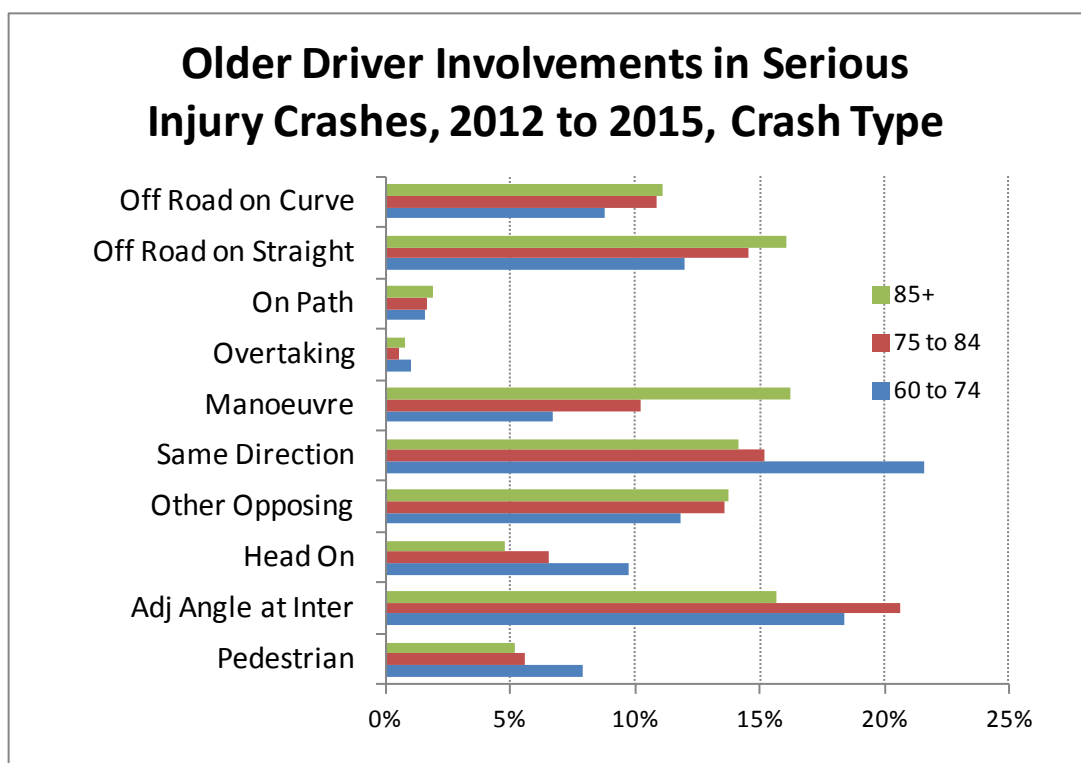
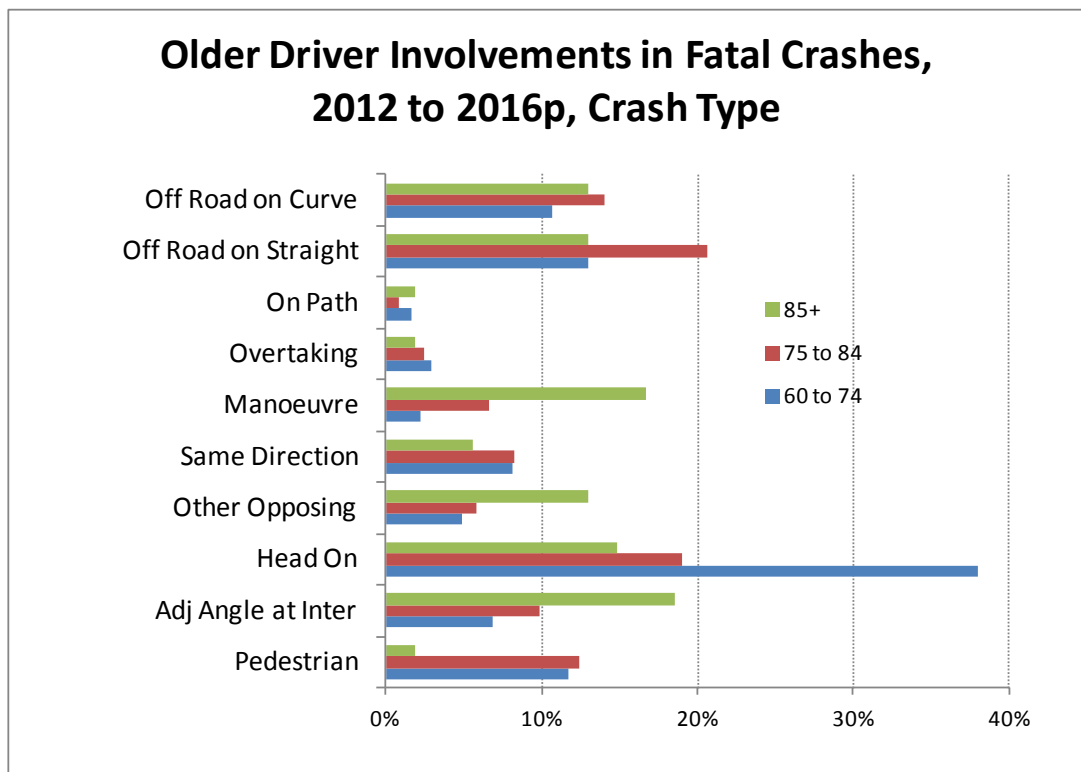
1.17 Behavioural factors

Generally, the involvement of most behaviour factors is quite low for older drivers. The possible exceptions are driver fatigue in fatal crashes for those aged 75 years or more and restraint non usage for drivers aged 85 years or more (though small numbers are involved).



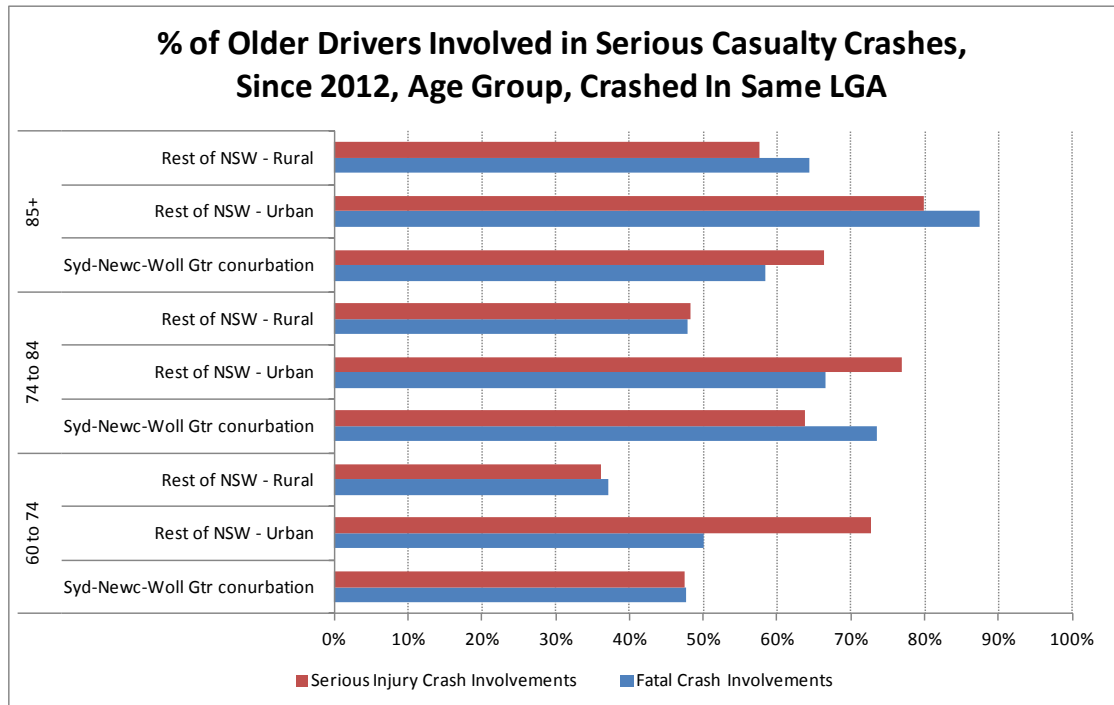
1.18 Crash type

There are clear differences in crash involvement types for older drivers, particularly amongst the elderly driver age group who are more likely to be involved in manoeuvre, adjacent angle at intersection and other opposing (right through crashes typically) fatal crashes. For serious injury crash involvements, the 85 years and over group have a relatively high incidence of manoeuvre and off road on straight crash involvements. For the 60 to 74 year age group the interesting crash types are head on fatal crash involvements and rear end serious injury crash involvements.



1.19 Crash occurs in the same LGA of residence

Typically older drivers have an elevated likelihood of crashing in the same local government area as they reside, particularly for those drivers aged 75 to 84 years and 85 years or more. This is very likely related to travel patterns.



1.20 Day of week

In contrast to younger drivers, less than one quarter of older driver serious injury crash involvements occur on the weekend but this percentage increases for fatal crash involvements.

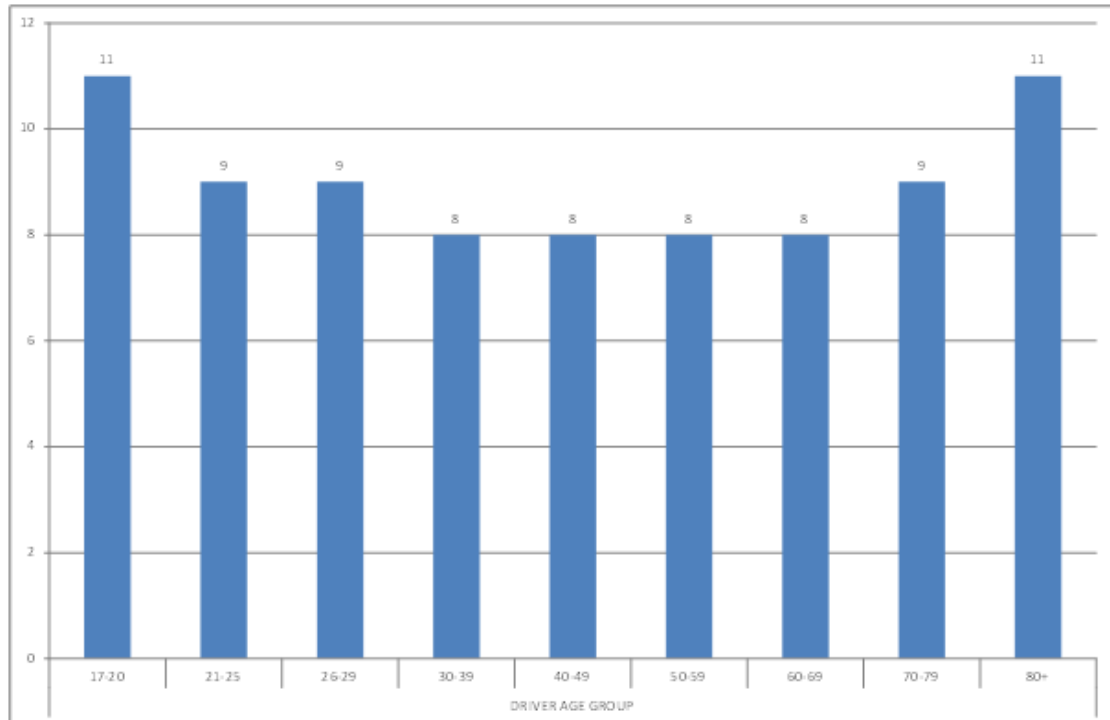
1.21 Time of day

The majority of older driver fatal crash involvements occur during the daylight hours between 8am and 6pm. Seventy per cent of fatal crash involvements and 75 per cent of serious injury crash involvements by 60 to 74 year old drivers occur during these hours. Not surprisingly these percentages increase to 87 per cent and 89 per cent respectively for those drivers aged 85 years or more. Again this would tend to reflect the travel patterns for these drivers.

1.22 Age of cars in crashes involving older drivers

Young drivers and older drivers appear to crash in the oldest cars on our roads.

The following chart shows the median ages of car/car derivative in recorded crashes of any severity, by age group of the driver, for five financial years (2011/12 to 2015/16).



For all age groups, except the 70+, the 0 to 4 years car age is an increasing proportion as injury severity decreases. The 15+ years car age is a decreasing proportion as injury severity decreases. This relationship is certainly clear for the 60 to 69 year old age group. However, for the 70+ age group, there is no clear effect of car age on injury severity.

The following graphs show the distributions of casualties, car drivers and passengers, at each severity level, over car age, for the five years ended 30 June 2016. The charts show this relationship for 60 to 69 year old drivers as well as 70 years or more drivers.

