REPORTED ROAD CRASHES
IN WESTERN AUSTRALIA 2013

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TITLE
Reported Road Crashes in Western Australia 2013

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ABSTRACT
This report presents information on road crashes that occurred in Western Australia in 2013. There were 36,887 police-reported road crashes involving 71,828 vehicles and 2,507 persons killed or seriously injured.

KEYWORDS
Road crash statistics, Crash severity, Blood alcohol concentration, Drink driving, Drugs, Fatality, Helmet use, Injury, Restraint use, Road environment, Metropolitan area, Regional area, Remote area, Seat belt, Speeding, Urban area, Vehicle type, Western Australia.

NOTE
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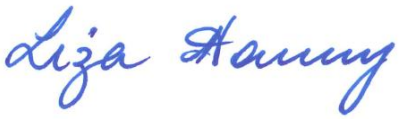
FOREWORD

Western Australia's 2013 road statistics show substantial improvement in road safety outcomes for Western Australian road users. Significant upgrades continue to make our network safer, an ever-increasing police presence on the roads is achieving higher compliance rates and advancements in the vehicle industry have revolutionised safety features. Notably, the most encouraging statistic to emerge from 2013 was the significant decrease in the number of road deaths in Western Australia – the lowest figure on record. Our road safety strategies are having an impact. Given the increase in Western Australia's population and the number of people using our roads, such figures are a considerable reduction.

The State Government's road safety strategy, *Towards Zero*, has been developed with leading international best practice and built on the globally-recognised Safe System approach, which benefits all road users by identifying strategies for safe road use, safe roads and roadsides, safe speeds, and safe vehicles. Results from 2013 are encouraging and show that the ambitious targets from this strategy are achievable and that ultimately, road deaths and serious injuries can be prevented if we make the conscious decision to give road safety the priority it deserves. In the past five years, motor vehicle occupant fatalities have steadily reduced, but with Western Australia's evolving transport landscape, percentage-wise, this has resulted in an increase of vulnerable road user fatalities through the same period.

As a State, it is clear that we are making solid inroads. However, this rate of improvement needs to increase to achieve the strategy's aspirations of a 40 per cent reduction in the number of people killed and seriously injured by 2020. The statistics from this document will provide valuable information for our Government and key policy makers to further investigate, plan and measure appropriate strategies to ensure Western Australia has a Safe System approach in place. The State Government is committed to reducing deaths and serious injuries on our roads and will continue to promote a shared responsibility to further reduce road trauma in Western Australia. We are all heading towards the same road safety cause to ensure all road users are better protected on our roads.



Hon Liza Harvey MLA; Minister for Police; Road Safety; Training and Workforce Development; Women's Interests

Professor Murray Lampard APM; Chairman of the Road Safety Council WA

KEY ROAD CRASH FACTS FOR 2013

Fatalities

- In 2013, there were 161 police-reported road crash fatalities in Western Australia, which was 20 less than in 2012.
- The number of fatalities was 11% lower than the previous year.
- Half (50%) of the fatalities in 2013 occurred in the Metropolitan region, 30% in Regional areas and 20% in Remote areas.

Persons Seriously Injured

- In 2013, there were 2,346 people seriously injured in police-reported road crashes, compared to 2,470 in 2012.
- The number of persons seriously injured was 5% lower than the previous year.
- Two thirds (67%) of those seriously injured were involved in crashes that occurred in the Metropolitan region, while 21% were injured in Regional areas and 12% were injured in Remote areas.

Trends in Crashes

- The fatality rate per 100,000 population for Western Australia was 6.4 (ranked 2nd highest out of all Australian States and Territories), compared to 5.1 for the whole of Australia.
- Of fatal crashes, 49% occurred in the Metropolitan region, 30% occurred in Regional areas and 20% in Remote areas.
- Of hospitalisation crashes, 69% occurred in the Metropolitan region, 20% occurred in Regional areas and 11% in Remote areas.
- In 2013, the number of fatalities in the 60 years or older age group was 48% higher than the previous year, while the 25 to 39 year and 40 to 59 year ages groups were lower by 26% and 28%, respectively. The number of fatalities that were female decreased by 47% from 2012.

All Road Users

- In 2013, 81% of all fatalities were male and 19% were female.
- Of all fatalities, 28% were aged between 25 and 39 years, 25% were aged over 60 years and 22% were aged between 40 and 59 years.
- Two fifths (40%) of all fatalities were drivers, 20% were pedestrians, 18% were passengers and 17% were motorcyclists.
- In 2013, 57% of those seriously injured were males, 34% were female and 8% did not have their gender recorded.
- Thirty per cent of the people seriously injured were aged between 25 and 39 years, 23% were aged between 40 and 59 years and 22% were aged between 17 and 24 years.
- Approximately half (49%) of the people seriously injured were drivers, 21% were passengers and 17% were motorcyclists

Child Road Users

- Children aged 16 years and under made up 6% of all persons killed or seriously injured.
- The highest proportion of child road users who were killed or seriously injured were passengers (63%) followed by pedestrians with 17%.
- Of child motor vehicle occupants in police-attended crashes who were killed or seriously injured, 10% were not wearing a seat belt, compared to 6% of all persons.
- Two of the 13 (15%) child bicyclists who were killed or seriously injured were not wearing helmets.
- Of all children killed or seriously injured, 30% were killed or seriously injured between 3pm to 6pm.

Young Adult Road Users

- Persons aged 17 to 24 years made up 22% of all persons killed or seriously injured.
- Of young adult road users who were killed or seriously injured, 52% were drivers, 22% were passengers and 14% were motorcyclists.
- Of young adult road users who were killed or seriously injured in police-attended crashes, 16% were in crashes where speed was a factor. In comparison, of all persons killed or seriously injured in police-attended crashes, 11% were in crashes where speed was factor.
- Of young adult road users who were killed or seriously injured in police-attended crashes, 11% were in alcohol-related crashes (i.e. a crash where at least one driver/rider involved in the crash had a blood alcohol concentration (BAC) of 0.05 g/100mL or higher), compared to 9% for all persons killed or seriously injured in police-attended crashes.
- One fifth of (21%) of young adult drivers/riders involved in serious crashes were involved in single vehicle 'hit object' crashes. This compares with 15% of all drivers/riders involved in serious crashes.
- Of all young adult killed or seriously injured, approximately a quarter (26%) were killed or seriously injured between 9pm and 3am. In comparison, of all persons killed or seriously injured, 16% were killed or seriously injured between 9pm and 3am.
- Of all accidents where young adult were killed or seriously injured, 18% occurred on a Sunday. In comparison, 15% of all persons killed or seriously injured were injured in crashes occurring on a Sunday.

Mature Adult Road Users

- Persons aged 25 to 59 years accounted for 53% of all persons killed or seriously injured.
- Half (50%) of mature adult road users who were killed or seriously injured were drivers, 22% were motorcyclists and 15% were motor vehicle passengers.
- Of mature adult road users who were killed or seriously injured in police-attended crashes, 12% were in crashes where speed was a factor.
- Of mature adult road users who were killed or seriously injured in police-attended crashes, 9% were in alcohol-related crashes.
- Of mature adult motor vehicle occupants in police-attended crashes who were killed or seriously injured, 7% were not wearing a seat belt.

Senior Adult Road Users

- Persons aged 60 years and over made up 14% of all persons killed or seriously injured.
- Of senior adult road users who were killed or seriously injured, 61% were drivers, 16% were passengers, 10% were pedestrians and 8% were motorcyclists.
- More than half (56%) of senior adult drivers/riders involved in serious crashes were in 'Intersection' crashes. This compares with 49% of all drivers/riders involved in serious crashes.
- Of all senior adult killed or seriously injured, three quarters (75%) were killed or seriously injured between 9am and 6pm, compared to 53% of all persons.

Speed

- Speed was a factor in 22% of police-attended fatal crashes.
- The percentage of police-attended fatal crashes that were speed-related was highest in the Remote region (23%) and lowest in the Regional *Towards Zero* region (20%).
- Over two fifths (41%) of motorcyclist fatalities occurred in speed-related crashes attended by police.
- More than three quarters (78%) of speed-related fatal crashes attended by police were single-vehicle crashes, and 64% of these were 'Hit Object' crashes.

Alcohol

- Almost one quarter (23%) of police-attended fatal crashes involved at least one driver/rider with a BAC of 0.05 g/100mL or above (i.e. were an alcohol related crash).
- Among road users killed or seriously injured, 8% were involved in alcohol-related crashes attended by police.
- The majority (94%) of drivers/riders *involved* in alcohol-related police-attended fatal crashes were male.
- Nine of the 33 (27%) pedestrian fatalities in police-attended crashes had a BAC of 0.05 g/100mL or higher.

Illegal Drugs

- A quarter (25%) of the 151 fatalities matched to the crash data had illegal drugs detected in their systems.
- Over a third (36%) of the 25 fatalities from age group 17 to 24 matched to the crash data had illegal drugs detected in their systems.
- More than a third (38%) of the 26 passenger fatalities and a quarter (26%) of the 61 driver fatalities matched to the crash data involved a driver/rider who had illegal drugs detected in their systems.

Seat Belts

- More than one quarter (26%) of motor vehicle occupant fatalities in police-attended crashes were not wearing a seat belt.
- Thirty per cent of male and 10% of female motor vehicle occupant fatalities in police-attended crashes were not wearing a seat belt.

Helmets

- Four of the 27 motorcyclist fatalities in police-attended crashes were not wearing a helmet.
- Of the six bicyclist fatalities in police-attended crashes, two were not wearing helmets.
- Almost one quarter (22%) of bicyclists seriously injured in crashes attended by police were not wearing a helmet.

Crash Nature

- Single-vehicle crashes constituted 70% of all fatal crashes.
- Single-vehicle crashes accounted for 80% of fatal crashes in Remote areas, 80% of fatal crashes in Regional areas and 59% of fatal crashes in the Metropolitan region.
- More than a third (36%) of fatal crashes in the Metropolitan region occurred at an intersection.
- In Remote areas, 70% of fatal crashes were 'Run Off Road' crashes, compared to 60% of fatal crashes in Regional areas and 27% of fatal crashes in the Metropolitan region.
- In Remote areas, 17% of fatal crashes were 'Head On' crashes, compared to 11% in the Metropolitan region and 4% in Regional areas.
- Over half (55%) of hospitalisation crashes were multiple vehicle crashes.
- Nearly two thirds (65%) of the hospitalisation crashes in the Metropolitan region were multiple vehicle crashes. In contrast 66% of hospitalisation crashes in Regional areas and 74% Remote areas were single vehicle crashes.
- Over half (52%) of the hospitalisation crashes in the Metropolitan region occurred at an intersection.
- In Remote areas, 60% of hospitalisation crashes 'Run Off Road' crashes, compared to 52% of hospitalisation crashes in Regional areas and 22% of hospitalisation crashes in the Metropolitan region.
- In Remote areas, 5% of hospitalisation crashes were 'Head On' crashes, compared to 5% in Regional areas and 2% in the Metropolitan region.

Hospital Inpatient Data

- Hospital inpatient data showed there were 4,309 people admitted to hospital due to road crashes, of whom 28 people died after admission to hospital.
- Indigenous Australians made up 6% of hospital inpatients resulting from road crashes.
- More than one quarter (28%) of hospital inpatients were motor vehicle drivers and 24% were motorcyclists.
- In 2013, 744 bicyclists were admitted to hospital as inpatients, a 13% increase on 2012.

Key Performance Indicators

The key performance indicators (KPI) below provide a more detailed breakdown of the broader performance indicators that are set out in *Towards Zero*, the State Government's road safety strategy for 2008-2020. The indicators have been approved by the Road Safety Council, and will be the means by which the annual progress of the Strategy is monitored. The indicators are subject to regular review, and may change during the life of the Strategy.

KPI	Year 2008	2009	2010	2011	2012	2013	2013 Change from 2012 (%)
Number of hospitalised bed days							
Cumulative length of stay (days)	30,966.30	31,094.40	29,577.80	26,541.90	25,920.00	26,715.80	3.1
Average length of stay (days)	8.1	7.9	7.4	6.3	6.0	6.2	3.3
Cost of crashes to the WA community (2012 dollars)[1]							
Cost ($m) – Human Capital	2,441.4	2,214.3	2,247.0	2,188.6	2,181.2	2,030.0	-6.9
Cost ($m) – Willingness to pay	3,032.8	2,828.7	2,860.9	2,759.1	2,758.5	2,490.0	-9.7
Number of serious crashes by *Towards Zero* regions							
Metropolitan	1,685	1,482	1,464	1,467	1,450	1,419	-2.1
Regional	501	427	459	444	423	436	3.1
Remote	279	274	282	258	312	236	-24.4
Number of persons killed or seriously injured							
Persons KSI	3,097	2,759	2,722	2,644	2,651	2,507	-5.4
Percentage of vehicles exceeding the speed limit by speed zone[2]							
60 km/h	41.2	38.2	46.6	48.2	44.3	41.3	-6.8
70 km/h	26.0	21.3	37.4	37.0	33.6	34.0	1.2
80 km/h	29.2	23.5	39.9	34.0	34.8	32.0	-8.0
90 km/h	34.5	33.7	26.6	27.8	31.6	27.6	-12.7
100 km/h	35.0	43.3	20.2	32.3	20.6	31.3	51.9
110 km/h	28.1	30.3	23.8	15.5	22.8	23.7	3.9
Injury rates for persons killed or seriously injured[3]							
Persons KSI per 100,000 population	142.6	123.2	118.8	112.3	108.7	99.5	-8.5
Persons KSI per 10,000 registered vehicles	17.7	15.1	13.8	13.8	13.4	12.2	-8.7
Persons KSI per 100 million km travelled[3]	12.4	10.7	10.4	9.9	9.6	8.9	-8.0

1. For details on data sources and methodology, refer to Section 2.2 on page 15. Average weekly earnings used May 2012 release for figures up to 2012 and November 2013 release for 2013 figures.
2. For details on data sources and methodology, refer to section 4.3 on page 78.
3. The 2008, 2009 and 2011 KSI rates per 100 million km travelled is based on average kilometres travelled (interpolated between 2007, 2010 and 2012 figures) and number of registered vehicles in each year. The 2013 figure is an estimate based on the 2012 average kilometres travelled per vehicle and the 2013 number of vehicles registered.

KPI	Year 2008 n	2008 %	2009 n	2009 %	2010 n	2010 %	2011 n	2011 %	2012 n	2012 %	2013 n	2013 %	2013 Change from 2012 %
Number and percentage of persons killed or seriously injured in police-attended crashes involving illegal behaviour[4,5,6]													
Speed a factor[4]	479	17.7	412	17.1	340	14.2	334	14.3	309	13.0	238	10.9	-23.0
Alcohol a factor[4]	313	11.6	334	13.9	282	11.7	253	10.8	239	10.1	185	8.5	-22.6
Seat belt not worn[5]	157	7.6	158	9.0	132	7.4	119	7.0	138	8.1	90	5.9	-34.8
Helmet not worn (motorcyclists)	37	10.1	38	11.1	36	9.9	22	6.0	38	10.1	35	9.8	-7.9
Helmet not worn (bicyclists)	22	21.6	23	27.1	19	23.2	19	22.4	29	27.1	26	23.0	-10.3
Illegal drugs (fatalities)[6]	46	31.7	38	29.9	37	26.1	28	17.4	39	22.9	37	24.5	-5.1
Number and percentage of persons killed or seriously injured by road user type[7]													
Driver	1,533	49.5	1,282	46.5	1,328	48.8	1,271	48.1	1,227	46.3	1,158	46.2	-5.6
Passenger	737	23.8	700	25.4	607	22.3	584	22.1	587	22.2	504	20.1	-14.1
Pedestrian	200	6.5	236	8.6	204	7.5	213	8.1	202	7.6	212	8.5	5.0
Bicyclist	119	3.8	112	4.1	111	4.1	105	4.0	131	4.9	137	5.5	4.6
Motorcyclist	420	13.6	386	14.0	421	15.5	424	16.0	436	16.5	432	17.2	-0.9
Scooter/Moped user	6	0.2	7	0.3	0	0.0	1	0.0	0	0.0	1	0.0	N/A
Heavy vehicle occupant	82	2.6	36	1.3	51	1.9	46	1.7	65	2.5	62	2.5	-4.6
Number and percentage of persons killed or seriously injured in crashes at intersections by *Towards Zero* areas													
Metropolitan	1,108	83.0	1,003	83.7	942	83.2	884	81.0	875	80.6	860	82.6	-1.7
Regional	162	12.1	142	11.8	151	13.3	161	14.8	154	14.2	144	13.8	-6.5
Remote	65	4.9	54	4.5	39	3.4	46	4.2	56	5.2	37	3.6	-33.9
Number and percentage of persons killed or seriously injured in head on crashes by *Towards Zero* areas													
Metropolitan	89	56.7	79	52.0	86	52.8	86	57.3	71	49.3	69	51.5	-2.8
Regional	55	35.0	55	36.2	45	27.6	42	28.0	28	19.4	38	28.4	35.7
Remote	13	8.3	18	11.8	32	19.6	22	14.7	45	31.3	27	20.1	-40.0
Number and percentage of persons killed or seriously injured run off road crashes by *Towards Zero* areas													
Metropolitan	454	40.9	398	42.7	350	36.7	388	42.9	393	41.1	359	41.7	-8.7
Regional	363	32.7	287	30.8	311	32.6	281	31.0	292	30.5	279	32.4	-4.5
Remote	292	26.3	248	26.6	293	30.7	236	26.1	272	28.4	223	25.9	-18.0

4. Speed and alcohol-related crashes refer to police-attended crashes only.
5. Motor vehicle occupants in police-attended crashes only.
6. Illegal drug data obtained from the Forensic Science Laboratory, Chemistry Centre of WA for fatalities only. Percentages of fatalities who were able to be matched between the two datasets.
7. Excludes persons with other/unknown road user type (n=1 for 2013).

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1. INTRODUCTION

This report, published annually, is produced and distributed on behalf of the Road Safety Council of Western Australia. The report provides road crash statistics for 2013 in Western Australia. Some historical data and road crash statistics for the rest of Australia are also included in the report to help readers to interpret the statistics in an appropriate context.

A crash is classified as a road crash if the following conditions hold: the crash resulted in bodily injury or property damage, the crash occurred on a road and the road was open to the public at the time of the crash, the crash involved at least one moving vehicle and the crash was not a result of a medical condition or a deliberate act (such as a suicide attempt). Crashes that do not meet these criteria have been excluded from the report.

The report focuses mainly on crashes that resulted in road users being killed or seriously injured, where a serious injury is defined as an injury that resulted in the road user being admitted to hospital for treatment. The term serious crash is used in this report to describe any crash resulting in at least one fatality or serious injury. For more detailed definitions of these and other terms, see the Glossary on page 162.

1.1 Data Sources and Acknowledgements

Sections 2 to 6 contain statistics extracted from data on police-reported road crashes. These data were obtained from the Integrated Road Information System (IRIS) maintained by Main Roads Western Australia. The dataset used was extracted from the IRIS on 10 July 2014 by Main Roads and changes made after this date are not reflected in this report.

Crash rates were calculated from the police-reported data using estimated resident population, vehicle registrations and estimated kilometres travelled data obtained from the Australian Bureau of Statistics (ABS). As the estimated kilometres travelled for 2013 was not able to be obtained directly from the ABS publication, it was estimated based on the 2012 average kilometres travelled per vehicle and the 2013 number of vehicles registered. The release date of data sourced from Australian Bureau of Statistics' publications with multiple releases is provided with each table.

Section 7 presents information on road traffic casualties who were admitted to public and private hospitals in Western Australia during 2013. Casualties involved in non-traffic crashes were excluded. The data was extracted on 29 May 2014 by the Hospital Morbidity Data Collections, Data Integrity, Performance Activity & Quality Division of the Western Australian Department of Health. Hospital inpatient data is captured using the Hospital Morbidity Data System.

These data offer an alternative data source to the police-reported data and provide additional details about the road traffic casualties not usually available in police crash reports (i.e. Indigenous status). However, there are differences in reporting criteria, reporting methods and road user type definitions between the two datasets. Therefore, the hospital inpatient data cannot be directly compared to the police-reported data.

The number of Western Australian motor driver licences on record for each year from 1974 onwards is provided in Appendix A on page 140. This information was obtained from the Western Australian Department of Transport.

Data Analysis Australia would like to thank the following people and organisations for their assistance in providing data:

Main Roads Western Australia

- Thandar Lim

Health Department of Western Australia

- David Oats
- Paul Stevens

Department of Transport

- Karl Shoebridge

We would also like to thank Matthew Legge from the Office of Road Safety for his contribution and assistance in the preparation of the report.

1.2 Reading and Interpreting the Report

The statistics in this report should be read in conjunction with the glossary included on page 162, which provides definitions of terms used in the report. Particular note should be made of some of the terminology used in this report compared to that of earlier reports in the same series. These changes took effect from the report for 2012 and have been made to provide consistency with the terminology used nationally in the area of road crash statistics.

All tables and figures in this report refer to road crashes that occurred in Western Australia in 2013, unless otherwise stated.

Tables and graphs are provided with varying levels of detail, and care must be taken when interpreting percentage changes where the overall numbers are small. For this reason percentage changes are not reported for counts less than 10 (indicated by N/R in tables). In some cases percentages may not add to exactly 100%, due to rounding.

Rates in the tables presented in this report are rounded to one decimal place, although percentage changes are calculated from the original, unrounded data. Therefore, calculating percentage changes using the rounded rates may result in values that differ from those shown in the tables.

Many of the tables that provide information by crash or injury severity include a subtotal column or row for total serious crashes or total persons Killed or Seriously Injured (KSI). Therefore, in these tables the overall column or row total cannot be calculated by simply summing all columns or rows.

Western Australian legislation requires that traffic crashes are reported to police if:

- the incident results in bodily harm to any person
- the total value of property damage exceeds $3,000
- the owner or representative of any damaged property is not present

Traffic crashes can be reported in person to a police station, using a paper-based form (the P72 form). In addition to this, in November 2009 an online crash report facility (OCRF) was launched by Western Australia Police and the Insurance Commission of Western Australia. The introduction

of the OCRF is expected to result in more accurate data, as some validation of the information entered can be conducted automatically at the time the crash is reported (such as make and model of vehicle and currency of driver's licence). It may also result in an apparent increase in the number of crashes involving property damage only, as the ease of reporting may reduce under-reporting of such crashes. There are some minor differences in the information collected via the OCRF and the hard copy P72 form, including the addition of passenger gender. The version of the P72 form used in 2013 is provided in Appendix C on page 146.

Throughout the report, overall table totals will vary because separate tables are provided for different levels, including the following:

- number of crashes
- number of road users
- number of drivers/riders
- number of motor vehicle occupants
- number of vehicles

Within these levels, tables and graphs are provided for subsets by crash severity, injury severity, road user group and police attendance. All captions for tables and figures describe the particular subset of data included in that table or figure.

1.3 *Towards Zero* Priority Crash Types

Towards Zero is the State Government's road safety strategy for 2008 to 2020. *Towards Zero* is based on a holistic view of road safety that seeks to manage the interaction between the road user, the road, travel speed and the vehicle. This 'safe system' approach has achieved results not possible using traditional road safety approaches. The measures outlined in *Towards Zero* use the safe system framework and its four cornerstones – Safe Road Use, Safe Roads and Roadsides, Safe Speeds and Safe Vehicles. Copies of the strategy are available from the Office of Road Safety website <http://www.ors.wa.gov.au/Towards-Zero.aspx>.

As part of the development of *Towards Zero*, problem areas were identified by the Monash University Accident Research Centre from an analysis of WA's reported crashes between 2005 and 2007. Problem areas were prioritised on their estimated contribution to the number of deaths and serious injuries, either because of their frequency or because the associated risks were high.

On this basis, three crash types were identified as having the highest priority and are reported on in various sections of this text. Two crash types, intersection and run-off-road crashes[1], were identified as a priority since each resulted in a third of the people killed and seriously injured between 2005 and 2007, and the third crash type, head-on crashes, was chosen because the risk associated with a person being killed or seriously injured is high.

These crash types are not mutually exclusive, hence tables presenting *Towards Zero* High Priority Crash Types may count some crashes more than once, and percentages will not sum to 100%.

[1] 'Run Off Road' crashes are defined as crashes in which a vehicle involved exits the carriageway, through a loss of control, swerving to avoid a collision or for other reasons. After the vehicle has left the carriageway it may also collide with a person, object, or vehicle, or it may roll over, and/or a person may fall or be ejected from the vehicle.

1.4 Reporting Regions and Accessibility/Remoteness Index of Australia

The accessibility/remoteness index of Australia (ARIA) is a geographical measure of remoteness developed by the National Centre for Social Applications of Geographical Information Systems Consultancy Services. Measurements of road distances between populated localities and service centres were used to determine the ARIA score for a given location. ARIA scores were derived for over 12,000 populated localities within Australia. These ARIA scores have then been interpolated to provide an ARIA score for the whole of Australia. Localities that are more remote have less access to service centres; those that are less remote have greater access to service centres. The standard ranges that are used for ARIA scores are provided in Table 1. These ranges have been used in all ARIA tables throughout the report.

Table 1 ARIA Scores and Categories

ARIA Score	ARIA Category
0 to ≤0.2	Highly Accessible
>0.2 to ≤2.4	Accessible
>2.4 to ≤5.92	Moderately Accessible
>5.92 to ≤10.53	Remote
>10.53	Very Remote

Source: National Centre for Social Applications of Geographical Information Systems Consultancy Services.

In 2013, 77.7% of Western Australia's population were located in 'Highly Accessible' areas and 8.2% in 'Accessible' areas while only 2.2% were located in 'Very Remote' areas.

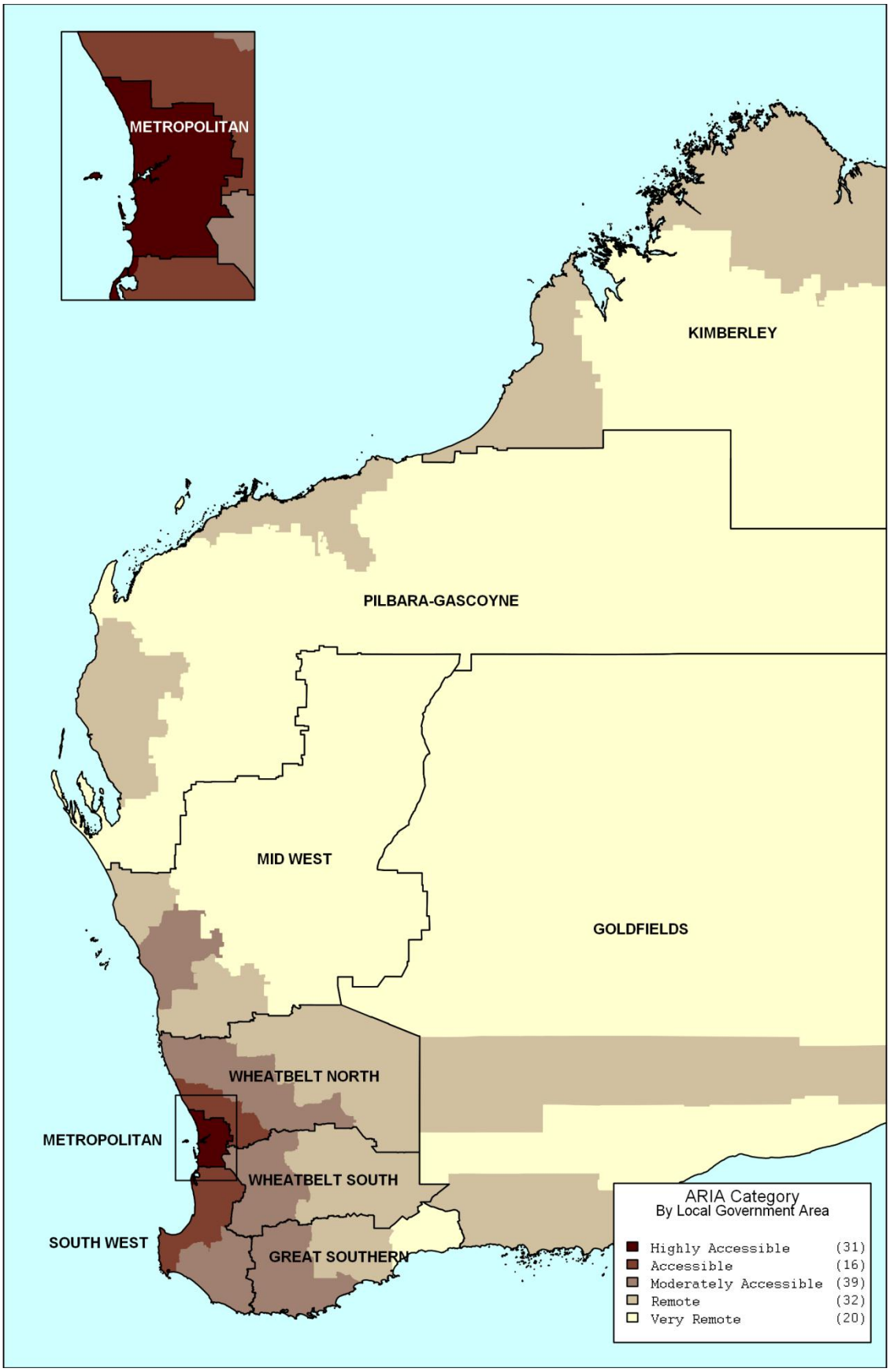
Table 2 2013 Western Australian Population by ARIA Category

	2013 Population	
ARIA Category	**n**	**%**
Highly Accessible	1,956,864	77.7%
Accessible	205,547	8.2%
Moderately Accessible	190,108	7.5%
Remote	111,042	4.4%
Very Remote	55,760	2.2%
Total	**2,519,321**	**100.0%**

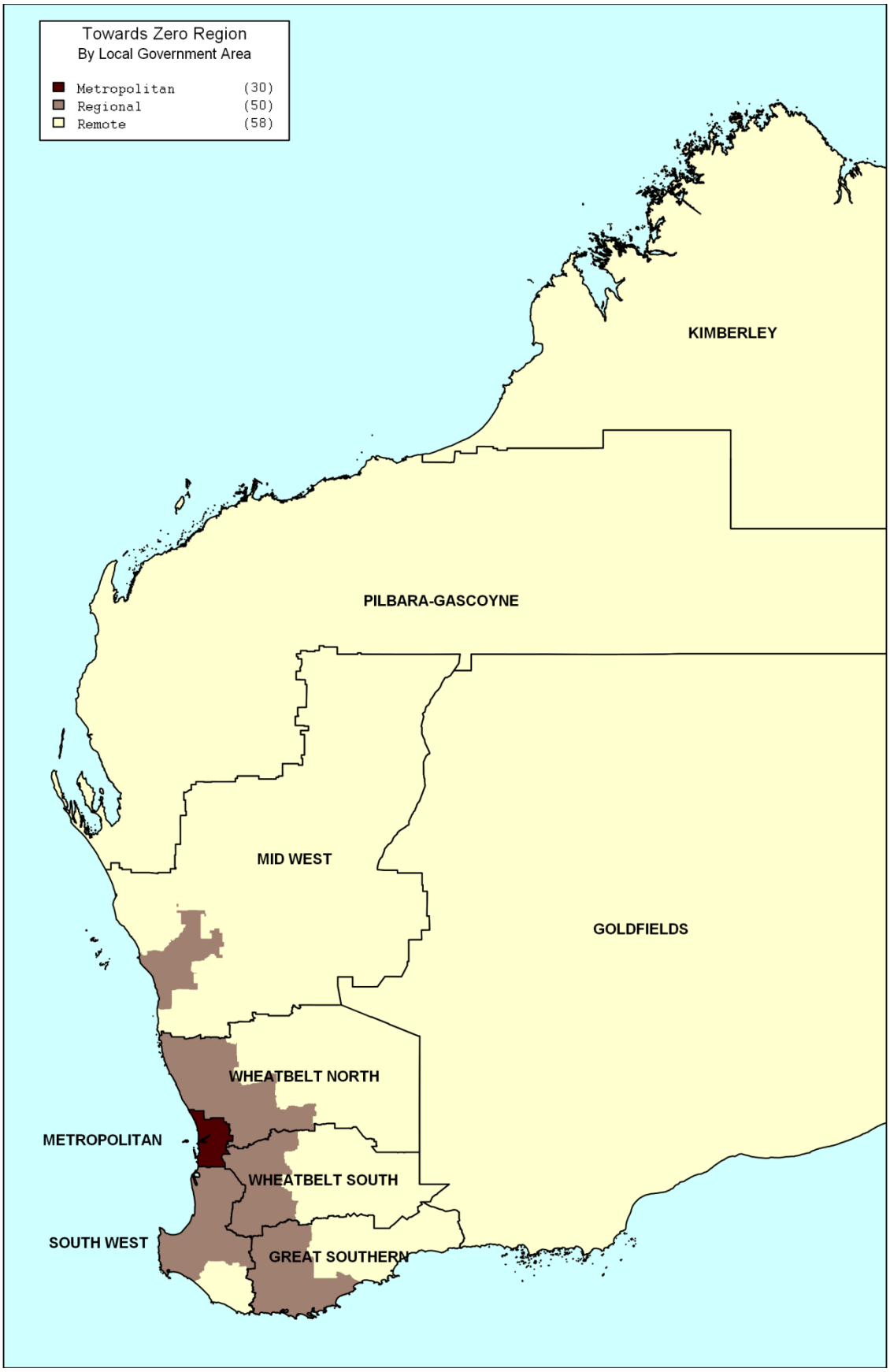
Source: Australian Bureau of Statistics, Customised report, 2014 for 2013 figures.

In line with the focus of the *Towards Zero* road safety strategy, some results in this report are presented comparing the Metropolitan region with Regional and Remote areas. The Metropolitan area is defined as the Perth Statistical Division and the remainder of the State is then split into Regional and Remote areas based on ARIA categories. Regional areas have ARIA categories of Accessible or Moderately Accessible, and Remote areas have ARIA categories of Remote or Very Remote. Note that the *Towards Zero* Regions were defined using 2006 ARIA categories whereas elsewhere in the book reports on 2011 ARIA categories. Map 1 shows the ARIA Categories, and Map 2 shows the *Towards Zero* Regions by Local Government Areas (LGAs) in Western Australia.

Map 1 ARIA Categories by Local Government Area



Map 2 ***Towards Zero*** **Regions by Local Government Area**



1.5 Selected Western Australian Statistical Indicators

This section contains key statistics to provide an overview of the Western Australian economy and population for 2008 to 2013. This information may provide additional context to the road crash statistics.

Table 3 Statistical Indicators of the Western Australian Economy by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Statistical Indicator	n	n	n	n	n	n	%
Gross State Product (June)[1]	155,306	176,582	182,215	221,852	240,811	242,697	0.8
Consumer Price Index (June)[2]							
Index Numbers	92.0	93.3	96.5	99.4	100.5	103.0	2.5
Annual Percentage Change	4.5	1.4	3.4	3.0	1.1	2.5	2.5
Labour Force (December)[3]							
Persons Employed	1,173,100	1,185,800	1,223,800	1,260,900	1,313,600	1,342,600	2.2
Persons Unemployed	39,600	64,200	56,400	54,800	59,400	67,000	12.8
Total Labour Force	1,212,700	1,250,000	1,280,200	1,315,700	1,373,000	1,409,600	2.7
Average Weekly Earnings (May)[4]							
Male	$1,230.10	$1,306.00	$1,352.70	$1,501.10	$1,562.10	$1,651.60	5.7
Female	$660.20	$706.40	$740.40	$780.40	$832.30	$886.80	6.5
Persons	$959.30	$1,008.70	$1,060.50	$1,146.00	$1,208.60	$1,289.20	6.7
New Motor Vehicle Sales[5]							
Passenger Vehicles	62,355	52,319	62,317	54,517	60,155	57,250	-4.8
Sports Utility Vehicle	24,556	22,501	28,513	28,285	35,952	38,000	5.7
Other Vehicles	29,816	25,468	27,018	26,981	31,775	30,557	-3.8
Total Vehicle Sales	116,727	100,289	117,848	109,784	127,883	125,804	-1.6

1. Source: Australian Bureau of Statistics, Catalogue No. 5220.0, in $million (2012/2013 releases). The estimates of Gross State Product are given in current price and chain volume terms.
2. Source: Australian Bureau of Statistics, Catalogue No. 6401.0 (December 2013 release). The Consumer Price Index is for all groups and is for the Perth Metropolitan area.
3. Source: Australian Bureau of Statistics, Catalogue No. 1306.5 (2010 – 2013 releases).
4. Source: Australian Bureau of Statistics, Catalogue No. 6302.0 Seasonally adjusted total earnings (May 2012 release for figures up to 2012 and November 2013 release for 2013 figures).
5. Source: Australian Bureau of Statistics, Catalogue No. 9314.0 (February 2014 release). The New Motor Vehicle Sales figures are seasonally adjusted.

Table 4 Western Australian Population by Gender and Age Group by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Male							
0 - 16	249,254	254,618	258,071	262,303	270,508	278,069	2.8
17 - 24	131,154	136,437	137,967	139,683	143,866	146,904	2.1
25 - 59	540,258	557,353	570,280	587,801	614,312	637,720	3.8
60 and over	174,228	181,030	187,746	195,263	203,007	211,102	4.0
Total Males	**1,094,894**	**1,129,438**	**1,154,064**	**1,185,050**	**1,231,693**	**1,273,795**	**3.4**
Female							
0 - 16	236,307	242,355	246,625	251,682	259,009	266,510	2.9
17 - 24	122,822	127,127	128,817	131,138	134,032	137,159	2.3
25 - 59	525,939	542,099	554,572	570,374	590,270	610,630	3.4
60 and over	191,738	199,231	206,767	215,165	222,990	231,227	3.7
Total Females	**1,076,806**	**1,110,812**	**1,136,781**	**1,168,359**	**1,206,301**	**1,245,526**	**3.3**
Persons							
0 - 16	485,561	496,973	504,696	513,985	529,517	544,579	2.8
17 - 24	253,976	263,564	266,784	270,821	277,898	284,063	2.2
25 - 59	1,066,197	1,099,452	1,124,852	1,158,175	1,204,582	1,248,350	3.6
60 and over	365,966	380,261	394,513	410,428	425,997	442,329	3.8
Total Population[1]	**2,171,700**	**2,240,250**	**2,290,845**	**2,353,409**	**2,437,994**	**2,519,321**	**3.3**

1. Source: Australian Bureau of Statistics, Catalogue No. 3101.0 (September 2013 release).

2. ROAD CRASH AND INJURY SUMMARIES

2.1 Historical Information

This section presents trends in road traffic crashes, casualties and corresponding rates. It also includes the distribution of road crashes and casualties in 2013 by geographical areas.

Figure 1 Fatalities by Year, 1961 to 2013

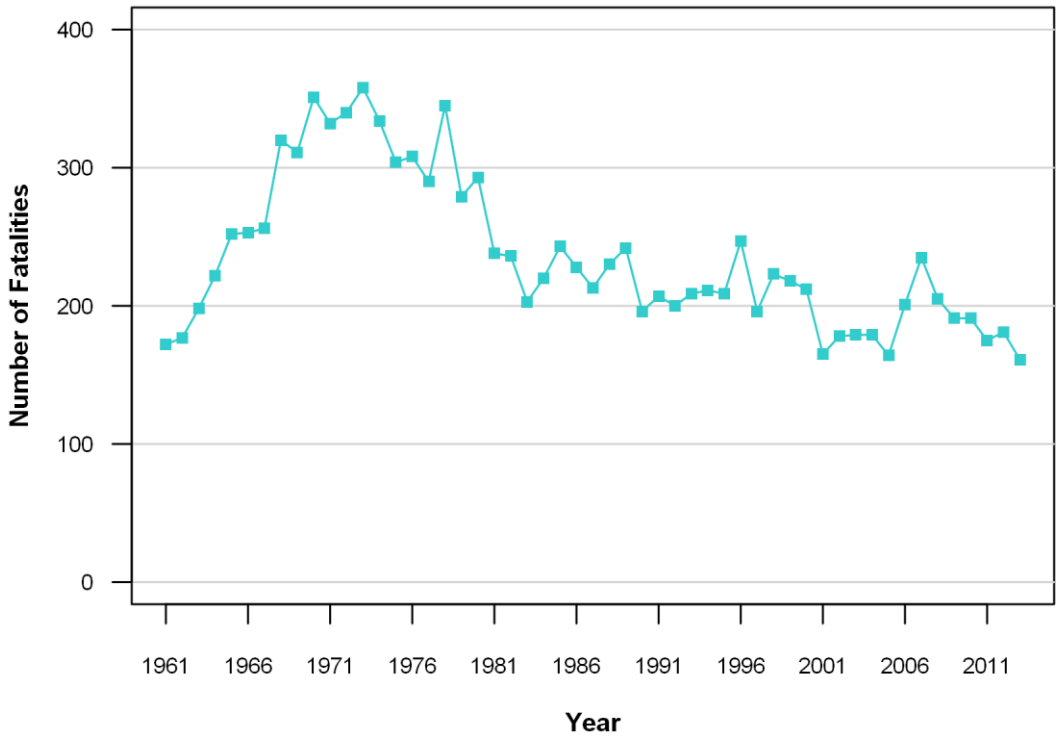


Figure 2 Fatality Rates by Year, 1961 to 2013

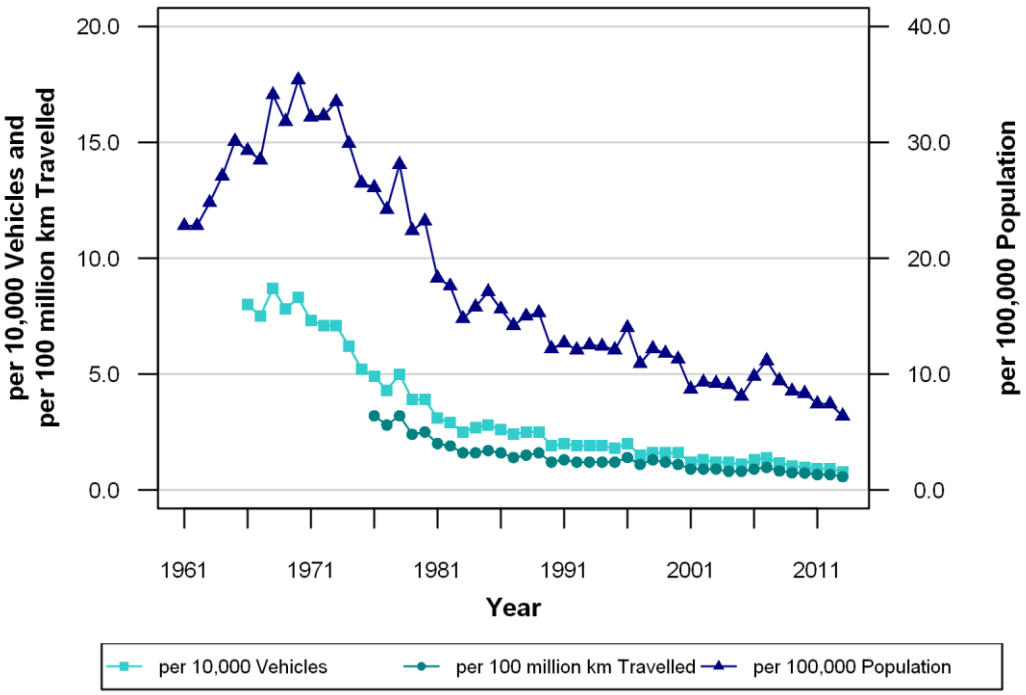


Figure 3 Persons Seriously Injured by Year, 1980 to 2013

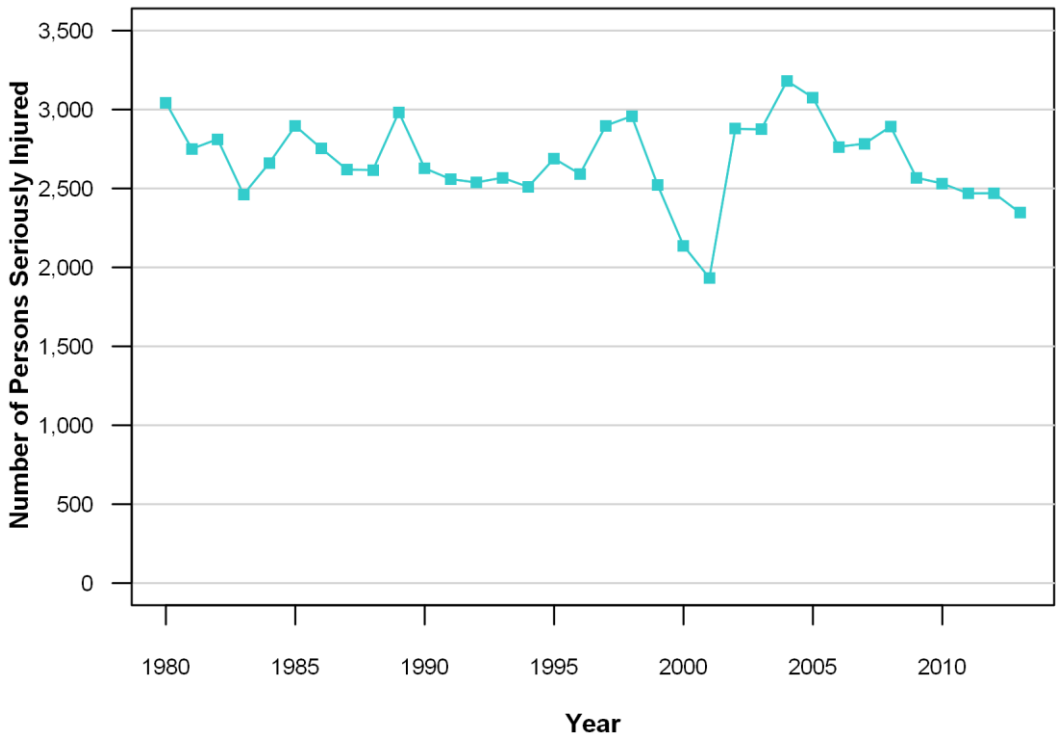


Figure 4 Serious Injury Rates by Year, 1980 to 2013

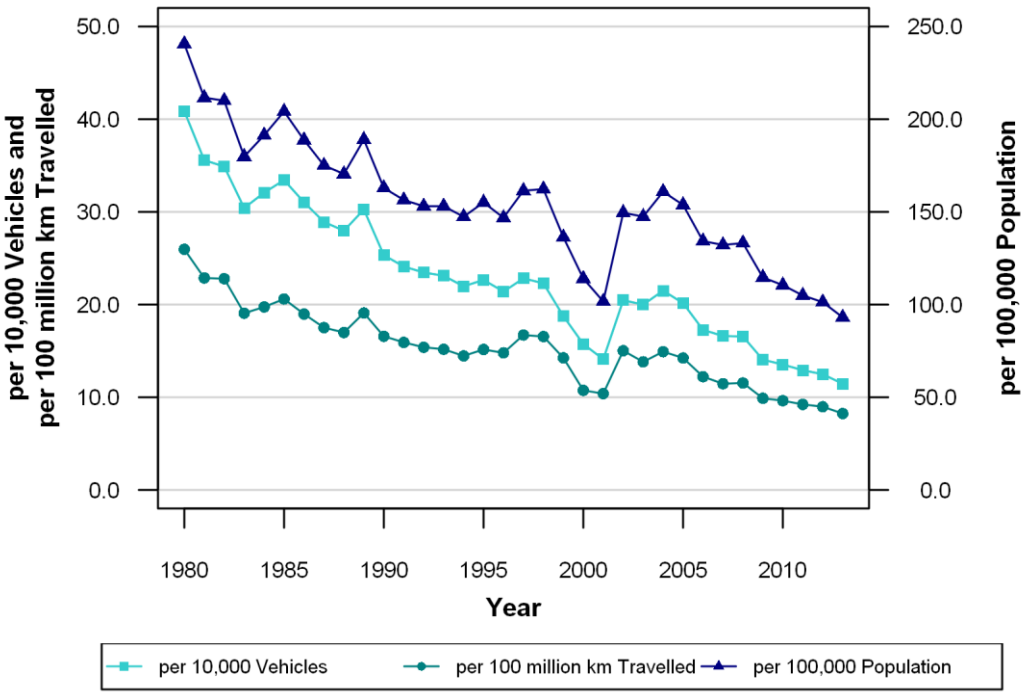


Figure 5 Reported Crash Rates by Year, 1976 to 2013

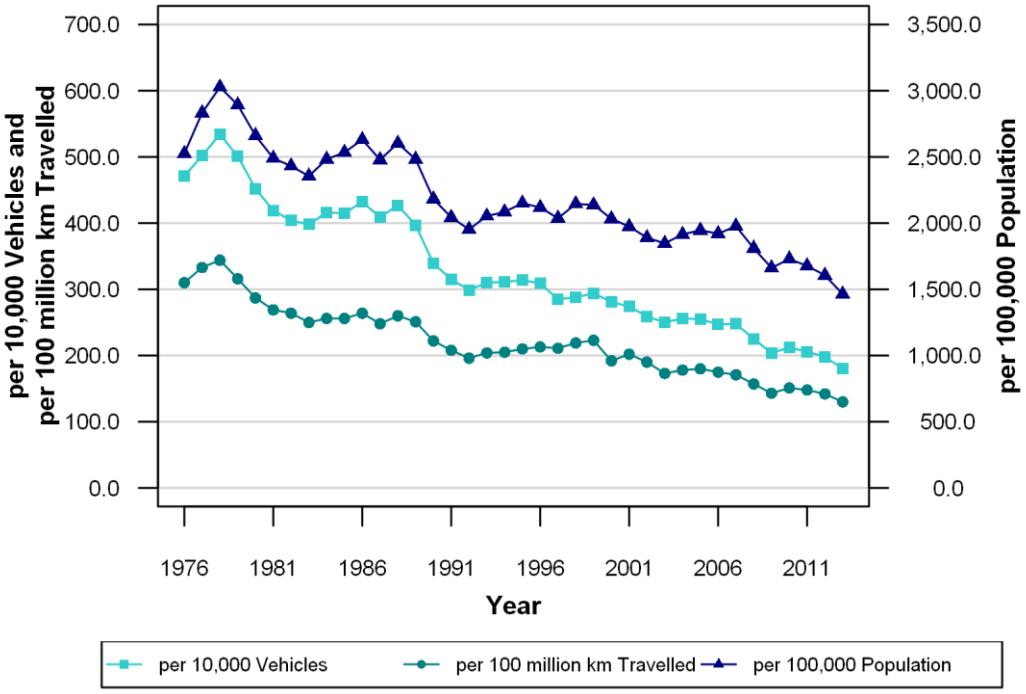


Table 5 Crash Severity by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Crash Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	185	176	174	163	169	148	-12.4
Hospitalisation	2,280	2,007	2,031	2,006	2,016	1,943	-3.6
Total Serious	**2,465**	**2,183**	**2,205**	**2,169**	**2,185**	**2,091**	**-4.3**
Other	36,833	35,043	37,411	37,287	36,964	34,796	-5.9
Total Crashes	**39,298**	**37,226**	**39,616**	**39,456**	**39,149**	**36,887**	**-5.8**

Table 6 Injury Severity by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	205	191	191	175	181	161	-11.0
Serious	2,892	2,568	2,531	2,469	2,470	2,346	-5.0
Total Persons KSI	3,097	2,759	2,722	2,644	2,651	2,507	-5.4
Minor	12,486	11,589	10,080	9,841	8,062	7,439	-7.7
None/unknown	93,241	87,972	97,493	92,976	93,803	88,508	-5.6
Total Persons	**108,824**	**102,320**	**110,295**	**105,461**	**104,516**	**98,454**	**-5.8**

Table 7 Injury Rates per 100,000 Population by Severity and Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	9.4	8.5	8.3	7.4	7.4	6.4	-13.9
Serious	133.2	114.6	110.5	104.9	101.3	93.1	-8.1
Total Persons KSI	**142.6**	**123.2**	**118.8**	**112.3**	**108.7**	**99.5**	**-8.5**
Minor	574.9	517.3	440.0	418.2	330.7	295.3	-10.7
None/unknown	4,293.5	3,926.9	4,255.8	3,950.7	3,847.5	3,513.2	-8.7
Total	**5,011.0**	**4,567.3**	**4,814.6**	**4,481.2**	**4,287.0**	**3,908.0**	**-8.8**
Estimated Population[1]	**2,171,700**	**2,240,250**	**2,290,845**	**2,353,409**	**2,437,994**	**2,519,321**	**-**

1. Source: Australian Bureau of Statistics, Catalogue No. 3101.0 (September 2013 release).

Table 8 Injury Rates per 10,000 Registered Vehicles by Severity and Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	1.2	1.0	1.0	0.9	0.9	0.8	-14.1
Serious	16.6	14.0	13.5	12.9	12.5	11.5	-8.3
Total Persons KSI	**17.7**	**15.1**	**14.6**	**13.8**	**13.4**	**12.2**	**-8.7**
Minor	71.5	63.4	53.9	51.4	40.8	36.3	-10.9
None/unknown	533.8	481.2	521.3	486.1	474.3	432.1	-8.9
Total	**623.1**	**559.6**	**589.8**	**551.4**	**528.5**	**480.6**	**-9.0**
Registered Vehicles[1]	**1,746,579**	**1,828,346**	**1,870,068**	**1,912,739**	**1,977,756**	**2,048,388**	**-**

1. Source: Australian Bureau of Statistics Motor Vehicle Census Catalogue No 9309.0 (2010 – 2013 releases).

Table 9 Injury Rates per 100 Million Kilometres Travelled by Severity and Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	0.8	0.7	0.7	0.7	0.7	0.6	-14.1
Serious	11.5	9.9	9.6	9.2	9.0	8.2	-8.3
Total Persons KSI	**12.4**	**10.6**	**10.4**	**9.9**	**9.6**	**8.8**	**-8.7**
Minor	49.8	44.6	38.3	36.8	29.3	26.1	-10.9
None/unknown	372.2	338.8	370.9	347.7	341.1	310.8	-8.9
Total	434.4	394.1	419.6	394.4	380.1	345.7	-9.0
Vehicle Kilometres Travelled (millions)[1]	**25,053**	**25,962**	**26,285**	**26,740**	**27,500**	**28,482**	**-**

1. Source: Australian Bureau of Statistics Survey of Motor Vehicle Use, Catalogue No 9208.0 (June 2012 release for 2010 and 2012 figures). Due to direct estimates being unavailable for 2008, 2009 and 2011, figures for those years were obtained by interpolating between the published average kilometres travelled per vehicle values for 2007, 2010 and 2012 and then multiplying by the number of registered vehicles in the respective years. The 2013 figure is an estimate based on the 2012 average kilometres travelled per vehicle and the 2013 number of vehicles registered.

Table 10 Crash Severity by *Towards Zero* Region

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
***Towards Zero* Region**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Metropolitan	73	49.3	1,346	69.3	**1,419**	**67.9**	29,768	85.6	**31,187**	**84.6**
Regional	45	30.4	391	20.1	**436**	**20.9**	3,553	10.2	**3,989**	**10.8**
Remote	30	20.3	206	10.6	**236**	**11.3**	1,472	4.2	**1,708**	**4.6**
Total Crashes[1]	**148**	**100.0**	**1,943**	**100.0**	**2,091**	**100.0**	**34,793**	**100.0**	**36,884**	**100.0**

1. Excludes 3 property damage only crashes for which the region was unknown.

Table 11 Injury Severity by *Towards Zero* Region

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
***Towards Zero* Region**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Metropolitan	80	49.7	1,565	66.7	**1,645**	**65.6**	6,087	81.8	76,439	86.4	**84,171**	**85.5**
Regional	48	29.8	492	21.0	**540**	**21.5**	959	12.9	8,769	9.9	**10,268**	**10.4**
Remote	33	20.5	289	12.3	**322**	**12.8**	393	5.3	3,295	3.7	**4,010**	**4.1**
Total Persons[1]	**161**	**100.0**	**2,346**	**100.0**	**2,507**	**100.0**	**7,439**	**100.0**	**88,503**	**100.0**	**98,449**	**100.0**

1. Excludes 5 uninjured persons in crashes for which the region was unknown.

Table 12 Crash Severity by ARIA Category

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
ARIA Category	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Highly Accessible	76	51.4	1,389	71.5	**1,465**	**70.1**	30,464	87.6	**31,929**	**86.6**
Accessible	27	18.2	226	11.6	**253**	**12.1**	1,758	5.1	**2,011**	**5.5**
Moderately Accessible	21	14.2	163	8.4	**184**	**8.8**	1,539	4.4	**1,723**	**4.7**
Remote	15	10.1	108	5.6	**123**	**5.9**	714	2.1	**837**	**2.3**
Very Remote	9	6.1	57	2.9	**66**	**3.2**	318	0.9	**384**	**1.0**
Total Crashes[1]	**148**	**100.0**	**1,943**	**100.0**	**2,091**	**100.0**	**34,793**	**100.0**	**36,884**	**100.0**

1. Excludes 3 property damage only crashes for which the region was unknown.

Table 13 Injury Severity by ARIA Category

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
ARIA Category	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Highly Accessible	83	51.6	1,618	69.0	1,701	67.9	6,255	84.1	78,204	88.4	86,160	87.5
Accessible	28	17.4	297	12.7	325	13.0	504	6.8	4,457	5.0	5,286	5.4
Moderately Accessible	24	14.9	191	8.1	215	8.6	370	5.0	3,615	4.1	4,200	4.3
Remote	16	9.9	164	7.0	180	7.2	194	2.6	1,595	1.8	1,969	2.0
Very Remote	10	6.2	76	3.2	86	3.4	116	1.6	632	0.7	834	0.8
Total Persons[1]	**161**	**100.0**	**2,346**	**100.0**	**2,507**	**100.0**	**7,439**	**100.0**	**88,503**	**100.0**	**98,449**	**100.0**

1. Excludes 5 uninjured persons in crashes for which the region was unknown.

2.2 Cost of Crashes

Estimates of the financial cost of road traffic injuries and crashes in Western Australia have been calculated using two different methods, and both are shown for comparison in Table 14.

The human capital approach evaluates the benefit of avoiding death and injury as the present value of income flow the economy could lose if a crash occurs. It is an "after the fact" valuation. That is, it focuses on the value lost to the economy after the event has occurred. The cost calculation is based on various identifiable costs associated with the crash and its aftermath. These include, but are not restricted to, the cost of ambulance, hospital inpatient and other medical costs, long term care, funeral costs, loss of income by the casualty and the repair or replacement costs to the vehicles and property involved in the crash. The value of the injury is then measured as the sum of the discounted present value of these component costs.

The willingness-to-pay approach is based on subjective preferences and is usually defined as the amount of money that individuals are willing to pay to reduce their risk of premature death or injury, while performing certain risky activities such as using the road network. When people spend extra time or money to avoid potentially fatal risks, or accept money to take such risks, they are making a trade off between their wealth and the probability of death or injury. In this sense, road safety is not valued on the basis of the cost of crashes or the loss of income by crash victims, but it is the value placed on a reduction in risk of death or injury due to a crash. So instead of deriving an "after the fact" value of the costs associated with a road crash, the willingness-to-pay approach captures the value individuals place on avoiding death and injury.

The human capital approach valuations were obtained from the Austroads publication "Guide to Project Evaluation Part 4: Project Evaluation Data", which provides estimates of average crash costs ($/crash) as at 30 June 2007. These valuations have been adjusted for inflation using Western Australia-specific price indices derived from the consumer price index (CPI) indices for June and seasonally adjusted average weekly earnings for May published by the Australian Bureau of Statistics. The willingness-to-pay valuations were obtained from the New South Wales Road Traffic Authority publication "Economic Valuation of Safety Benefits: Serious injuries - Final Report". These are the only Australian willingness-to-pay values currently available. These figures have also been adjusted for inflation using the Perth specific CPI – All Groups index for June, published by the Australian Bureau of Statistics.

The most striking difference between the two approaches is the much higher value associated with fatal crashes using the willingness-to-pay approach, compared to the human capital valuation. This is an indication of the value that the community places on avoiding road deaths. The other difference is that the willingness-to-pay valuations for hospitalisation crashes are lower than the human capital approach equivalents. For example, using the human capital approach to estimate the total cost of crashes in 2013 yields an estimate of $2.1 billion, 20% of which was due to fatal crashes and 58% from hospitalisation crashes. In contrast, the willingness-to-pay approach gives an estimate of $2.5 billion, of which 44% was due to fatal crashes and 27% from hospitalisation crashes.

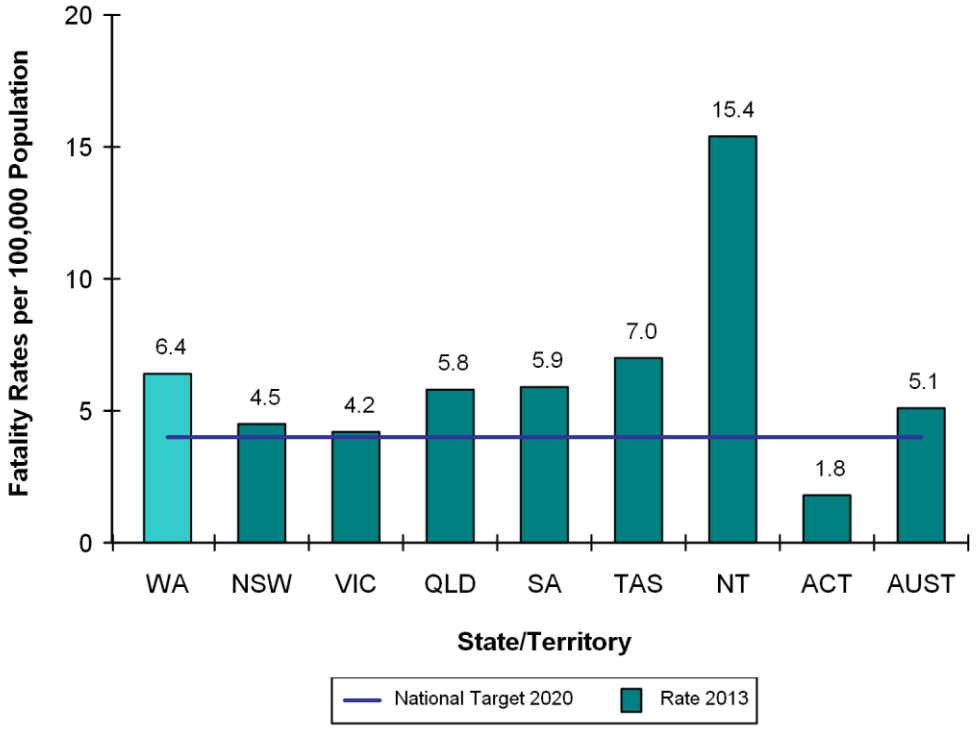
Table 14 Estimated Cost of Crashes to the Western Australian Community

		Human Capital Approach		Willingness-to-Pay Approach	
	Crashes	Cost Per Crash[1]	Total Cost	Cost Per Crash[2]	Total Cost
Crash Severity	n	$	$	$	$
Metropolitan					
Fatal	73	2,806,830	204.9M	7,099,499	518.3M
Hospitalisation	1,346	620,291	834.9M	297,512	400.5M
Medical Attention	4,131	35,943	148.5M	75,407	311.5M
Other[3]	25,637	9,595	246M	11,612	297.7M
Total Metropolitan Crashes	**31,187**	**-**	**1434.3M**	**-**	**1527.9M**
Non-Metropolitan					
Fatal	75	2,989,404	224.2M	8,064,256	604.8M
Hospitalisation	597	672,350	401.4M	476,887	284.7M
Medical Attention	721	38,003	27.4M	104,534	75.4M
Other[3]	4,304	9,595	41.3M	11,612	50M
Total Non-Metro Crashes	**5,697**	**-**	**694.3M**	**-**	**1014.9M**
Total Western Australian Crashes[4]	**36,884**	**-**	**2128.6M**	**-**	**2542.8M**

1. Human capital costs per crash were provided by the Office of Road Safety and are based on:
   - Austroads' "Guide to Project Evaluation Part 4: Project Evaluation Data" (2008).
   - Average weekly earnings for Western Australia for the May quarter Australia Bureau of Statistics Catalogue No. 6302 (November 2013 release).
   - The Consumer Price Index, Australia Bureau of Statistics Catalogue No. 6401.0 (September 2013 release).
2. Willingness-to-pay costs per crash were provided by the Office of Road Safety and are derived using:
   - Costs per injury from NSW RTA "Economic Valuation of Safety Benefits: Serious injuries - Final Report".
   - Consumer price index (CPI) categories of CPI - All Groups, CPI - Motor Vehicle Repair and Servicing and CPI – Health, for the June quarter, Australia Bureau of Statistics Catalogue No. 6401.0 (September 2013 release).
3. Other refers to crashes that resulted in property damage only.
4. Excludes 3 uninjured persons in crashes for which the region was unknown.

2.3 Comparison with Other States and Territories

Figure 6 Fatality Rates per 100,000 Population - Australian States and Territories



Note: The National target for 2020 is a rate of 4.0 fatalities per 100,000 population.

Table 15 Fatality Rates per 100,000 Population by Year - Australian States and Territories

	Year											
	2008		2009		2010		2011		2012		2013	
State/Territory	**n**	**Rate**	**n**	**Rate**	**n**	**Rate**	**n**	**Rate**	**n**	**Rate**	**n**	**Rate**
WA	205	9.4	191	8.5	191	8.3	175	7.4	181	7.4	161	6.4
NSW	374	5.4	454	6.4	405	5.7	364	5	369	5	332	4.5
VIC	303	5.8	290	5.4	288	5.3	287	5.2	282	5	242	4.2
QLD	328	7.8	331	7.6	249	5.7	269	6	280	6.1	271	5.8
SA	99	6.2	119	7.4	118	7.3	103	6.3	94	5.7	98	5.9
TAS	39	7.8	63	12.5	31	6.1	24	4.7	31	6.1	36	7
NT	75	34.1	31	13.7	50	21.8	45	19.5	49	20.8	37	15.4
ACT	14	4	12	3.4	19	5.3	6	1.6	12	3.2	7	1.8
AUST	1,437	6.8	1,491	6.9	1,353	6.1	1,277	5.7	1,300	5.7	1,185	5.1

Source: Number of fatalities for Western Australia from IRIS, number of fatalities for all other states and territories extracted (13/11/2014) from the Department of Infrastructure and Regional Development "Fatal Road Crash Database".
Rates calculated using population data from Australian Bureau of Statistics Catalogue No. 3101.0 (September 2013 release).

2.4 Gender and Age

Table 16 Fatalities by Gender and Age Group by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Male							
0 - 11	8	5	5	6	3	5	N/R
12 - 16	4	5	2	3	3	4	N/R
17 - 24	41	27	32	31	22	25	13.6
25 - 39	42	47	43	33	44	37	-15.9
40 - 59	34	39	35	32	35	31	-11.4
60 and over	20	18	14	24	15	29	93.3
Total Male	**149**	**141**	**131**	**129**	**123**	**131**	**6.5**
Female							
0 - 11	1	3	2	1	1	1	N/R
12 - 16	4	2	2	1	2	2	N/R
17 - 24	11	9	12	13	11	3	-72.7
25 - 39	16	13	12	9	16	8	-50.0
40 - 59	13	9	15	7	15	5	-66.7
60 and over	7	11	15	15	12	11	-8.3
Total Female	**52**	**47**	**58**	**46**	**57**	**30**	**-47.4**
Total Unknown Gender	**4**	**3**	**2**	**0**	**1**	**0**	**N/R**
All Persons							
0 – 11	9	9	9	7	4	6	N/R
12 - 16	8	7	4	4	5	6	N/R
17 - 24	53	36	44	44	33	28	-15.2
25 - 39	59	60	55	42	61	45	-26.2
40 - 59	47	50	50	39	50	36	-28.0
60 and over	28	29	29	39	27	40	48.1
Unknown age	1	0	0	0	1	0	N/R
Total Fatalities	**205**	**191**	**191**	**175**	**181**	**161**	**-11.0**

1. 2013 change from 2012 not reported for persons with unknown age or gender, or for age groups with fewer than ten fatalities.

Figure 7 Fatalities by Gender and Age Group

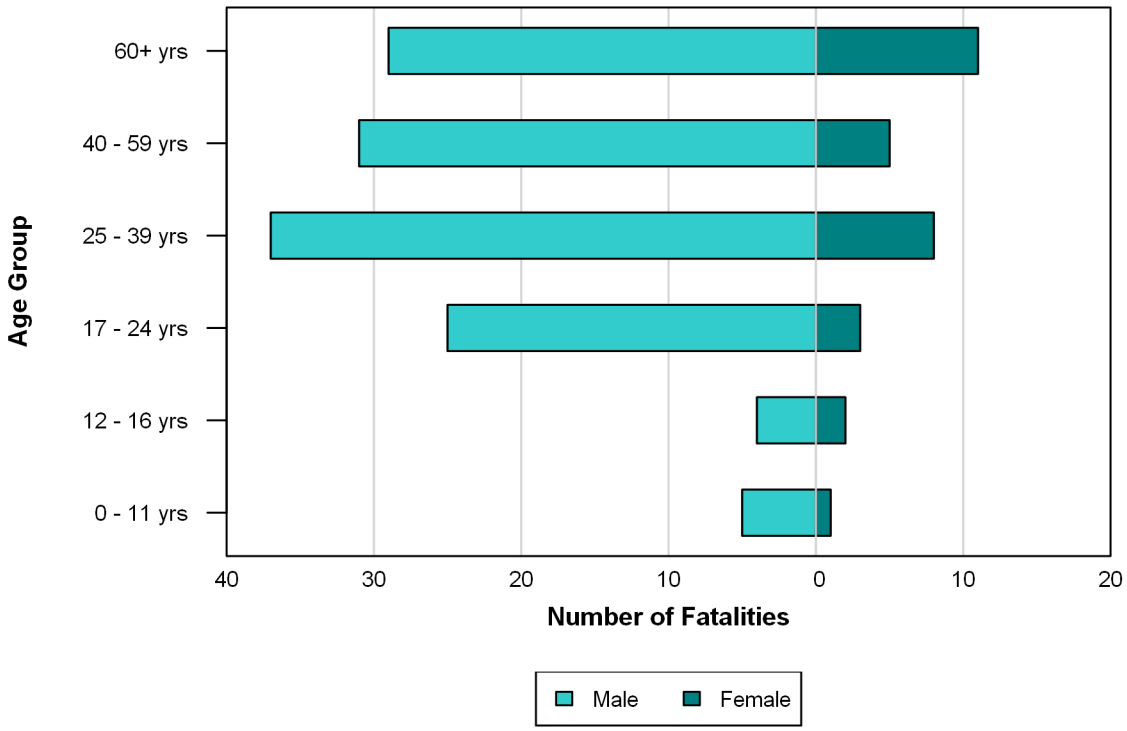


Table 17 Fatalities by Age Group and Gender

	Gender			Percentage of Fatalities	Percentage of Population	Age-Specific Fatality Rate[1]
	Male	Female	Total			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 5	3	0	**3**	1.9	8.0	1.5
6 - 11	2	1	**3**	1.9	7.5	1.6
12 - 16	4	2	**6**	3.7	6.1	3.9
17 - 20	15	1	**16**	9.9	5.2	12.2
21 - 24	10	2	**12**	7.5	6.1	7.9
25 - 29	15	3	**18**	11.2	8.4	8.5
30 - 34	15	3	**18**	11.2	7.7	9.3
35 - 39	7	2	**9**	5.6	6.9	5.2
40 - 44	11	1	**12**	7.5	7.4	6.4
45 - 49	10	2	**12**	7.5	6.7	7.1
50 - 54	3	2	**5**	3.1	6.6	3.0
55 - 59	7	0	**7**	4.3	5.9	4.7
60 - 64	5	3	**8**	5.0	5.1	6.3
65 - 69	7	2	**9**	5.6	4.2	8.5
70 - 74	8	2	**10**	6.2	3.0	13.3
75 - 79	4	0	**4**	2.5	2.2	7.2
80 - 84	2	1	**3**	1.9	1.6	7.4
85 and over	3	3	**6**	3.7	1.5	15.7
Unknown age	0	0	**0**	0.0	N/A	N/A
Total Fatalities	**131**	**30**	**161**	**100.0**	**100.0**	**6.4**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Age-specific fatality rates per 100,000 population.

Table 18 Fatalities by Age Group Subtotals and Gender

	Gender			Percentage of Fatalities	Percentage of Population	Age-Specific Fatality Rate[1]
	Male	Female	Total			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 11	5	1	**6**	3.7	15.5	1.5
12 - 16	4	2	**6**	3.7	6.1	3.9
17 - 24	25	3	**28**	17.4	11.3	9.9
25 - 39	37	8	**45**	28.0	22.9	7.8
40 - 59	31	5	**36**	22.4	26.6	5.4
60 and over	29	11	**40**	24.8	17.6	9.0
Unknown age	0	0	**0**	0.0	N/A	N/A
Total Fatalities	**131**	**30**	**161**	**100.0**	**100.0**	**6.4**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Age-specific fatality rates per 100,000 population.

Table 19 Persons Seriously Injured by Gender and Age Group by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Male							
0 – 11	19	21	24	25	26	31	19.2
12 – 16	47	45	42	54	63	26	-58.7
17 – 24	350	278	290	305	336	300	-10.7
25 – 39	421	373	371	393	418	442	5.7
40 – 59	358	316	338	375	359	341	-5.0
60 and over	143	127	148	152	156	162	3.8
Unknown age	35	36	24	41	37	46	N/R
Total Male	**1,373**	**1,196**	**1,237**	**1,345**	**1,395**	**1,348**	**-3.4**
Female							
0 – 11	11	14	10	26	34	22	-35.3
12 – 16	20	15	22	34	22	25	13.6
17 – 24	220	198	180	196	175	179	2.3
25 – 39	230	186	207	212	219	216	-1.4
40 – 59	217	203	220	214	213	183	-14.1
60 and over	101	113	118	118	126	141	11.9
Unknown age	21	21	25	47	31	42	N/R
Total Female	**820**	**750**	**782**	**847**	**820**	**808**	**-1.5**
Total Unknown Gender	**699**	**622**	**512**	**277**	**255**	**190**	**-25.5**
All Persons							
0 – 11	97	95	84	84	97	69	-28.9
12 – 16	132	111	105	107	102	64	-37.3
17 – 24	742	648	583	588	567	516	-9.0
25 – 39	752	663	677	659	699	705	0.9
40 – 59	674	603	638	618	600	547	-8.8
60 and over	336	308	317	286	303	319	5.3
Unknown age	159	140	127	127	102	126	N/R
Total Persons Seriously Injured	**2,892**	**2,568**	**2,531**	**2,469**	**2,470**	**2,346**	**-5.0**

1. 2013 change from 2012 not reported for persons with unknown age or gender, or for age groups with fewer than ten persons seriously injured.

Table 20 Persons Seriously Injured by Age Group and Gender

	Gender			Percentage of Seriously Injured	Percentage of Population	Age-Specific Serious Injury Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 5	13	9	**30**	1.3	8.0	14.9
6 - 11	18	13	**39**	1.7	7.5	20.8
12 - 16	26	25	**64**	2.7	6.1	41.3
17 - 20	155	98	**274**	11.7	5.2	208.6
21 - 24	145	81	**242**	10.3	6.1	158.5
25 - 29	190	86	**301**	12.8	8.4	142.4
30 - 34	144	66	**225**	9.6	7.7	116.7
35 - 39	108	64	**179**	7.6	6.9	103.0
40 - 44	92	52	**154**	6.6	7.4	82.7
45 - 49	91	55	**152**	6.5	6.7	89.4
50 - 54	90	36	**129**	5.5	6.6	77.5
55 - 59	68	40	**112**	4.8	5.9	75.9
60 - 64	52	24	**77**	3.3	5.1	60.2
65 - 69	38	32	**74**	3.2	4.2	70.2
70 - 74	26	20	**52**	2.2	3.0	69.4
75 - 79	17	32	**50**	2.1	2.2	90.3
80 - 84	15	20	**35**	1.5	1.6	86.6
85 and over	14	13	**31**	1.3	1.5	81.0
Unknown age	46	42	**126**	5.4	N/A	N/A
Total Persons Seriously Injured	**1,348**	**808**	**2,346**	**100.0**	**100.0**	**93.1**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.

1. Includes persons of unknown gender.
2. Age-specific serious injury rates per 100,000 population.

Table 21 Persons Seriously Injured by Age Group Subtotals and Gender

	Gender			Percentage of Seriously Injured	Percentage of Population	Age-Specific Serious Injury Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 – 11	31	22	**69**	2.9	15.5	17.7
12 – 16	26	25	**64**	2.7	6.1	41.3
17 – 24	300	179	**516**	22.0	11.3	181.6
25 – 39	442	216	**705**	30.1	22.9	122.0
40 – 59	341	183	**547**	23.3	26.6	81.6
60 and over	162	141	**319**	13.6	17.6	72.1
Unknown age	46	42	**126**	5.4	N/A	N/A
Total Persons Seriously Injured	**1,348**	**808**	**2,346**	**100.0**	**100.0**	**93.1**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.

1. Includes unknown gender.
2. Age-specific serious injury rates per 100,000 population.

2.5 Road User Types

Summaries of the number of persons killed or seriously injured are provided by road user type. When interpreting tables showing road user type by gender, it should be noted that gender was not recorded for a large percentage of motor vehicle passengers.

Figure 8 Fatalities by Road User Type

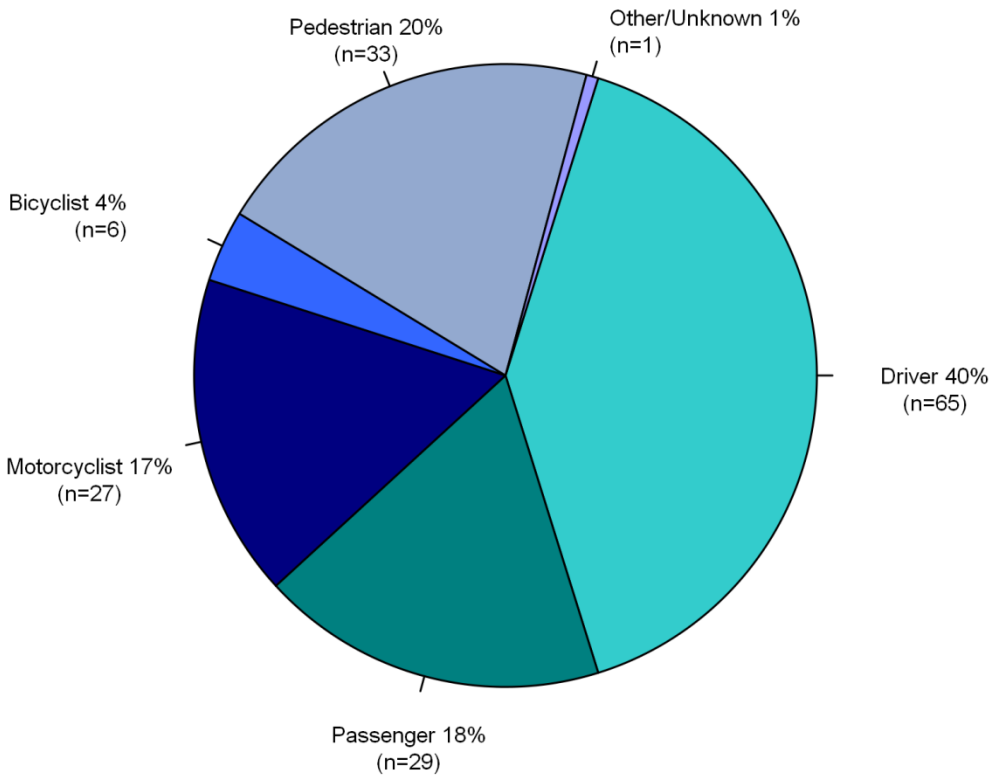


Figure 9 Persons Seriously Injured by Road User Type

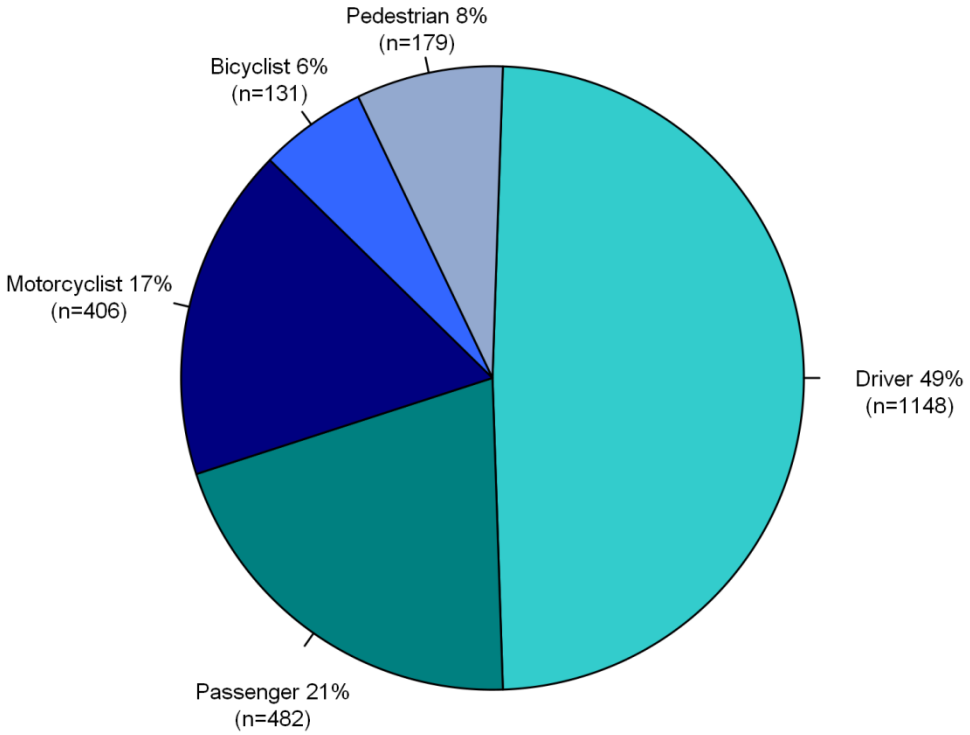


Table 22 Fatalities by Road User Type by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Road User	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Driver	100	90	96	86	83	65	-21.7
Passenger	45	43	40	37	38	29	-23.7
Motorcyclist	37	33	35	25	32	27	-15.6
Bicyclist	3	0	4	3	3	6	N/R
Pedestrian	20	25	16	24	25	33	32.0
Other/ Unknown	0	0	0	0	0	1	N/R
Total Fatalities	**205**	**191**	**191**	**175**	**181**	**161**	**-11.0**

1. 2013 change from 2012 not reported for road user types with fewer than ten fatalities.

Table 23 Persons Seriously Injured by Road User Type by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Road User	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Driver	1,501	1,224	1,273	1,229	1,199	1,148	-4.3
Passenger	706	661	577	549	559	482	-13.8
Motorcyclist	389	360	386	400	404	406	0.5
Bicyclist	116	112	107	102	128	131	2.3
Pedestrian	180	211	188	189	177	179	1.1
Other/ Unknown	0	0	0	0	3	0	N/R
Total Persons Seriously Injured	**2,892**	**2,568**	**2,531**	**2,469**	**2,470**	**2,346**	**-5.0**

1. 2013 change from 2012 not reported for road user types with fewer than ten fatalities.

Figure 10 Persons Killed or Seriously Injured by Road User Type by Gender

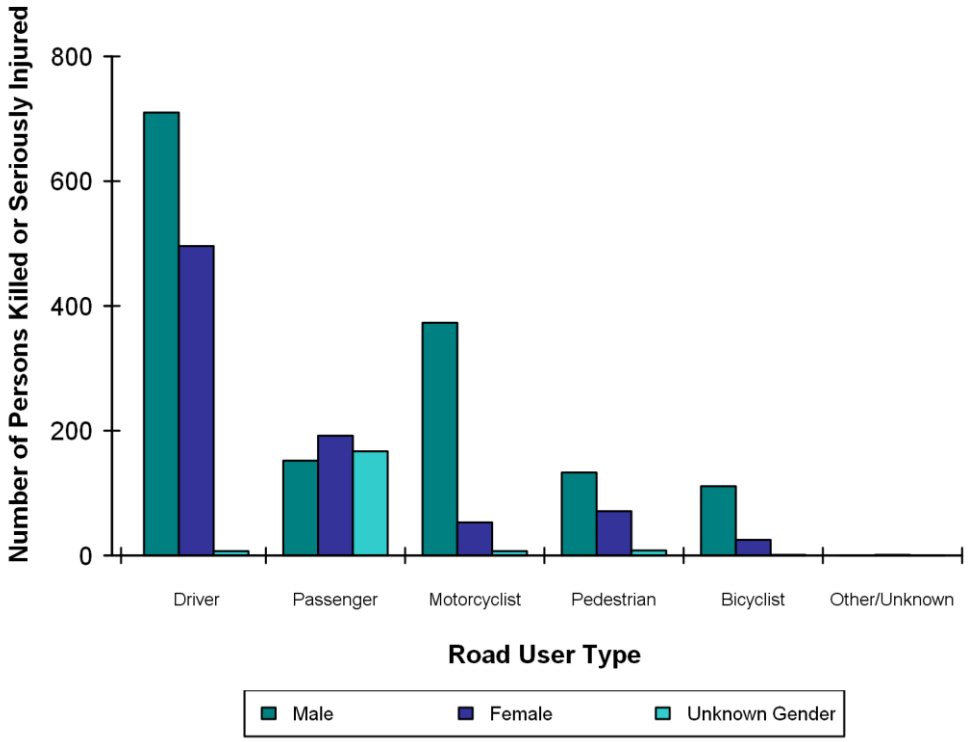


Table 24 Persons Killed or Seriously Injured by Road User Type by ARIA Category

	ARIA Category											
	Highly Accessible		Accessible		Moderately Accessible		Remote		Very Remote		Total	
Road User	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Driver	781	45.9	169	52.0	125	58.1	86	47.8	52	60.5	**1,213**	**48.4**
Passenger	277	16.3	80	24.6	52	24.2	69	38.3	33	38.4	**511**	**20.4**
Motorcyclist	336	19.8	50	15.4	28	13.0	18	10.0	1	1.2	**433**	**17.3**
Bicyclist	123	7.2	10	3.1	1	0.5	3	1.7	0	0.0	**137**	**5.5**
Pedestrian	184	10.8	15	4.6	9	4.2	4	2.2	0	0.0	**212**	**8.5**
Other/ Unknown	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	**1**	**0.0**
Total Persons KSI	**1,701**	**100.0**	**325**	**100.0**	**215**	**100.0**	**180**	**100.0**	**86**	**100.0**	**2,507**	**100.0**

Table 25 Persons Killed or Seriously Injured by Road User Type by Gender and Age Group – State

	Road User Type											
	Driver		Passenger[1]		Motorcyclist		Bicycle Rider		Pedestrian		Total[2]	
Gender/Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
Male												
0 – 5	0	0.0	9	56.3	0	0.0	1	6.3	6	37.5	**16**	**100.0**
6 – 11	0	0.0	14	70.0	0	0.0	3	15.0	3	15.0	**20**	**100.0**
12 - 16	3	10.0	7	23.3	9	30.0	5	16.7	6	20.0	**30**	**100.0**
17 - 20	85	50.0	28	16.5	28	16.5	9	5.3	20	11.8	**170**	**100.0**
21 - 24	86	55.5	19	12.3	39	25.2	3	1.9	8	5.2	**155**	**100.0**
25 - 29	84	41.0	29	14.1	71	34.6	7	3.4	14	6.8	**205**	**100.0**
30 - 39	144	52.6	20	7.3	71	25.9	20	7.3	19	6.9	**274**	**100.0**
40 - 49	92	45.1	13	6.4	60	29.4	24	11.8	15	7.4	**204**	**100.0**
50 - 59	83	49.4	5	3.0	52	31.0	15	8.9	13	7.7	**168**	**100.0**
60 - 69	60	58.8	2	2.0	23	22.5	11	10.8	6	5.9	**102**	**100.0**
70 and over	58	65.2	1	1.1	7	7.9	4	4.5	19	21.3	**89**	**100.0**
Unknown age	15	32.6	5	10.9	13	28.3	9	19.6	4	8.7	**46**	**100.0**
Total Male	**710**	**48.0**	**152**	**10.3**	**373**	**25.2**	**111**	**7.5**	**133**	**9.0**	**1,479**	**100.0**
Female												
0 – 5	0	0.0	8	88.9	0	0.0	1	11.1	0	0.0	**9**	**100.0**
6 – 11	0	0.0	9	64.3	0	0.0	1	7.1	4	28.6	**14**	**100.0**
12 - 16	3	11.1	17	63.0	0	0.0	2	7.4	5	18.5	**27**	**100.0**
17 - 20	62	62.6	22	22.2	4	4.0	2	2.0	9	9.1	**99**	**100.0**
21 - 24	48	57.8	19	22.9	5	6.0	2	2.4	9	10.8	**83**	**100.0**
25 - 29	61	68.5	11	12.4	7	7.9	5	5.6	5	5.6	**89**	**100.0**
30 - 39	86	63.7	24	17.8	12	8.9	4	3.0	9	6.7	**135**	**100.0**
40 - 49	67	60.9	18	16.4	14	12.7	4	3.6	7	6.4	**110**	**100.0**
50 - 59	50	64.1	11	14.1	8	10.3	2	2.6	7	9.0	**78**	**100.0**
60 - 69	40	65.6	14	23.0	0	0.0	1	1.6	5	8.2	**61**	**100.0**
70 and over	60	65.9	24	26.4	0	0.0	1	1.1	6	6.6	**91**	**100.0**
Unknown age	19	45.2	15	35.7	3	7.1	0	0.0	5	11.9	**42**	**100.0**
Total Female	**496**	**59.2**	**192**	**22.9**	**53**	**6.3**	**25**	**3.0**	**71**	**8.5**	**838**	**100.0**
Unknown Gender	**7**	**3.7**	**167**	**87.9**	**7**	**3.7**	**1**	**0.5**	**8**	**4.2**	**190**	**100.0**
Total Persons KSI	**1,213**	**48.4**	**511**	**20.4**	**433**	**17.3**	**137**	**5.5**	**212**	**8.5**	**2,507**	**100.0**

1. Note that for a large percentage of passengers the gender was not recorded in the crash database.
2. There was one female other road users.

Table 26 Persons Killed or Seriously Injured by Road User Type by Gender and Age Group – Metropolitan

	Road User Type											
	Driver		Passenger[1]		Motorcyclist		Bicycle Rider		Pedestrian		Total	
Gender/Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
Male												
0-5	0	0.0	6	54.5	0	0.0	0	0.0	5	45.5	**11**	**100.0**
6-11	0	0.0	7	58.3	0	0.0	2	16.7	3	25.0	**12**	**100.0**
12-16	1	5.6	4	22.2	5	27.8	5	27.8	3	16.7	**18**	**100.0**
17-20	48	44.9	13	12.1	22	20.6	9	8.4	15	14.0	**107**	**100.0**
21-24	53	49.5	8	7.5	36	33.6	3	2.8	7	6.5	**107**	**100.0**
25-29	50	36.2	14	10.1	56	40.6	5	3.6	13	9.4	**138**	**100.0**
30-39	72	42.9	9	5.4	59	35.1	18	10.7	10	6.0	**168**	**100.0**
40-49	55	39.0	5	3.5	45	31.9	23	16.3	13	9.2	**141**	**100.0**
50-59	49	42.2	3	2.6	38	32.8	14	12.1	12	10.3	**116**	**100.0**
60-69	36	54.5	0	0.0	17	25.8	8	12.1	5	7.6	**66**	**100.0**
70 and over	31	60.8	0	0.0	3	5.9	2	3.9	15	29.4	**51**	**100.0**
Unknown age	8	28.6	3	10.7	7	25.0	8	28.6	2	7.1	**28**	**100.0**
Total Male	**403**	**41.8**	**72**	**7.5**	**288**	**29.9**	**97**	**10.1**	**103**	**10.7**	**963**	**100.0**
Female												
0-5	0	0.0	5	83.3	0	0.0	1	16.7	0	0.0	**6**	**100.0**
6-11	0	0.0	1	20.0	0	0.0	1	20.0	3	60.0	**5**	**100.0**
12-16	1	5.3	11	57.9	0	0.0	2	10.5	5	26.3	**19**	**100.0**
17-20	44	62.0	13	18.3	4	5.6	2	2.8	8	11.3	**71**	**100.0**
21-24	31	55.4	10	17.9	4	7.1	2	3.6	9	16.1	**56**	**100.0**
25-29	37	63.8	5	8.6	6	10.3	5	8.6	5	8.6	**58**	**100.0**
30-39	57	65.5	12	13.8	6	6.9	4	4.6	8	9.2	**87**	**100.0**
40-49	51	63.0	12	14.8	9	11.1	3	3.7	6	7.4	**81**	**100.0**
50-59	38	65.5	8	13.8	4	6.9	1	1.7	7	12.1	**58**	**100.0**
60-69	25	69.4	6	16.7	0	0.0	1	2.8	4	11.1	**36**	**100.0**
70 and over	48	67.6	16	22.5	0	0.0	1	1.4	6	8.5	**71**	**100.0**
Unknown age	12	40.0	10	33.3	3	10.0	0	0.0	5	16.7	**30**	**100.0**
Total Female	**344**	**59.5**	**109**	**18.9**	**36**	**6.2**	**23**	**4.0**	**66**	**11.4**	**578**	**100.0**
Unknown Gender	**5**	**4.8**	**86**	**82.7**	**5**	**4.8**	**1**	**1.0**	**7**	**6.7**	**104**	**100.0**
Total Persons KSI	**752**	**45.7**	**267**	**16.2**	**329**	**20.0**	**121**	**7.4**	**176**	**10.7**	**1,645**	**100.0**

1. Note that for a large percentage of passengers the gender was not recorded in the crash database.

Table 27 Persons Killed or Seriously Injured by Road User Type by Gender and Age Group – Regional

	Road User Type											
	Driver		Passenger[1]		Motorcyclist		Bicycle Rider		Pedestrian		Total[2]	
Gender/Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Male												
0-5	0	0.0	1	33.3	0	0.0	1	33.3	1	33.3	**3**	**100.0**
6-11	0	0.0	6	85.7	0	0.0	1	14.3	0	0.0	**7**	**100.0**
12-16	1	14.3	1	14.3	2	28.6	0	0.0	3	42.9	**7**	**100.0**
17-20	24	63.2	3	7.9	6	15.8	0	0.0	5	13.2	**38**	**100.0**
21-24	17	81.0	2	9.5	1	4.8	0	0.0	1	4.8	**21**	**100.0**
25-29	14	42.4	8	24.2	9	27.3	1	3.0	1	3.0	**33**	**100.0**
30-39	41	64.1	8	12.5	7	10.9	1	1.6	7	10.9	**64**	**100.0**
40-49	24	58.5	4	9.8	10	24.4	1	2.4	2	4.9	**41**	**100.0**
50-59	20	57.1	1	2.9	13	37.1	1	2.9	0	0.0	**35**	**100.0**
60-69	16	61.5	1	3.8	5	19.2	3	11.5	1	3.8	**26**	**100.0**
70 and over	24	72.7	0	0.0	4	12.1	2	6.1	3	9.1	**33**	**100.0**
Unknown age	3	27.3	2	18.2	4	36.4	0	0.0	2	18.2	**11**	**100.0**
Total Male	**184**	**57.7**	**37**	**11.6**	**61**	**19.1**	**11**	**3.4**	**26**	**8.2**	**319**	**100.0**
Female												
0-5	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	**2**	**100.0**
6-11	0	0.0	7	87.5	0	0.0	0	0.0	1	12.5	**8**	**100.0**
12-16	1	20.0	4	80.0	0	0.0	0	0.0	0	0.0	**5**	**100.0**
17-20	12	70.6	5	29.4	0	0.0	0	0.0	0	0.0	**17**	**100.0**
21-24	13	81.3	3	18.8	0	0.0	0	0.0	0	0.0	**16**	**100.0**
25-29	13	92.9	1	7.1	0	0.0	0	0.0	0	0.0	**14**	**100.0**
30-39	21	63.6	7	21.2	4	12.1	0	0.0	1	3.0	**33**	**100.0**
40-49	11	50.0	5	22.7	4	18.2	1	4.5	1	4.5	**22**	**100.0**
50-59	11	61.1	2	11.1	4	22.2	1	5.6	0	0.0	**18**	**100.0**
60-69	12	70.6	3	17.6	0	0.0	0	0.0	1	5.9	**17**	**100.0**
70 and over	12	63.2	7	36.8	0	0.0	0	0.0	0	0.0	**19**	**100.0**
Unknown age	4	50.0	4	50.0	0	0.0	0	0.0	0	0.0	**8**	**100.0**
Total Female	**110**	**61.5**	**50**	**27.9**	**12**	**6.7**	**2**	**1.1**	**4**	**2.2**	**179**	**100.0**
Unknown Gender	**1**	**2.4**	**38**	**90.5**	**2**	**4.8**	**0**	**0.0**	**1**	**2.4**	**42**	**100.0**
Total Persons KSI	**295**	**54.6**	**125**	**23.1**	**75**	**13.9**	**13**	**2.4**	**31**	**5.7**	**540**	**100.0**

1. Note that for a large percentage of passengers the gender was not recorded in the crash database.
2. There were one Female other road users.

Table 28 Persons Killed or Seriously Injured by Road User Type by Gender and Age Group – Remote

	Road User Type											
	Driver		Passenger[1]		Motorcyclist		Bicycle Rider		Pedestrian		Total	
Gender/Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Male												
0-5	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	**2**	**100.0**
6-11	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	**1**	**100.0**
12-16	1	20.0	2	40.0	2	40.0	0	0.0	0	0.0	**5**	**100.0**
17-20	13	52.0	12	48.0	0	0.0	0	0.0	0	0.0	**25**	**100.0**
21-24	16	59.3	9	33.3	2	7.4	0	0.0	0	0.0	**27**	**100.0**
25-29	20	58.8	7	20.6	6	17.6	1	2.9	0	0.0	**34**	**100.0**
30-39	31	73.8	3	7.1	5	11.9	1	2.4	2	4.8	**42**	**100.0**
40-49	13	59.1	4	18.2	5	22.7	0	0.0	0	0.0	**22**	**100.0**
50-59	14	82.4	1	5.9	1	5.9	0	0.0	1	5.9	**17**	**100.0**
60-69	8	80.0	1	10.0	1	10.0	0	0.0	0	0.0	**10**	**100.0**
70 and over	3	60.0	1	20.0	0	0.0	0	0.0	1	20.0	**5**	**100.0**
Unknown age	4	57.1	0	0.0	2	28.6	1	14.3	0	0.0	**7**	**100.0**
Total Male	**123**	**62.4**	**43**	**21.8**	**24**	**12.2**	**3**	**1.5**	**4**	**2.0**	**197**	**100.0**
Female												
0-5	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	**1**	**100.0**
6-11	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	**1**	**100.0**
12-16	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0	**3**	**100.0**
17-20	6	54.5	4	36.4	0	0.0	0	0.0	1	9.1	**11**	**100.0**
21-24	4	36.4	6	54.5	1	9.1	0	0.0	0	0.0	**11**	**100.0**
25-29	11	64.7	5	29.4	1	5.9	0	0.0	0	0.0	**17**	**100.0**
30-39	8	53.3	5	33.3	2	13.3	0	0.0	0	0.0	**15**	**100.0**
40-49	5	71.4	1	14.3	1	14.3	0	0.0	0	0.0	**7**	**100.0**
50-59	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	**2**	**100.0**
60-69	3	37.5	5	62.5	0	0.0	0	0.0	0	0.0	**8**	**100.0**
70 and over	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	**1**	**100.0**
Unknown age	3	75.0	1	25.0	0	0.0	0	0.0	0	0.0	**4**	**100.0**
Total Female	**42**	**51.9**	**33**	**40.7**	**5**	**6.2**	**0**	**0.0**	**1**	**1.2**	**81**	**100.0**
Unknown Gender	**1**	**2.3**	**43**	**97.7**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**44**	**100.0**
Total Persons KSI	**166**	**51.6**	**119**	**37.0**	**29**	**9.0**	**3**	**0.9**	**5**	**1.6**	**322**	**100.0**

1. Note that for a large percentage of passengers the gender was not recorded in the crash database.

3. BROAD AGE GROUPS

3.1 Child Road Users – 0 to 16 years

Figure 11 Children Killed or Seriously Injured by Road User Type

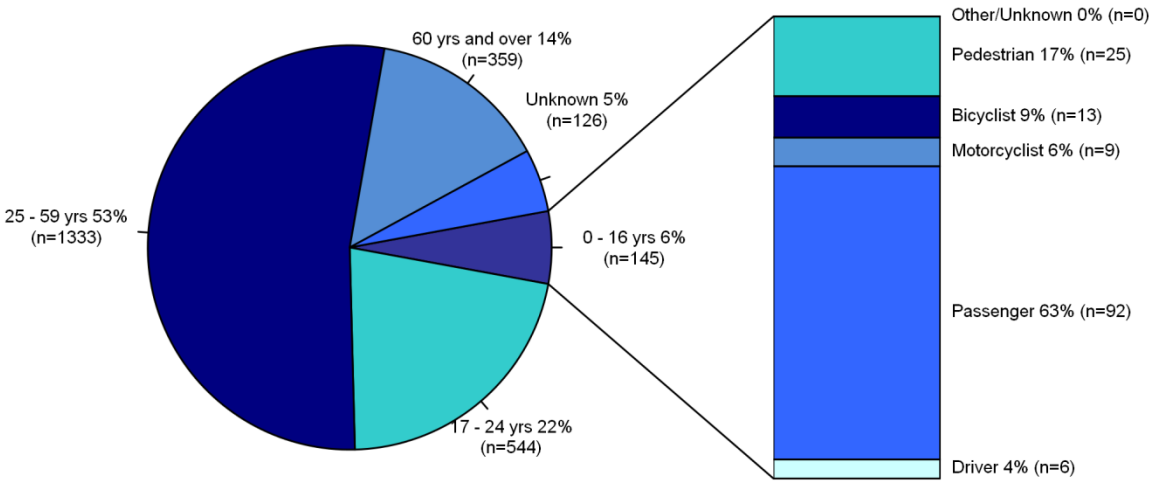


Table 29 Children Killed or Seriously Injured by Road User Type and Age Group

	Road User Type						
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Other/ Unknown	Total
Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**n**
0 - 5	0	25	0	2	6	0	33
6 - 11	0	31	0	4	7	0	42
12 - 16	6	36	9	7	12	0	70
Total Children KSI	**6**	**92**	**9**	**13**	**25**	**0**	**145**

Table 30 Child Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage and Age Group, Police-Attended Crashes

	Seat Belt Usage							
	Worn		Not Worn		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
0 - 5	20	95.2	0	0.0	1	4.8	**21**	**100.0**
6 - 11	24	92.3	2	7.7	0	0.0	**26**	**100.0**
12 - 16	27	65.9	7	17.1	7	17.1	**41**	**100.0**
Total Child Motor Vehicle Occupants KSI	**71**	**80.7**	**9**	**10.2**	**8**	**9.1**	**88**	**100.0**
All Motor Vehicle Occupants KSI[1]	**1,223**	**80.5**	**90**	**5.9**	**206**	**13.6**	**1,519**	**100.0**

Note: Motor vehicle occupants exclude occupants of tractors and trailer type vehicles.

1. Includes persons with unknown age.

Table 31 Child Bicylists Killed or Seriously Injured by Helmet Usage and Gender

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Gender	**n**	**n**	**n**	**n**
Male	7	1	1	9
Female	2	1	1	4
Total Child Bicyclists KSI	**9**	**2**	**2**	**13**

Table 32 Children Killed or Seriously Injured by Time of Day and Age Group

	Time of Day																			
	Midnight to < 3am		3am to < 6am		6am to < 9am		9am to < Midday		Midday to < 3pm		3pm to < 6pm		6pm to < 9pm		9pm to < Midnight		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
0 - 5	2	6.1	0	0.0	4	12.1	3	9.1	10	30.3	7	21.2	5	15.2	2	6.1	0	0.0	**33**	**100.0**
6 - 11	1	2.4	0	0.0	7	16.7	5	11.9	10	23.8	14	33.3	3	7.1	1	2.4	1	2.4	**42**	**100.0**
12 - 16	9	12.9	1	1.4	9	12.9	2	2.9	13	18.6	23	32.9	6	8.6	5	7.1	2	2.9	**70**	**100.0**
Total Children KSI	**12**	**8.3**	**1**	**0.7**	**20**	**13.8**	**10**	**6.9**	**33**	**22.8**	**44**	**30.3**	**14**	**9.7**	**8**	**5.5**	**3**	**2.1**	**145**	**100.0**
All Persons KSI[1]	**143**	**5.7**	**92**	**3.7**	**288**	**11.5**	**347**	**13.8**	**399**	**15.9**	**574**	**22.9**	**355**	**14.2**	**258**	**10.3**	**51**	**2.0**	**2,507**	**100.0**

1. Includes persons with unknown age.

3.2 Young Adult Road Users – 17 to 24 years

Figure 12 Young Adults Killed or Seriously Injured by Road User Type

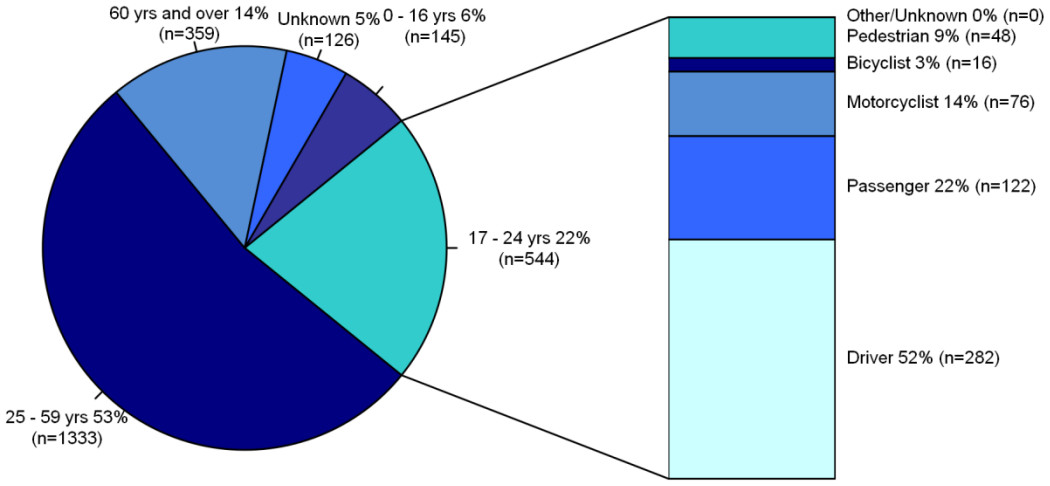


Table 33 Young Adults Killed or Seriously Injured by Road User Type and Age Group

	Road User Type						
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Other/ Unknown	Total
Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**n**
17 - 20	147	70	32	11	30	0	**290**
21 - 24	135	52	44	5	18	0	**254**
Total Young Adults KSI	**282**	**122**	**76**	**16**	**48**	**0**	**544**

Table 34 Young Adults Killed or Seriously Injured by Speed a Factor and Age Group, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
17 - 20	39	14.6	69	25.8	159	59.6	**267**	**100.0**
21 - 24	38	16.7	57	25.1	132	58.1	**227**	**100.0**
Total Young Adults KSI	**77**	**15.6**	**126**	**25.5**	**291**	**58.9**	**494**	**100.0**
All Persons KSI[1]	**238**	**10.9**	**666**	**30.5**	**1,283**	**58.7**	**2,187**	**100.0**

1. Includes persons with unknown age.

Table 35 Young Adults Killed or Seriously Injured by Highest Driver/Rider BAC in Crash and Age Group, Police-Attended Crashes

	Highest Driver/Rider BAC in Crash (g/100mL)															
	Nil		>0 to <0.05		0.05 to <0.08		0.08 to <0.15		≥0.15		Subtotal ≥0.05		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
17 - 20	162	61.1	5	1.9	8	3.0	7	2.6	6	2.3	**21**	**7.9**	77	29.1	**265**	**100.0**
21 - 24	130	57.5	7	3.1	5	2.2	20	8.8	8	3.5	**33**	**14.6**	56	24.8	**226**	**100.0**
Total Young Adults KSI[1]	**292**	**59.5**	**12**	**2.4**	**13**	**2.6**	**27**	**5.5**	**14**	**2.9**	**54**	**11.0**	**133**	**27.1**	**491**	**100.0**
All Persons KSI[2, 3]	**1,378**	**63.5**	**39**	**1.8**	**36**	**1.7**	**87**	**4.0**	**62**	**2.9**	**185**	**8.5**	**567**	**26.1**	**2,169**	**100.0**

1. Excludes young adults killed or seriously injured in police-attended crashes that did not involve any drivers/riders (n=3).
2. Excludes persons killed or seriously injured in police-attended crashes that did not involve any drivers/riders (n=18).
3. Includes persons with unknown age.

Table 36 Young Adult Drivers/Riders *Involved* in Serious Crashes by Driver/Rider BAC and Age Group, Police-Attended Crashes

	Driver/Rider BAC (g/100mL)															
	Nil		>0 to <0.05		0.05 to <0.08		0.08 to <0.15		≥0.15		Subtotal ≥0.05		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Young Adult Drivers/Riders KSI																
17 – 20	99	62.7	2	1.3	5	3.2	2	1.3	4	2.5	**11**	**7.0**	46	29.1	**158**	**100.0**
21 – 24	83	52.9	6	3.8	1	0.6	12	7.6	6	3.8	**19**	**12.1**	49	31.2	**157**	**100.0**
Total Drivers/Riders KSI	**182**	**57.8**	**8**	**2.5**	**6**	**1.9**	**14**	**4.4**	**10**	**3.2**	**30**	**9.5**	**95**	**30.2**	**315**	**100.0**
Other Young Adult Drivers/Riders[1]																
17 - 20	82	66.7	0	0.0	1	0.8	7	5.7	0	0.0	**8**	**6.5**	33	26.8	**123**	**100.0**
21 - 24	94	68.6	2	1.5	2	1.5	4	2.9	2	1.5	**8**	**5.8**	33	24.1	**137**	**100.0**
Total Other Drivers/Riders	**176**	**67.7**	**2**	**0.8**	**3**	**1.2**	**11**	**4.2**	**2**	**0.8**	**16**	**6.2**	**66**	**25.4**	**260**	**100.0**
Total Young Adult Drivers/Riders																
17 - 20	181	64.4	2	0.7	6	2.1	9	3.2	4	1.4	**19**	**6.8**	79	28.1	281	**100.0**
21 - 24	177	60.2	8	2.7	3	1.0	16	5.4	8	2.7	**27**	**9.2**	82	27.9	294	**100.0**
Total Young Adult Drivers/Riders in Serious Crashes	**358**	**62.3**	**10**	**1.7**	**9**	**1.6**	**25**	**4.3**	**12**	**2.1**	**46**	**8.0**	**161**	**28.0**	**575**	**100.0**

1. Other young adult drivers/riders are young adult drivers/riders in crashes where a road user was killed or seriously injured, but the driver/riders themselves had only minor injuries or no/unknown injuries.

Table 37 Young Adult Drivers/Riders *Involved* in Serious Crashes by Crash Nature and Age Group

	Crash Nature																					
	Multi-Vehicle Crashes								Single-Vehicle Crashes												Total	
	Head On		Right Angle		Other/Unknown Multi		Total Multi		Hit Pedestrian		Hit Animal		Hit Object		Non Collision		Other/Unknown Single		Total Single			
Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
17 - 20	15	4.7	70	21.7	126	39.1	**211**	**65.5**	11	3.4	1	0.3	68	21.1	26	8.1	5	1.6	**111**	**34.5**	**322**	**100.0**
21 - 24	15	4.3	60	17.4	145	42.0	**220**	**63.8**	23	6.7	0	0.0	71	20.6	30	8.7	1	0.3	**125**	**36.2**	**345**	**100.0**
Total Young Adult Drivers/Riders in Serious Crashes	**30**	**4.5**	**130**	**19.5**	**271**	**40.6**	**431**	**64.6**	**34**	**5.1**	**1**	**0.1**	**139**	**20.8**	**56**	**8.4**	**6**	**0.9**	**236**	**35.4**	**667**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**175**	**5.4**	**722**	**22.4**	**1,358**	**42.2**	**2,255**	**70.0**	**189**	**5.9**	**17**	**0.5**	**485**	**15.1**	**238**	**7.4**	**36**	**1.1**	**965**	**30.0**	**3,220**	**100.0**

1. Includes persons with unknown age.

Table 38 Young Adult Drivers/Riders *Involved* in Serious Crashes by High Priority Crash Type and Age Group

	High Priority Crash Types								Total	
	Intersection		Run Off Road		Head On		Other			
Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
17 - 20	151	46.9	90	28.0	15	4.7	79	24.5	322	**100.0**
21 - 24	154	44.6	103	29.9	15	4.3	89	25.8	345	**100.0**
Total Young Adult Drivers/Riders in Serious Crashes	**305**	**45.7**	**193**	**28.9**	**30**	**4.5**	**168**	**25.2**	**667**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**1,572**	**48.8**	**724**	**22.5**	**175**	**5.4**	**860**	**26.7**	**3,220**	**100.0**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and percentages will sum to greater than 100%.

1. Includes persons with unknown age.

Table 39 Young Adults Killed or Seriously Injured by Time of Day and Age Group

	Time of Day																			
	Midnight to < 3am		3am to < 6am		6am to < 9am		9am to < Midday		Midday to < 3pm		3pm to < 6pm		6pm to < 9pm		9pm to < Midnight		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
17 - 20	32	11.0	14	4.8	25	8.6	28	9.7	47	16.2	50	17.2	44	15.2	41	14.1	9	3.1	**290**	**100.0**
21 - 24	29	11.4	14	5.5	25	9.8	28	11.0	20	7.9	57	22.4	38	15.0	39	15.4	4	1.6	**254**	**100.0**
Total Young Adults KSI	**61**	**11.2**	**28**	**5.1**	**50**	**9.2**	**56**	**10.3**	**67**	**12.3**	**107**	**19.7**	**82**	**15.1**	**80**	**14.7**	**13**	**2.4**	**544**	**100.0**
All Persons KSI[1]	**143**	**5.7**	**92**	**3.7**	**288**	**11.5**	**347**	**13.8**	**399**	**15.9**	**574**	**22.9**	**355**	**14.2**	**258**	**10.3**	**51**	**2.0**	**2,507**	**100.0**

1. Includes persons with unknown age.

Table 40 Young Adults Killed or Seriously Injured by Day of Week and Age Group

	Day of Week															
	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
17 - 20	29	10.0	33	11.4	26	9.0	46	15.9	56	19.3	42	14.5	58	20.0	**290**	**100.0**
21 - 24	40	15.7	29	11.4	34	13.4	28	11.0	38	15.0	43	16.9	42	16.5	**254**	**100.0**
Total Young Adults KSI	**69**	**12.7**	**62**	**11.4**	**60**	**11.0**	**74**	**13.6**	**94**	**17.3**	**85**	**15.6**	**100**	**18.4**	**544**	**100.0**
All Persons KSI[1]	**310**	**12.4**	**315**	**12.6**	**335**	**13.4**	**358**	**14.3**	**405**	**16.2**	**411**	**16.4**	**373**	**14.9**	**2,507**	**100.0**

1. Includes persons with unknown age.

3.3 Mature Adult Road Users – 25 to 59 years

Figure 13 Mature Adults Killed or Seriously Injured by Road User Type

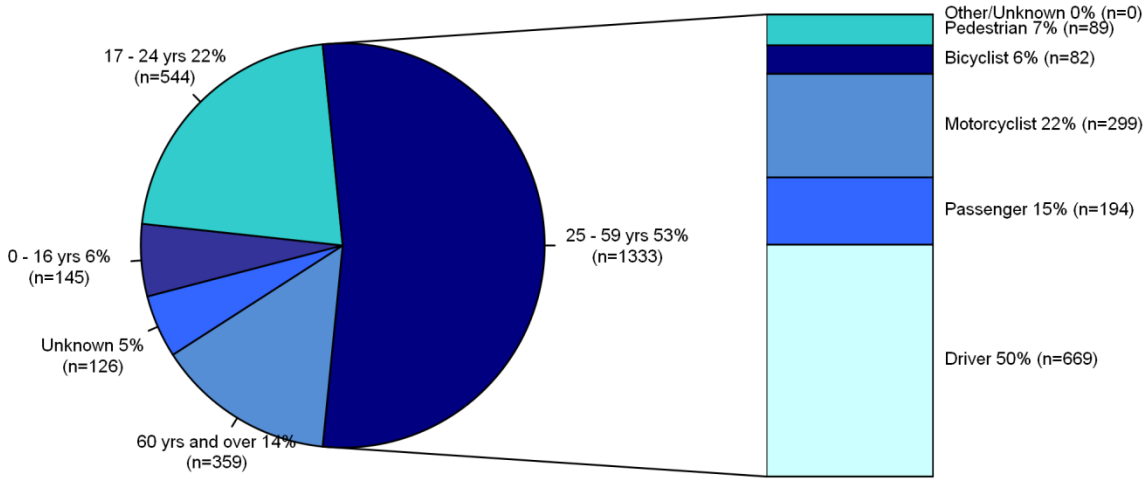


Table 41 Mature Adults Killed or Seriously Injured by Road User Type and Age Group

	Road User Type						
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Other/ Unknown	Total
Age Group	n	n	n	n	n	n	n
25 - 29	147	61	79	13	19	0	**319**
30 - 34	131	49	42	10	11	0	**243**
35 - 39	99	16	42	14	17	0	**188**
40 - 44	80	24	34	13	15	0	**166**
45 - 49	79	22	41	15	7	0	**164**
50 - 54	74	11	34	7	8	0	**134**
55 - 59	59	11	27	10	12	0	**119**
Total Mature Adults KSI	**669**	**194**	**299**	**82**	**89**	**0**	**1,333**

Table 42 Mature Adults Killed or Seriously Injured by Speed a Factor and Age Group, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Age Group	n	Row %	n	Row %	n	Row %	n	Row %
25 - 29	41	14.6	90	32.1	149	53.2	**280**	**100.0**
30 - 34	27	13.3	65	32.0	111	54.7	**203**	**100.0**
35 - 39	20	11.9	47	28.0	101	60.1	**168**	**100.0**
40 - 44	18	12.7	43	30.3	81	57.0	**142**	**100.0**
45 - 49	16	11.8	43	31.6	77	56.6	**136**	**100.0**
50 - 54	8	6.7	36	30.3	75	63.0	**119**	**100.0**
55 - 59	4	3.8	38	36.2	63	60.0	**105**	**100.0**
Total Mature Adults KSI	**134**	**11.6**	**362**	**31.4**	**657**	**57.0**	**1,153**	**100.0**
All Persons KSI[1]	**238**	**10.9**	**666**	**30.5**	**1,283**	**58.7**	**2,187**	**100.0**

1. Includes persons with unknown age.

Table 43 Mature Adult Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage and Age Group, Police-Attended Crashes

	Seat Belt Usage							
	Worn		Not Worn		Unknown		Total	
Age Group	n	Row %	n	Row %	n	Row %	n	Row %
25 - 29	150	80.6	11	5.9	25	13.4	**186**	**100.0**
30 - 34	113	76.4	10	6.8	25	16.9	**148**	**100.0**
35 - 39	87	80.6	8	7.4	13	12.0	**108**	**100.0**
40 - 44	72	80.9	7	7.9	10	11.2	**89**	**100.0**
45 - 49	62	75.6	7	8.5	13	15.9	**82**	**100.0**
50 - 54	64	85.3	5	6.7	6	8.0	**75**	**100.0**
55 - 59	56	87.5	2	3.1	6	9.4	**64**	**100.0**
Total Mature Adult Motor Vehicle Occupants KSI	**604**	**80.3**	**50**	**6.6**	**98**	**13.0**	**752**	**100.0**
All Motor Vehicle Occupants KSI[1]	**1,223**	**80.5**	**90**	**5.9**	**206**	**13.6**	**1,519**	**100.0**

Note: Motor vehicle occupants exclude occupants of tractors and trailer type vehicles.

1. Includes persons with unknown age.

Table 44 Mature Adults Killed or Seriously Injured by Highest Driver/Rider BAC in Crash and Age Group, Police-Attended Crashes

	Highest Driver/Rider BAC in Crash (g/100mL)															
	Nil		>0 to <0.05		0.05 to <0.08		0.08 to <0.15		≥0.15		Subtotal ≥0.05		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
25 - 29	170	61.4	4	1.4	6	2.2	12	4.3	15	5.4	**33**	**11.9**	70	25.3	**277**	**100.0**
30 - 34	125	61.6	3	1.5	4	2.0	12	5.9	8	3.9	**24**	**11.8**	51	25.1	**203**	**100.0**
35 - 39	88	53.0	3	1.8	2	1.2	12	7.2	3	1.8	**17**	**10.2**	58	34.9	**166**	**100.0**
40 - 44	90	63.4	4	2.8	0	0.0	10	7.0	5	3.5	**15**	**10.6**	33	23.2	**142**	**100.0**
45 - 49	89	65.9	1	0.7	1	0.7	4	3.0	8	5.9	**13**	**9.6**	32	23.7	**135**	**100.0**
50 - 54	85	72.6	0	0.0	1	0.9	0	0.0	1	0.9	**2**	**1.7**	30	25.6	**117**	**100.0**
55 - 59	75	72.1	1	1.0	1	1.0	1	1.0	2	1.9	**4**	**3.8**	24	23.1	**104**	**100.0**
Total Mature Adults KSI[1]	**722**	**63.1**	**16**	**1.4**	**15**	**1.3**	**51**	**4.5**	**42**	**3.7**	**108**	**9.4**	**298**	**26.0**	**1,144**	**100.0**
All Persons KSI[2,3]	**1,378**	**63.5**	**39**	**1.8**	**36**	**1.7**	**87**	**4.0**	**62**	**2.9**	**185**	**8.5**	**567**	**26.1**	**2,169**	**100.0**

1. Excludes mature adults killed or seriously injured in police-attended crashes that did not involve any drivers/riders (n=9).
2. Excludes persons killed or seriously injured in police-attended crashes that did not involve any drivers/riders (n=18).
3. Includes persons with unknown age.

Table 45 Mature Adult Drivers/Riders *Involved* in Serious Crashes by Driver/Rider BAC and Age Group, Police-Attended Crashes

	Driver/Rider BAC (g/100mL)															
	Nil		>0 to <0.05		0.05 to <0.08		0.08 to <0.15		≥0.15		Subtotal ≥0.05		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Mature Adult Drivers/Riders KSI																
25 – 29	108	55.4	2	1.0	3	1.5	10	5.1	12	6.2	**25**	**12.8**	60	30.8	**195**	**100.0**
30 – 34	81	55.5	2	1.4	4	2.7	9	6.2	4	2.7	**17**	**11.6**	46	31.5	**146**	**100.0**
35 – 39	55	45.1	1	0.8	2	1.6	8	6.6	3	2.5	**13**	**10.7**	53	43.4	**122**	**100.0**
40 – 44	52	55.3	3	3.2	0	0.0	7	7.4	4	4.3	**11**	**11.7**	28	29.8	**94**	**100.0**
45 – 49	63	66.3	0	0.0	1	1.1	2	2.1	5	5.3	**8**	**8.4**	24	25.3	**95**	**100.0**
50 – 54	65	68.4	0	0.0	0	0.0	0	0.0	1	1.1	**1**	**1.1**	29	30.5	**95**	**100.0**
55 – 59	53	69.7	0	0.0	1	1.3	1	1.3	2	2.6	**4**	**5.3**	19	25.0	**76**	**100.0**
Total Drivers/Riders KSI	**477**	**58.0**	**8**	**1.0**	**11**	**1.3**	**37**	**4.5**	**31**	**3.8**	**79**	**9.6**	**259**	**31.5**	**823**	**100.0**
Other Mature Adult Drivers/Riders[1]																
25 - 29	98	60.9	2	1.2	4	2.5	2	1.2	1	0.6	**7**	**4.3**	54	33.5	**161**	**100.0**
30 - 34	80	58.0	0	0.0	1	0.7	0	0.0	2	1.4	**3**	**2.2**	55	39.9	**138**	**100.0**
35 - 39	82	62.6	0	0.0	0	0.0	1	0.8	1	0.8	**2**	**1.5**	47	35.9	**131**	**100.0**
40 - 44	71	59.7	0	0.0	1	0.8	1	0.8	0	0.0	**2**	**1.7**	46	38.7	**119**	**100.0**
45 - 49	64	61.0	0	0.0	0	0.0	1	1.0	0	0.0	**1**	**1.0**	40	38.1	**105**	**100.0**
50 - 54	62	68.1	1	1.1	0	0.0	0	0.0	0	0.0	**0**	**0.0**	28	30.8	**91**	**100.0**
55 - 59	45	68.2	2	3.0	0	0.0	0	0.0	0	0.0	**0**	**0.0**	19	28.8	**66**	**100.0**
Total Other Drivers/Riders	**502**	**61.9**	**5**	**0.6**	**6**	**0.7**	**5**	**0.6**	**4**	**0.5**	**15**	**1.8**	**289**	**35.6**	**811**	**100.0**
Total Mature Adult Drivers/Riders																
25 - 29	206	57.9	4	1.1	7	2.0	12	3.4	13	3.7	**32**	**9.0**	114	32.0	356	**100.0**
30 - 34	161	56.7	2	0.7	5	1.8	9	3.2	6	2.1	**20**	**7.0**	101	35.6	284	**100.0**
35 - 39	137	54.2	1	0.4	2	0.8	9	3.6	4	1.6	**15**	**5.9**	100	39.5	253	**100.0**
40 - 44	123	57.7	3	1.4	1	0.5	8	3.8	4	1.9	**13**	**6.1**	74	34.7	213	**100.0**
45 - 49	127	63.5	0	0.0	1	0.5	3	1.5	5	2.5	**9**	**4.5**	64	32.0	200	**100.0**
50 - 54	127	68.3	1	0.5	0	0.0	0	0.0	1	0.5	**1**	**0.5**	57	30.6	186	**100.0**
55 - 59	98	69.0	2	1.4	1	0.7	1	0.7	2	1.4	**4**	**2.8**	38	26.8	142	**100.0**
Total Mature Adult Drivers/Riders in Serious Crashes	**979**	**59.9**	**13**	**0.8**	**17**	**1.0**	**42**	**2.6**	**35**	**2.1**	**94**	**5.8**	**548**	**33.5**	**1,634**	**100.0**

1. Other mature adult drivers/riders are mature adult drivers/riders in crashes where a road user was killed or seriously injured, but the driver/riders themselves had only minor injuries or no/unknown injuries.

Table 46 Mature Adult Drivers/Riders *Involved* in Serious Crashes by Crash Nature

	Crash Nature																					
	Multi-Vehicle Crashes								Single-Vehicle Crashes												Total	
	Head On		Right Angle		Other/Unknown Multi		Total Multi		Hit Pedestrian		Hit Animal		Hit Object		Non Collision		Other/Unknown Single		Total Single			
Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
25 - 29	18	4.5	84	21.0	158	39.5	**260**	**65.0**	21	5.3	2	0.5	69	17.3	41	10.3	7	1.8	**140**	**35.0**	**400**	**100.0**
30 - 34	30	9.1	60	18.1	146	44.1	**236**	**71.3**	11	3.3	1	0.3	57	17.2	19	5.7	7	2.1	**95**	**28.7**	**331**	**100.0**
35 - 39	16	5.6	61	21.5	119	41.9	**196**	**69.0**	10	3.5	1	0.4	42	14.8	34	12.0	1	0.4	**88**	**31.0**	**284**	**100.0**
40 - 44	20	8.3	60	24.9	110	45.6	**190**	**78.8**	12	5.0	3	1.2	20	8.3	15	6.2	1	0.4	**51**	**21.2**	**241**	**100.0**
45 - 49	10	4.2	57	23.9	103	43.3	**170**	**71.4**	15	6.3	2	0.8	29	12.2	20	8.4	2	0.8	**68**	**28.6**	**238**	**100.0**
50 - 54	12	5.7	61	28.9	82	38.9	**155**	**73.5**	15	7.1	3	1.4	20	9.5	15	7.1	3	1.4	**56**	**26.5**	**211**	**100.0**
55 - 59	7	4.4	33	20.9	74	46.8	**114**	**72.2**	14	8.9	2	1.3	22	13.9	4	2.5	2	1.3	**44**	**27.8**	**158**	**100.0**
Total Mature Adult Drivers/Riders in Serious Crashes	**113**	**6.1**	**416**	**22.3**	**792**	**42.5**	**1,321**	**70.9**	**98**	**5.3**	**14**	**0.8**	**259**	**13.9**	**148**	**7.9**	**23**	**1.2**	**542**	**29.1**	**1,863**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**175**	**5.4**	**722**	**22.4**	**1,358**	**42.2**	**2,255**	**70.0**	**189**	**5.9**	**17**	**0.5**	**485**	**15.1**	**238**	**7.4**	**36**	**1.1**	**965**	**30.0**	**3,220**	**100.0**

1. Includes persons with unknown age.

Table 47 Mature Adult Drivers/Riders *Involved* in Serious Crashes by High Priority Crash Type and Age Group

	High Priority Crash Types								Total	
	Intersection		Run Off Road		Head On		Other			
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
25 - 29	172	43.0	112	28.0	18	4.5	112	28.0	400	**100.0**
30 - 34	156	47.1	77	23.3	30	9.1	79	23.9	331	**100.0**
35 - 39	139	48.9	72	25.4	16	5.6	69	24.3	284	**100.0**
40 - 44	126	52.3	34	14.1	20	8.3	68	28.2	241	**100.0**
45 - 49	119	50.0	42	17.6	10	4.2	72	30.3	238	**100.0**
50 - 54	115	54.5	33	15.6	12	5.7	56	26.5	211	**100.0**
55 - 59	88	55.7	26	16.5	7	4.4	39	24.7	158	**100.0**
Total Mature Adult Drivers/Riders in Serious Crashes	**915**	**49.1**	**396**	**21.3**	**113**	**6.1**	**495**	**26.6**	**1,863**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**1,572**	**48.8**	**724**	**22.5**	**175**	**5.4**	**860**	**26.7**	**3,220**	**100.0**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and percentages will sum to greater than 100%.

1. Includes persons with unknown age.

Table 48 Mature Adults Killed or Seriously Injured by Time of Day and Age Group

	Time of Day																			
	Midnight to < 3am		3am to < 6am		6am to < 9am		9am to < Midday		Midday to < 3pm		3pm to < 6pm		6pm to < 9pm		9pm to < Midnight		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
25 - 29	17	5.3	16	5.0	37	11.6	33	10.3	32	10.0	79	24.8	59	18.5	38	11.9	8	2.5	**319**	**100.0**
30 - 34	20	8.2	8	3.3	18	7.4	27	11.1	31	12.8	61	25.1	43	17.7	31	12.8	4	1.6	**243**	**100.0**
35 - 39	5	2.7	10	5.3	34	18.1	18	9.6	27	14.4	37	19.7	27	14.4	26	13.8	4	2.1	**188**	**100.0**
40 - 44	7	4.2	2	1.2	24	14.5	14	8.4	26	15.7	39	23.5	34	20.5	17	10.2	3	1.8	**166**	**100.0**
45 - 49	10	6.1	7	4.3	19	11.6	22	13.4	33	20.1	41	25.0	19	11.6	10	6.1	3	1.8	**164**	**100.0**
50 - 54	2	1.5	7	5.2	15	11.2	26	19.4	23	17.2	30	22.4	17	12.7	12	9.0	2	1.5	**134**	**100.0**
55 - 59	1	0.8	1	0.8	15	12.6	27	22.7	19	16.0	30	25.2	18	15.1	5	4.2	3	2.5	**119**	**100.0**
Total Mature Adults KSI	**62**	**4.7**	**51**	**3.8**	**162**	**12.2**	**167**	**12.5**	**191**	**14.3**	**317**	**23.8**	**217**	**16.3**	**139**	**10.4**	**27**	**2.0**	**1,333**	**100.0**
All Persons KSI[1]	**143**	**5.7**	**92**	**3.7**	**288**	**11.5**	**347**	**13.8**	**399**	**15.9**	**574**	**22.9**	**355**	**14.2**	**258**	**10.3**	**51**	**2.0**	**2,507**	**100.0**

1. Includes persons with unknown age.

Table 49 Mature Adults Killed or Seriously Injured by Day of Week and Age Group

	Day of Week															
	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
25 - 29	35	11.0	39	12.2	50	15.7	45	14.1	43	13.5	51	16.0	56	17.6	**319**	**100.0**
30 - 34	31	12.8	31	12.8	32	13.2	40	16.5	38	15.6	41	16.9	30	12.3	**243**	**100.0**
35 - 39	25	13.3	33	17.6	23	12.2	23	12.2	33	17.6	29	15.4	22	11.7	**188**	**100.0**
40 - 44	20	12.0	15	9.0	21	12.7	22	13.3	38	22.9	32	19.3	18	10.8	**166**	**100.0**
45 - 49	20	12.2	20	12.2	24	14.6	26	15.9	22	13.4	32	19.5	20	12.2	**164**	**100.0**
50 - 54	20	14.9	18	13.4	19	14.2	19	14.2	16	11.9	25	18.7	17	12.7	**134**	**100.0**
55 - 59	11	9.2	16	13.4	13	10.9	28	23.5	19	16.0	17	14.3	15	12.6	**119**	**100.0**
Total Mature Adults KSI	**162**	**12.2**	**172**	**12.9**	**182**	**13.7**	**203**	**15.2**	**209**	**15.7**	**227**	**17.0**	**178**	**13.4**	**1,333**	**100.0**
All Persons KSI[1]	**310**	**12.4**	**315**	**12.6**	**335**	**13.4**	**358**	**14.3**	**405**	**16.2**	**411**	**16.4**	**373**	**14.9**	**2,507**	**100.0**

3.4 Senior Adult Road Users – 60 years or older

Figure 14 Senior Adults Killed or Seriously Injured by Road User Group

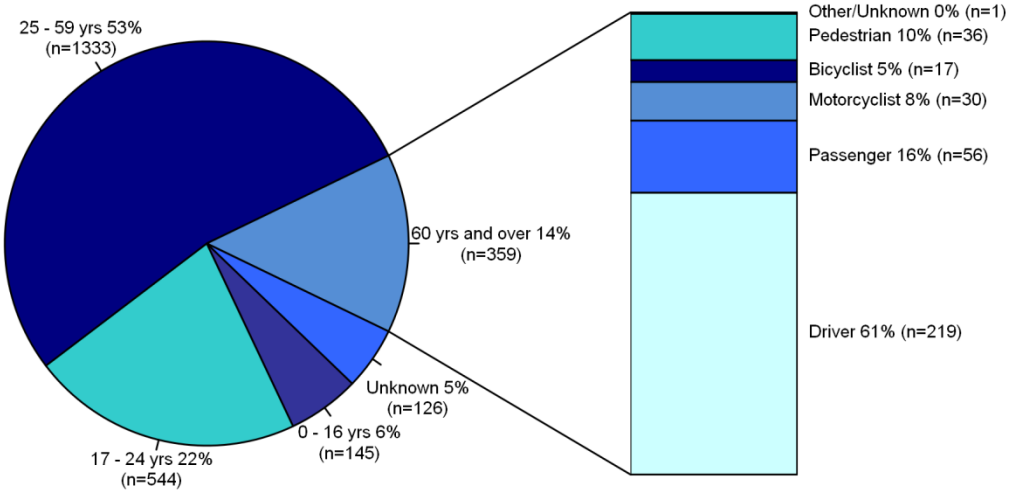


Table 50 Senior Adults Killed or Seriously Injured by Road User Type and Age Group

	Road User Type						
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Other/ Unknown	Total
Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**n**
60 - 64	50	8	14	7	5	1	**85**
65 - 69	50	13	9	5	6	0	**83**
70 - 74	42	9	3	3	5	0	**62**
75 - 79	30	13	1	2	8	0	**54**
80 - 84	23	7	3	0	5	0	**38**
85 and over	24	6	0	0	7	0	**37**
Total Senior Adults KSI	**219**	**56**	**30**	**17**	**36**	**1**	**359**

Table 51 Senior Adult Drivers/Riders *Involved* in Serious Crashes by Crash Nature

	Crash Nature																			
	Multi-Vehicle Crashes								Single-Vehicle Crashes												Total	
	Head On		Right Angle		Other/Unknown Multi		Total Multi		Hit Pedestrian		Hit Animal		Hit Object		Non Collision		Other/Unknown Single		Total Single			
Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
60 - 64	6	4.5	37	28.0	59	44.7	**102**	**77.3**	7	5.3	1	0.8	15	11.4	6	4.5	1	0.8	**30**	**22.7**	**132**	**100.0**
65 - 69	10	9.7	22	21.4	40	38.8	**72**	**69.9**	6	5.8	0	0.0	18	17.5	6	5.8	1	1.0	**31**	**30.1**	**103**	**100.0**
70 - 74	5	6.8	28	38.4	24	32.9	**57**	**78.1**	5	6.8	0	0.0	7	9.6	3	4.1	1	1.4	**16**	**21.9**	**73**	**100.0**
75 - 79	1	2.1	17	36.2	22	46.8	**40**	**85.1**	2	4.3	0	0.0	3	6.4	1	2.1	1	2.1	**7**	**14.9**	**47**	**100.0**
80 - 84	1	3.0	14	42.4	10	30.3	**25**	**75.8**	1	3.0	1	3.0	6	18.2	0	0.0	0	0.0	**8**	**24.2**	**33**	**100.0**
85 and over	1	3.4	9	31.0	9	31.0	**19**	**65.5**	1	3.4	0	0.0	9	31.0	0	0.0	0	0.0	**10**	**34.5**	**29**	**100.0**
Total Senior Adult Drivers/Riders in Serious Crashes	**24**	**5.8**	**127**	**30.5**	**164**	**39.3**	**315**	**75.5**	**22**	**5.3**	**2**	**0.5**	**58**	**13.9**	**16**	**3.8**	**4**	**1.0**	**102**	**24.5**	**417**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**175**	**5.4**	**722**	**22.4**	**1,358**	**42.2**	**2,255**	**70.0**	**189**	**5.9**	**17**	**0.5**	**485**	**15.1**	**238**	**7.4**	**36**	**1.1**	**965**	**30.0**	**3,220**	**100.0**

1. Includes persons with unknown age.

Table 52 Senior Adult Drivers/Riders *Involved* in Serious Crashes by High Priority Crash Type and Age Group

	High Priority Crash Types								Total	
	Intersection		Run Off Road		Head On		Other			
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
60 - 64	79	59.8	21	15.9	6	4.5	29	22.0	132	**100.0**
65 - 69	51	49.5	27	26.2	10	9.7	19	18.4	103	**100.0**
70 - 74	38	52.1	11	15.1	5	6.8	20	27.4	73	**100.0**
75 - 79	28	59.6	4	8.5	1	2.1	16	34.0	47	**100.0**
80 - 84	23	69.7	5	15.2	1	3.0	5	15.2	33	**100.0**
85 and over	15	51.7	9	31.0	1	3.4	5	17.2	29	**100.0**
Total Senior Adult Drivers/Riders in Serious Crashes	**234**	**56.1**	**77**	**18.5**	**24**	**5.8**	**94**	**22.5**	**417**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**1,572**	**48.8**	**724**	**22.5**	**175**	**5.4**	**860**	**26.7**	**3,220**	**100.0**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and percentages will sum to greater than 100%.

1. Includes persons with unknown age.

Table 53 Senior Adults Killed or Seriously Injured by Time of Day and Age Group

	Time of Day																	
	Midnight to < 3am		3am to < 6am		6am to < 9am		9am to < Midday		Midday to < 3pm		3pm to < 6pm		6pm to < 9pm		9pm to < Midnight		Unknown		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
60 - 64	0	0.0	1	1.2	15	17.6	18	21.2	18	21.2	24	28.2	8	9.4	1	1.2	0	0.0	**85**	**100.0**
65 - 69	0	0.0	4	4.8	8	9.6	30	36.1	14	16.9	16	19.3	2	2.4	7	8.4	2	2.4	**83**	**100.0**
70 - 74	0	0.0	1	1.6	8	12.9	23	37.1	17	27.4	3	4.8	6	9.7	2	3.2	2	3.2	**62**	**100.0**
75 - 79	0	0.0	1	1.9	9	16.7	19	35.2	9	16.7	13	24.1	2	3.7	1	1.9	0	0.0	**54**	**100.0**
80 - 84	0	0.0	1	2.6	2	5.3	4	10.5	17	44.7	13	34.2	0	0.0	1	2.6	0	0.0	**38**	**100.0**
85 and over	0	0.0	1	2.7	1	2.7	10	27.0	10	27.0	11	29.7	2	5.4	2	5.4	0	0.0	**37**	**100.0**
Total Senior Adults KSI	**0**	**0.0**	**9**	**2.5**	**43**	**12.0**	**104**	**29.0**	**85**	**23.7**	**80**	**22.3**	**20**	**5.6**	**14**	**3.9**	**4**	**1.1**	**359**	**100.0**
All Persons KSI[1]	**143**	**5.7**	**92**	**3.7**	**288**	**11.5**	**347**	**13.8**	**399**	**15.9**	**574**	**22.9**	**355**	**14.2**	**258**	**10.3**	**51**	**2.0**	**2,507**	**100.0**

1. Includes persons with unknown age.

Table 54 Senior Adults Killed or Seriously Injured by Day of Week and Age Group

	Day of Week															
	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Total	
Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
60 - 64	10	11.8	17	20.0	13	15.3	16	18.8	8	9.4	7	8.2	14	16.5	**85**	**100.0**
65 - 69	9	10.8	12	14.5	13	15.7	10	12.0	14	16.9	11	13.3	14	16.9	**83**	**100.0**
70 - 74	3	4.8	9	14.5	8	12.9	5	8.1	12	19.4	13	21.0	12	19.4	**62**	**100.0**
75 - 79	8	14.8	4	7.4	9	16.7	6	11.1	11	20.4	9	16.7	7	13.0	**54**	**100.0**
80 - 84	5	13.2	5	13.2	3	7.9	3	7.9	6	15.8	10	26.3	6	15.8	**38**	**100.0**
85 and over	4	10.8	4	10.8	3	8.1	9	24.3	4	10.8	6	16.2	7	18.9	**37**	**100.0**
Total Mature Adults KSI	**39**	**10.9**	**51**	**14.2**	**49**	**13.6**	**49**	**13.6**	**55**	**15.3**	**56**	**15.6**	**60**	**16.7**	**359**	**100.0**
All Persons KSI[1]	**310**	**12.4**	**315**	**12.6**	**335**	**13.4**	**358**	**14.3**	**405**	**16.2**	**411**	**16.4**	**373**	**14.9**	**2,507**	**100.0**

4. SAFE SYSTEM

4.1 Safe Road User Behaviours

4.1.1 Speeding

Speed is a contributing factor to the occurrence and severity of crashes by reducing response time and increasing the amount of energy in a crash. It is not just driving faster than the posted speed limit. Speed can be a contributing factor if the vehicle is being driven too fast for the prevailing weather, visibility, traffic and road conditions without full regard for the condition of the vehicle, driver skills and experience. Whether speed was a contributing factor in causing a crash and increasing crash severity is most reliably determined by an attending police officer, hence this section considers police-attended crashes only. This resulted in the exclusion of 295 of the 2,091 hospitalisation crashes that occurred in 2013. All fatal crashes in 2013 were attended by Police and are included in this section.

Table 55 Speed a Factor by Crash Severity, Police-Attended Crashes – State

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Speed a Factor in Crash	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Yes	32	21.6	158	9.6	**190**	**10.6**	483	6.5	**673**	**7.3**
No	24	16.2	522	31.7	**546**	**30.4**	2,291	31.0	**2,837**	**30.9**
Unknown	92	62.2	968	58.7	**1,060**	**59.0**	4,609	62.4	**5,669**	**61.8**
Total Crashes	**148**	**100.0**	**1,648**	**100.0**	**1,796**	**100.0**	**7,383**	**100.0**	**9,179**	**100.0**

Table 56 Speed a Factor by Crash Severity, Police-Attended Crashes - Metropolitan

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Speed a Factor in Crash	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Yes	16	21.9	105	9.3	**121**	**10.1**	355	6.4	**476**	**7.1**
No	7	9.6	320	28.4	**327**	**27.3**	1,497	27.0	**1,824**	**27.0**
Unknown	50	68.5	702	62.3	**752**	**62.7**	3,693	66.6	**4,445**	**65.9**
Total Crashes	**73**	**100.0**	**1,127**	**100.0**	**1,200**	**100.0**	**5,545**	**100.0**	**6,745**	**100.0**

Table 57 Speed a Factor by Crash Severity, Police-Attended Crashes - Regional

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Speed a Factor in Crash	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Yes	9	20.0	37	10.9	**46**	**11.9**	84	6.7	**130**	**7.9**
No	13	28.9	128	37.6	**141**	**36.6**	540	42.8	**681**	**41.4**
Unknown	23	51.1	175	51.5	**198**	**51.4**	637	50.5	**835**	**50.7**
Total Crashes	**45**	**100.0**	**340**	**100.0**	**385**	**100.0**	**1,261**	**100.0**	**1,646**	**100.0**

Table 58 Speed a Factor by Crash Severity, Police-Attended Crashes - Remote

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Speed a Factor in Crash	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Yes	7	23.3	16	8.8	**23**	**10.9**	44	7.6	**67**	**8.5**
No	4	13.3	74	40.9	**78**	**37.0**	254	44.0	**332**	**42.1**
Unknown	19	63.3	91	50.3	**110**	**52.1**	279	48.4	**389**	**49.4**
Total Crashes	**30**	**100.0**	**181**	**100.0**	**211**	**100.0**	**577**	**100.0**	**788**	**100.0**

Figure 15 Fatal Crashes With Speed a Factor by Year, Police-Attended Crashes

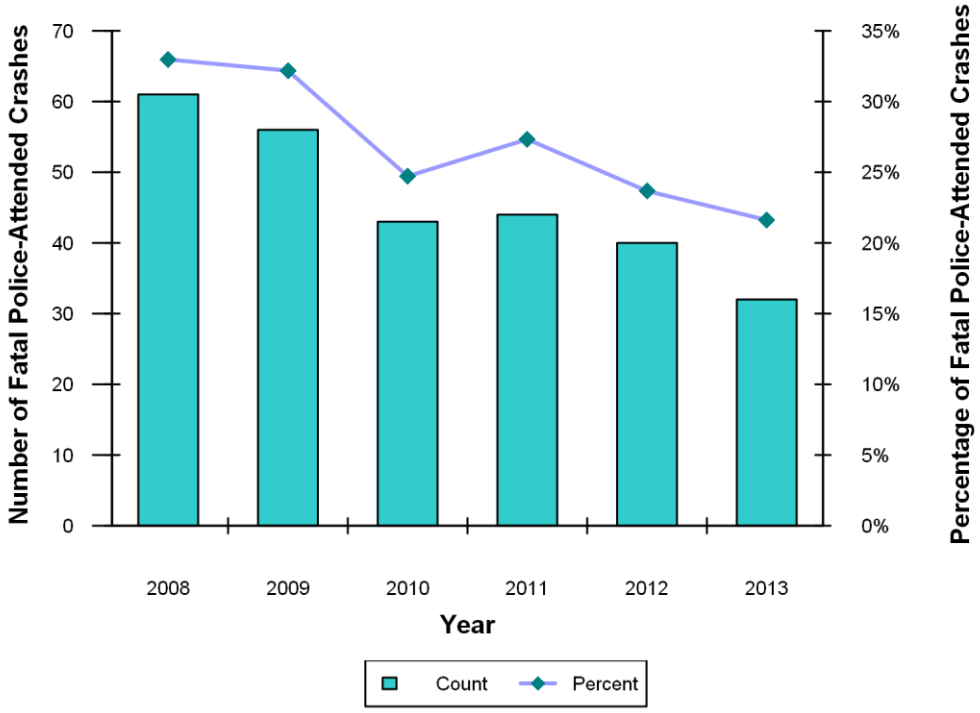


Table 59 Fatal Crashes by Speed a Factor by Year, Police-Attended Crashes

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Speed a Factor in Crash	n	n	n	n	n	n	%
Yes	61	56	43	44	40	32	-20.0
No	37	37	39	43	37	24	-35.1
Unknown	87	81	92	74	92	92	0.0
Total Fatal Crashes	**185**	**174**	**174**	**161**	**169**	**148**	**-12.4**

Table 60 Serious Crashes by Speed a Factor by ARIA Category, Police-Attended Crashes

	Speed a Factor							
	Yes		No		Unknown		Total	
ARIA Category	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Highly Accessible	126	10.1	341	27.5	775	62.4	**1,242**	**100.0**
Accessible	28	12.4	78	34.7	119	52.9	**225**	**100.0**
Moderately Accessible	19	12.0	68	43.0	71	44.9	**158**	**100.0**
Remote	14	12.4	39	34.5	60	53.1	**113**	**100.0**
Very Remote	3	5.2	20	34.5	35	60.3	**58**	**100.0**
Total Serious Crashes	**190**	**10.6**	**546**	**30.4**	**1,060**	**59.0**	**1,796**	**100.0**

Table 61 Drivers/Riders *Involved* in Fatal Crashes by Speed a Factor by Gender and Age Group, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Gender/Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Male								
0 - 11	0	N/A	0	N/A	0	N/A	**0**	**N/A**
12 - 16	1	50.0	0	0.0	1	50.0	**2**	**100.0**
17 - 24	8	29.6	2	7.4	17	63.0	**27**	**100.0**
25 - 29	9	42.9	3	14.3	9	42.9	**21**	**100.0**
30 - 39	8	24.2	5	15.2	20	60.6	**33**	**100.0**
40 - 49	6	24.0	2	8.0	17	68.0	**25**	**100.0**
50 - 59	5	22.7	4	18.2	13	59.1	**22**	**100.0**
60 and over	0	0.0	3	12.5	21	87.5	**24**	**100.0**
Unknown age	0	0.0	0	0.0	1	100.0	**1**	**100.0**
Total Male	**37**	**23.9**	**19**	**12.3**	**99**	**63.9**	**155**	**100.0**
Female								
0 – 11	0	N/A	0	N/A	0	N/A	**0**	**N/A**
12 – 16	0	N/A	0	N/A	0	N/A	**0**	**N/A**
17 – 24	0	0.0	1	14.3	6	85.7	**7**	**100.0**
25 – 29	0	0.0	0	0.0	4	100.0	**4**	**100.0**
30 – 39	1	25.0	1	25.0	2	50.0	**4**	**100.0**
40 – 49	1	25.0	0	0.0	3	75.0	**4**	**100.0**
50 – 59	1	50.0	0	0.0	1	50.0	**2**	**100.0**
60 and over	0	0.0	4	40.0	6	60.0	**10**	**100.0**
Total Female	**3**	**9.7**	**6**	**19.4**	**22**	**71.0**	**31**	**100.0**
Unknown Gender	**0**	**0.0**	**0**	**0.0**	**5**	**100.0**	**5**	**100.0**
Total Drivers/Riders in Fatal Crashes	**40**	**20.9**	**25**	**13.1**	**126**	**66.0**	**191**	**100.0**

Table 62 Drivers/Riders *Involved* in Hospitalisation Crashes by Speed a Factor by Gender and Age Group, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Gender/Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Male								
0 - 11	0	N/A	0	N/A	0	N/A	**0**	N/A
12 - 16	0	0.0	3	25.0	9	75.0	**12**	**100.0**
17 - 24	60	16.6	98	27.1	203	56.2	**361**	**100.0**
25 - 29	28	13.0	58	27.0	129	60.0	**215**	**100.0**
30 - 39	38	11.7	95	29.1	193	59.2	**326**	**100.0**
40 - 49	23	10.0	70	30.4	137	59.6	**230**	**100.0**
50 - 59	11	5.2	65	31.0	134	63.8	**210**	**100.0**
60 and over	9	4.6	72	36.5	116	58.9	**197**	**100.0**
Unknown age	7	11.5	7	11.5	47	77.0	**61**	**100.0**
Total Male	**176**	**10.9**	**468**	**29.0**	**968**	**60.0**	**1,612**	**100.0**
Female								
0 - 11	0	N/A	0	N/A	0	N/A	**0**	N/A
12 - 16	0	0.0	1	20.0	4	80.0	**5**	**100.0**
17 - 24	9	5.1	56	31.5	113	63.5	**178**	**100.0**
25 - 29	8	7.1	43	38.4	61	54.5	**112**	**100.0**
30 - 39	14	8.1	63	36.4	96	55.5	**173**	**100.0**
40 - 49	8	5.2	52	34.0	93	60.8	**153**	**100.0**
50 - 59	1	1.1	34	36.6	58	62.4	**93**	**100.0**
60 and over	6	4.9	41	33.6	75	61.5	**122**	**100.0**
Unknown age	0	0.0	7	21.2	26	78.8	**33**	**100.0**
Total Female	**46**	**5.3**	**297**	**34.2**	**526**	**60.5**	**869**	**100.0**
Unknown Gender	**5**	**6.0**	**9**	**10.8**	**69**	**83.1**	**83**	**100.0**
Total Drivers/Riders in Hospitalisation Crashes	**227**	**8.9**	**774**	**30.2**	**1,563**	**61.0**	**2,564**	**100.0**

Table 63 Persons Killed or Seriously Injured by Speed a Factor by Gender and Age Group, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Gender/Age Group	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Male								
0 - 11	2	6.5	10	32.3	19	61.3	**31**	**100.0**
12 - 16	2	8.3	5	20.8	17	70.8	**24**	**100.0**
17 - 24	62	20.9	68	23.0	166	56.1	**296**	**100.0**
25 - 29	35	19.3	47	26.0	99	54.7	**181**	**100.0**
30 - 39	39	16.5	63	26.7	134	56.8	**236**	**100.0**
40 - 49	24	13.6	50	28.4	102	58.0	**176**	**100.0**
50 - 59	11	7.3	46	30.5	94	62.3	**151**	**100.0**
60 and over	5	3.0	57	34.5	103	62.4	**165**	**100.0**
Unknown age	4	10.3	2	5.1	33	84.6	**39**	**100.0**
Total Male	**184**	**14.2**	**348**	**26.8**	**767**	**59.0**	**1,299**	**100.0**
Female								
0 - 11	0	0.0	9	45.0	11	55.0	**20**	**100.0**
12 - 16	0	0.0	9	37.5	15	62.5	**24**	**100.0**
17 - 24	12	7.4	49	30.2	101	62.3	**162**	**100.0**
25 - 29	5	6.5	29	37.7	43	55.8	**77**	**100.0**
30 - 39	5	4.3	44	37.9	67	57.8	**116**	**100.0**
40 - 49	4	4.7	33	38.4	49	57.0	**86**	**100.0**
50 - 59	1	1.5	26	38.8	40	59.7	**67**	**100.0**
60 and over	5	3.9	51	39.5	73	56.6	**129**	**100.0**
Unknown age	2	6.1	7	21.2	24	72.7	**33**	**100.0**
Total Female	**34**	**4.8**	**257**	**36.0**	**423**	**59.2**	**714**	**100.0**
Unknown Gender	**20**	**11.5**	**61**	**35.1**	**93**	**53.4**	**174**	**100.0**
Total Persons KSI	**238**	**10.9**	**666**	**30.5**	**1,283**	**58.7**	**2,187**	**100.0**

Table 64 Fatalities by Road User Type by Speed a Factor, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Road User Type	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Driver	16	24.6	11	16.9	38	58.5	**65**	**100.0**
Passenger	4	13.8	3	10.3	22	75.9	**29**	**100.0**
Motorcyclist	11	40.7	1	3.7	15	55.6	**27**	**100.0**
Bicyclist	0	0.0	2	33.3	4	66.7	**6**	**100.0**
Pedestrian	3	9.1	9	27.3	21	63.6	**33**	**100.0**
Other/Unknown	0	0.0	1	100.0	0	0.0	**1**	**100.0**
Total Fatalities	**34**	**21.1**	**27**	**16.8**	**100**	**62.1**	**161**	**100.0**

Table 65 Fatal Crashes by Speed a Factor by Crash Nature, Police-Attended Crashes - Metropolitan

	Speed a Factor in Crash			
	Yes	No	Unknown	Total
Crash Nature	**n**	**n**	**n**	**n**
Multi-Vehicle Crashes				
Rear End	1	0	5	**6**
Head On	1	0	7	**8**
Sideswipe Same Dir.	0	0	1	**1**
Right Angle	4	2	2	**8**
Right Turn Through	0	0	4	**4**
Other/ Unknown	1	0	2	**3**
Total Multi Vehicle	**7**	**2**	**21**	**30**
Single-Vehicle Crashes				
Hit Pedestrian	2	4	17	**23**
Hit Animal	0	0	0	**0**
Hit Object	6	0	7	**13**
Non Collision	1	1	4	**6**
Other/ Unknown	0	0	1	**1**
Total Single Vehicle	**9**	**5**	**29**	**43**
Total Fatal Crashes	**16**	**7**	**50**	**73**

Table 66 Fatal Crashes by Speed a Factor by Crash Nature, Police-Attended Crashes - Regional

	Speed a Factor in Crash			
	Yes	No	Unknown	Total
Crash Nature	**n**	**n**	**n**	**n**
Multi-Vehicle Crashes				
Rear End	0	0	0	**0**
Head On	0	1	1	**2**
Sideswipe Same Dir.	0	1	0	**1**
Right Angle	0	0	5	**5**
Right Turn Through	0	0	0	**0**
Other/ Unknown	0	1	0	**1**
Total Multi Vehicle	**0**	**3**	**6**	**9**
Single-Vehicle Crashes				
Hit Pedestrian	0	3	2	**5**
Hit Animal	0	0	0	**0**
Hit Object	6	6	8	**20**
Non Collision	3	0	5	**8**
Other/ Unknown	0	1	2	**3**
Total Single Vehicle	**9**	**10**	**17**	**36**
Total Fatal Crashes	**9**	**13**	**23**	**45**

Table 67 Fatal Crashes by Speed a Factor by Crash Nature, Police-Attended Crashes - Remote

	Speed a Factor in Crash			
	Yes	No	Unknown	Total
Crash Nature	**n**	**n**	**n**	**n**
Multi-Vehicle Crashes				
Rear End	0	0	0	**0**
Head On	0	0	5	**5**
Sideswipe Same Dir.	0	0	0	**0**
Right Angle	0	0	1	**1**
Right Turn Through	0	0	0	**0**
Other/ Unknown	0	0	0	**0**
Total Multi Vehicle	**0**	**0**	**6**	**6**
Single-Vehicle Crashes				
Hit Pedestrian	0	1	0	**1**
Hit Animal	0	0	1	**1**
Hit Object	4	2	7	**13**
Non Collision	3	1	5	**9**
Other/ Unknown	0	0	0	**0**
Total Single Vehicle	**7**	**4**	**13**	**24**
Total Fatal Crashes	**7**	**4**	**19**	**30**

Table 68 Fatal Crashes by Speed a Factor by Speed Zone, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Speed Zone	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
<50	1	3.1	0	0.0	2	2.2	**3**	**2.0**
50	2	6.3	4	16.7	14	15.2	**20**	**13.5**
60	9	28.1	3	12.5	14	15.2	**26**	**17.6**
70	4	12.5	4	16.7	9	9.8	**17**	**11.5**
80	3	9.4	1	4.2	10	10.9	**14**	**9.5**
90	0	0.0	2	8.3	3	3.3	**5**	**3.4**
100	0	0.0	1	4.2	11	12.0	**12**	**8.1**
110	12	37.5	9	37.5	29	31.5	**50**	**33.8**
State Default	0	0.0	0	0.0	0	0.0	**0**	**0.0**
Unknown	1	3.1	0	0.0	0	0.0	**1**	**0.7**
Total Fatal Crashes	**32**	**100.0**	**24**	**100.0**	**92**	**100.0**	**148**	**100.0**

Table 69 Hospitalisation Crashes by Speed a Factor by Speed Zone, Police-Attended Crashes

	Speed a Factor in Crash							
	Yes		No		Unknown		Total	
Speed Zone	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
<50	1	0.6	6	1.1	15	1.5	**22**	**1.3**
50	32	20.3	113	21.6	229	23.7	**374**	**22.7**
60	47	29.7	128	24.5	238	24.6	**413**	**25.1**
70	19	12.0	68	13.0	132	13.6	**219**	**13.3**
80	19	12.0	51	9.8	95	9.8	**165**	**10.0**
90	7	4.4	21	4.0	37	3.8	**65**	**3.9**
100	9	5.7	22	4.2	63	6.5	**94**	**5.7**
110	17	10.8	105	20.1	123	12.7	**245**	**14.9**
State Default	3	1.9	3	0.6	16	1.7	**22**	**1.3**
Unknown	4	2.5	5	1.0	20	2.1	**29**	**1.8**
Total Hospitalisation Crashes	**158**	**100.0**	**522**	**100.0**	**968**	**100.0**	**1,648**	**100.0**

4.1.2 Alcohol

This section focuses on the involvement of alcohol in road crashes. The legal blood alcohol concentration (BAC) limit for drivers holding an ordinary licence in Western Australia is 0.05 g/100mL. Therefore, in this report crashes that involved a driver/rider with a BAC of 0.05 g/100mL or above are referred to as 'alcohol-related crashes'. As a driver's or rider's BAC is usually determined by a breath or blood test in the presence of a police officer, only police-attended crashes are included in this section. In 2013, there were 295 hospitalisation crashes that were not police attended and are, therefore, not included in this section. All fatal crashes in 2013 were attended by Police and are included in this section.

Since alcohol involvement in crashes is based on the BAC of all drivers and motorcycle riders (referred to as drivers/riders) involved in the crash, crashes that did not involve a driver or rider were excluded from the tables and figures presented in this section. Such crashes include collisions between bicycles and pedestrians or where a parked vehicle rolls away and hits another vehicle or road user. With this restriction a further 40 police-attended crashes were excluded from this section, for a total of 9,139 police-attended crashes that involved a driver/rider.

Table 70 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes

Highest Driver/Rider BAC in Crash (g/100mL)	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Nil	81	55.9	1,036	63.4	**1,117**	**62.8**	4,295	58.3	**5,412**	**59.2**
> 0 to < 0.05	9	6.2	21	1.3	**30**	**1.7**	101	1.4	**131**	**1.4**
0.05 to < 0.08	2	1.4	27	1.7	**29**	**1.6**	121	1.6	**150**	**1.6**
0.08 to < 0.15	11	7.6	61	3.7	**72**	**4.0**	306	4.2	**378**	**4.1**
≥ 0.15	20	13.8	29	1.8	**49**	**2.8**	172	2.3	**221**	**2.4**
Subtotal ≥ 0.05	**33**	**22.8**	**117**	**7.2**	**150**	**8.4**	**599**	**8.1**	**749**	**8.2**
Unknown	22	15.2	459	28.1	**481**	**27.1**	2,366	32.1	**2,847**	**31.2**
Total Crashes[1]	**145**	**100.0**	**1,633**	**100.0**	**1,778**	**100.0**	**7,361**	**100.0**	**9,139**	**100.0**

1. Excludes police-attended crashes that did not involve a driver/rider (n=40).

Figure 16 Fatal Crashes by Highest Driver/Rider BAC in Crash by Year, Police-Attended Crashes

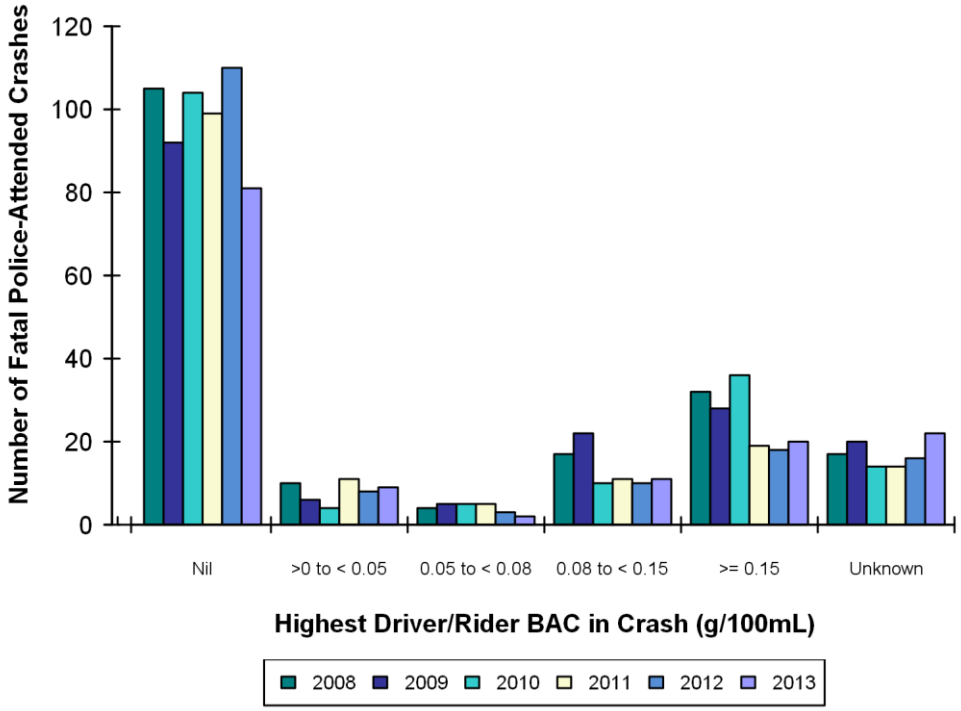


Table 71 Fatal Crashes by Highest Driver/Rider BAC in Crash by Year, Police-Attended Crashes

Highest Driver/Rider BAC in Crash (g/100mL)	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012[1]
	n	n	n	n	n	n	%
Nil	105	92	104	99	110	81	-26.4
> 0 to < 0.05	10	6	4	11	8	9	N/R
0.05 to < 0.08	4	5	5	5	3	2	N/R
0.08 to < 0.15	17	22	10	11	10	11	10.0
≥ 0.15	32	28	36	19	18	20	11.1
Sub-total ≥ 0.05	**53**	**55**	**51**	**35**	**31**	**33**	**6.5**
Unknown	17	20	14	14	16	22	N/R
Total Fatal Crashes	**185**	**173**	**173**	**159**	**165**	**145**	**-12.1**

1. 2013 change from 2012 not reported for crashes with unknown BAC, or for BAC categories with fewer than ten crashes.

Table 72 Serious Crashes by Highest Driver/Rider BAC by ARIA Category, Police-Attended Crashes

Highest Driver/Rider BAC in Crash	ARIA Category											
	Highly Accessible		Accessible		Moderately Accessible		Remote		Very Remote		Total	
	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Nil	796	64.7	142	64.3	96	60.8	58	52.3	25	43.1	**1,117**	**62.8**
> 0 to < 0.05	18	1.5	4	1.8	5	3.2	1	0.9	2	3.4	**30**	**1.7**
0.05 to < 0.08	18	1.5	3	1.4	5	3.2	3	2.7	0	0.0	**29**	**1.6**
0.08 to < 0.15	50	4.1	6	2.7	4	2.5	6	5.4	6	10.3	**72**	**4.0**
≥ 0.15	23	1.9	9	4.1	7	4.4	5	4.5	5	8.6	**49**	**2.8**
Sub-total ≥ 0.05	**91**	**7.4**	**18**	**8.1**	**16**	**10.1**	**14**	**12.6**	**11**	**19.0**	**150**	**8.4**
Unknown	325	26.4	57	25.8	41	25.9	38	34.2	20	34.5	**481**	**27.1**
Total Serious Crashes[1]	**1,230**	**100.0**	**221**	**100.0**	**158**	**100.0**	**111**	**100.0**	**58**	**100.0**	**1,778**	**100.0**

1. Excludes police-attended crashes that did not involve a driver/rider (n=18).

Table 73 Drivers/Riders *Involved* in Fatal Crashes by Driver/Rider BAC by Gender and Age Group, Police-Attended Crashes

Gender/Age Group	Driver/Rider BAC (g/100mL)							
	Nil	<0.05	0.05 to <0.08	0.08 to <0.15	≥0.15	Subtotal ≥0.05	Unknown	Total
	n	n	n	n	n	n	n	n
Male								
0 - 11	0	0	0	0	0	**0**	0	**0**
12 - 16	0	0	1	1	0	**2**	0	**2**
17 - 24	14	2	0	2	4	**6**	5	**27**
25 - 29	7	1	0	5	4	**9**	4	**21**
30 - 39	18	2	0	1	4	**5**	8	**33**
40 - 49	14	0	1	0	3	**4**	7	**25**
50 - 59	18	0	0	0	3	**3**	1	**22**
60 and over	19	2	0	1	1	**2**	1	**24**
Unknown Age	0	0	0	0	0	**0**	1	**1**
Total Male	**90**	**7**	**2**	**10**	**19**	**31**	**27**	**155**
Female								
0 - 11	0	0	0	0	0	**0**	0	**0**
12 - 16	0	0	0	0	0	**0**	0	**0**
17 - 24	3	2	0	0	0	**0**	2	**7**
25 - 29	3	0	0	1	0	**1**	0	**4**
30 - 39	1	0	0	0	1	**1**	2	**4**
40 - 49	2	0	0	0	0	**0**	2	**4**
50 - 59	2	0	0	0	0	**0**	0	**2**
60 and over	8	0	0	0	0	**0**	2	**10**
Unknown Age	0	0	0	0	0	**0**	0	**0**
Total Female	**19**	**2**	**0**	**1**	**1**	**2**	**8**	**31**
Unknown Gender	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**5**
Total Drivers/Riders in Fatal Crashes	**109**	**9**	**2**	**11**	**20**	**33**	**40**	**191**

Table 74 Drivers/Riders *Involved* in Hospitalisation Crashes by Driver/Rider BAC by Gender and Age Group, Police-Attended Crashes

	Driver/Rider BAC (g/100mL)							
	Nil	<0.05	0.05 to <0.08	0.08 to <0.15	≥0.15	Subtotal ≥0.05	Unknown	Total
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Male								
0 - 11	0	0	0	0	0	**0**	0	**0**
12 - 16	6	0	0	0	0	**0**	6	**12**
17 - 24	222	6	8	20	7	**35**	98	**361**
25 - 29	118	1	7	5	6	**18**	78	**215**
30 - 39	172	1	7	13	4	**24**	129	**326**
40 - 49	137	2	0	9	6	**15**	76	**230**
50 - 59	139	3	1	1	0	**2**	66	**210**
60 and over	142	3	1	3	0	**4**	48	**197**
Unknown age	27	0	1	0	0	**1**	33	**61**
Total Male	**963**	**16**	**25**	**51**	**23**	**99**	**534**	**1,612**
Female								
0 – 11	0	0	0	0	0	**0**	0	**0**
12 – 16	2	1	0	0	0	**0**	2	**5**
17 – 24	118	0	1	3	1	**5**	55	**178**
25 – 29	75	2	0	1	3	**4**	31	**112**
30 – 39	107	0	0	4	1	**5**	61	**173**
40 - 49	96	1	1	2	0	**3**	53	**153**
50 - 59	66	0	0	0	0	**0**	27	**93**
60 and over	81	1	0	0	0	**0**	40	**122**
Unknown age	8	0	1	1	1	**3**	22	**33**
Total Female	**553**	**5**	**3**	**11**	**6**	**20**	**291**	**869**
Unknown Gender	**7**	**0**	**0**	**0**	**0**	**0**	**76**	**83**
Total Drivers/Riders in Hospitalisation Crashes	**1,523**	**21**	**28**	**62**	**29**	**119**	**901**	**2,564**

Table 75 Persons Killed or Seriously Injured by Gender and Age Group by Highest Driver/Rider BAC in Crash, Police-Attended Crashes

	Highest Driver/Rider BAC in Crash (g/100mL)							
	Nil	<0.05	0.05 to <0.08	0.08 to <0.15	≥0.15	Subtotal ≥0.05	Unknown	Total
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Male								
0 - 11	23	0	0	0	1	**1**	7	**31**
12 - 16	15	0	2	1	0	**3**	6	**24**
17 - 24	159	8	11	18	12	**41**	87	**295**
25 - 29	97	2	6	11	10	**27**	53	**179**
30 - 39	130	5	6	16	8	**30**	69	**234**
40 - 49	110	2	1	9	11	**21**	42	**175**
50 - 59	104	0	2	1	3	**6**	39	**149**
60 and over	116	4	1	4	1	**6**	34	**160**
Unknown age	23	0	1	2	0	**3**	13	**39**
Total Male	**777**	**21**	**30**	**62**	**46**	**138**	**350**	**1,286**
Female								
0 - 11	13	0	0	0	0	**0**	7	**20**
12 - 16	11	4	0	0	0	**0**	9	**24**
17 - 24	106	3	1	8	1	**10**	41	**160**
25 - 29	52	2	0	1	5	**6**	16	**76**
30 - 39	71	0	0	7	1	**8**	37	**116**
40 - 49	60	3	0	4	1	**5**	18	**86**
50 - 59	50	1	0	0	0	**0**	15	**66**
60 and over	92	1	0	0	0	**0**	35	**128**
Unknown age	14	0	1	2	1	**4**	15	**33**
Total Female	**469**	**14**	**2**	**22**	**9**	**33**	**193**	**709**
Unknown Gender	**132**	**4**	**4**	**3**	**7**	**14**	**24**	**174**
Total Persons KSI[1]	**1,378**	**39**	**36**	**87**	**62**	**185**	**567**	**2,169**

1. Excludes persons killed or seriously injured in crashes that did not involve a driver/rider (n=18).

Table 76 BAC of Pedestrian Fatalities by Area of Crash, Police-Attended

	Pedestrian BAC (g/100mL)							
	Nil	<0.05	0.05 to <0.08	0.08 to <0.15	≥0.15	Subtotal ≥0.05	Unknown	Total
Area	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Metropolitan	19	0	1	1	4	**6**	1	**26**
Regional	4	0	0	0	2	**2**	0	**6**
Remote	0	0	0	0	1	**1**	0	**1**
Total Pedestrian Fatalities	**23**	**0**	**1**	**1**	**7**	**9**	**1**	**33**

4.1.3 Illegal Drugs

Data regarding the number of road crash fatalities with drugs detected in their system was provided by the Forensic Science Laboratory of the Chemistry Centre of Western Australia. The drugs tested for included prescription drugs, illegal drugs and alcohol. Data was also provided for persons for whom no drugs (prescription or illegal) or alcohol were detected. It should be noted that the testing only detects the presence of a drug, and it cannot be determined from these results whether the person killed was under the influence of the detected drug(s) at the time of the crash.

The data supplied by the Chemistry Centre of Western Australia may also include data for fatalities that were out of scope, such as those killed in off-road crashes. Therefore, the data supplied by the Chemistry Centre was matched to the crash data. This process resulted in 151 of 161 fatalities from the crash data being matched to a record within the drug dataset. There were also 21 records of fatalities from the drug data that could not to be matched to records in the crash data. Of these 21 fatalities, three had cannabis detected in their systems, one had both alcohol and cannabis in their system, and one had both amphetamines and cannabis detected in their system. The remaining 16 did not have any illegal drugs detected in their systems.

It is likely that many of the 10 fatalities from the crash data who could not be matched to the drug data did not have illegal drugs in their system, but it is likely that some did. All tables in this section include only the 151 crash fatalities who were matched to the drug data.

Table 77 Fatalities by Drug Use and Gender

	Gender		
	Male	**Female**	**Total Fatalities**
Drugs Detected	**n**	**n**	**n**
Amphetamines only	5	2	**7**
Cannabis only	9	1	**10**
Amphetamines and Cannabis only	1	0	**1**
Amphetamines and Alcohol only	3	0	**3**
Cannabis and Alcohol only	12	3	**15**
Amphetamines, Cannabis and Alcohol only	0	1	**1**
Total with Drugs Detected	**30**	**7**	**37**
None	93	21	**114**
Total Fatalities	**123**	**28**	**151**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.

Table 78 Fatalities by Drug Use and Age Group

	Age Group				
	0-16	17-24	25-59	60 and over	Total Fatalities
Drugs Detected	**n**	**n**	**n**	**n**	**n**
Amphetamines only	0	0	7	0	**7**
Cannabis only	1	3	4	2	**10**
Amphetamines and Cannabis only	0	0	1	0	**1**
Amphetamines and Alcohol only	0	1	2	0	**3**
Cannabis and Alcohol only	2	5	8	0	**15**
Amphetamines, Cannabis and Alcohol only	0	0	1	0	**1**
Total with Drugs Detected	**3**	**9**	**23**	**2**	**37**
None	9	16	54	35	**114**
Total Fatalities	**12**	**25**	**77**	**37**	**151**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.

Table 79 Fatalities by Drug Use and Road User Type

	Road User Type					
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Total Fatalities
Drugs Detected	**n**	**n**	**n**	**n**	**n**	**n**
Amphetamines only	3	2	1	1	0	**7**
Cannabis only	4	3	1	1	1	**10**
Amphetamines and Cannabis only	0	0	1	0	0	**1**
Amphetamines and Alcohol only	2	1	0	0	0	**3**
Cannabis and Alcohol only	7	3	0	0	5	**15**
Amphetamines, Cannabis and Alcohol only	0	1	0	0	0	**1**
Total with Drugs Detected	**16**	**10**	**3**	**2**	**6**	**37**
None	45	16	23	4	26	**114**
Total Fatalities	**61**	**26**	**26**	**6**	**32**	**151**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.

Table 80 Fatalities by Drug Use and Day of Week

	Day Of Week							
	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**	**Total Fatalities**
Drugs Detected	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Amphetamines only	1	0	0	3	1	2	0	**7**
Cannabis only	0	0	1	2	1	1	5	**10**
Amphetamines and Cannabis only	0	0	0	0	1	0	0	**1**
Amphetamines and Alcohol only	0	0	0	0	3	0	0	**3**
Cannabis and Alcohol only	1	2	1	2	0	6	3	**15**
Amphetamines, Cannabis and Alcohol only	0	0	1	0	0	0	0	**1**
Total with Drugs Detected	**2**	**2**	**3**	**7**	**6**	**9**	**8**	**37**
None	13	15	22	11	11	18	24	**114**
Total Fatalities	**15**	**17**	**25**	**18**	**17**	**27**	**32**	**151**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.

4.1.4 Seat Belts

The use of seat belts is only reported for occupants of motor vehicles that are likely to have seat belts fitted. Therefore, the term 'motor vehicle occupants' excludes occupants of non-motorised vehicles, motorcyclists, motorcycle passengers, occupants of tractors and occupants of vehicles that are normally towed (trailers, caravans, campers etc.).

As seat belt usage is more reliably recorded for police-attended crashes this section will focus on police-attended crashes. However, tables and figures covering multiple years will use data from all fatal crashes, as in some years police were not able to attend all fatal crashes. In 2013, all fatal crashes were attended by police.

Figure 17 Motor Vehicle Occupant Fatalities Where Seat Belts Were Not Worn by Year

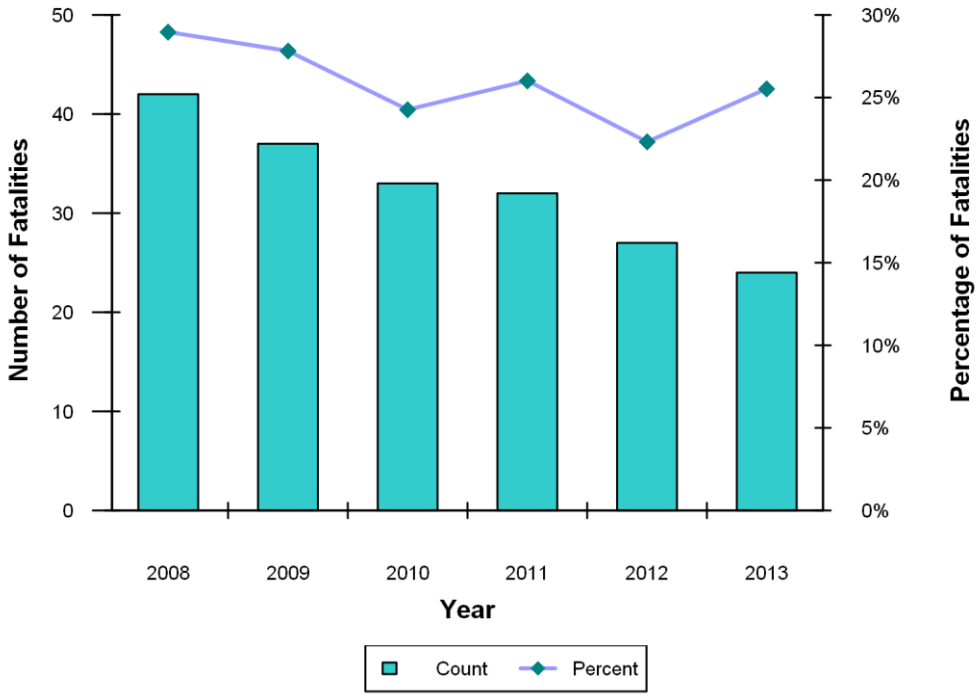


Table 81 Motor Vehicle Occupant Fatalities by Seat Belt Usage by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012[1]
Seat Belt Usage	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Worn	82	75	84	72	76	47	-38.2
Not Worn	42	37	33	32	27	24	-11.1
Unknown	21	21	19	19	18	23	27.8
Total Motor Vehicle Occupant Fatalities	**145**	**133**	**136**	**123**	**121**	**94**	**-22.3**

1. 2013 change from 2012 not reported for fatalities whose seat belt usage was unknown.

Table 82 Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage by ARIA Category, Police-Attended Crashes

	Seat Belt Usage							
	Worn		Not Worn		Unknown		Total	
ARIA Category	n	Row %	n	Row %	n	Row %	n	Row %
Highly Accessible	787	85.0	26	2.8	113	12.2	**926**	**100.0**
Accessible	167	74.6	20	8.9	37	16.5	**224**	**100.0**
Moderately Accessible	115	76.7	15	10.0	20	13.3	**150**	**100.0**
Remote	107	73.8	13	9.0	25	17.2	**145**	**100.0**
Very Remote	47	63.5	16	21.6	11	14.9	**74**	**100.0**
Total Motor Vehicle Occupants KSI	**1,223**	**80.5**	**90**	**5.9**	**206**	**13.6**	**1,519**	**100.0**

Table 83 Motor Vehicle Occupant Fatalities by Seat Belt Usage by Gender and Age Group, Police-Attended Crashes

	Seat Belt Usage							
	Worn		Not Worn		Unknown		Total	
Gender/Age Group	n	Row %	n	Row %	n	Row %	n	Row %
Male								
0 - 11	2	100.0	0	0.0	0	0.0	**2**	**100.0**
12 - 16	1	50.0	1	50.0	0	0.0	**2**	**100.0**
17 - 24	5	29.4	5	29.4	7	41.2	**17**	**100.0**
25 - 29	7	58.3	2	16.7	3	25.0	**12**	**100.0**
30 - 39	6	37.5	6	37.5	4	25.0	**16**	**100.0**
40 - 49	3	42.9	3	42.9	1	14.3	**7**	**100.0**
50 - 59	3	50.0	3	50.0	0	0.0	**6**	**100.0**
60 and over	8	72.7	2	18.2	1	9.1	**11**	**100.0**
Total Male	35	47.9	22	30.1	16	21.9	73	**100.0**
Female								
0 - 11	1	100.0	0	0.0	0	0.0	**1**	**100.0**
12 - 16	1	100.0	0	0.0	0	0.0	**1**	**100.0**
17 - 24	1	50.0	1	50.0	0	0.0	**2**	**100.0**
25 - 29	1	33.3	1	33.3	1	33.3	**3**	**100.0**
30 - 39	0	0.0	0	0.0	3	100.0	**3**	**100.0**
40 - 49	1	50.0	0	0.0	1	50.0	**2**	**100.0**
50 - 59	0	N/A	0	N/A	0	N/A	**0**	**N/A**
60 and over	7	77.8	0	0.0	2	22.2	**9**	**100.0**
Total Female	12	57.1	2	9.5	7	33.3	21	**100.0**
Total Motor Vehicle Occupant Fatalities	**47**	**50.0**	**24**	**25.5**	**23**	**24.5**	**94**	**100.0**

Table 84 Motor Vehicle Occupants Seriously Injured by Seat Belt Usage by Gender and Age Group, Police-Attended Crashes

	Seat Belt Usage							
	Worn		Not Worn		Unknown		Total	
Gender/Age Group	n	Row %	n	Row %	n	Row %	n	Row %
Male								
0 - 11	14	87.5	2	12.5	0	0.0	**16**	**100.0**
12 - 16	5	71.4	1	14.3	1	14.3	**7**	**100.0**
17 - 24	141	75.8	13	7.0	32	17.2	**186**	**100.0**
25 - 29	65	73.0	5	5.6	19	21.3	**89**	**100.0**
30 - 39	102	78.5	9	6.9	19	14.6	**130**	**100.0**
40 - 49	65	77.4	7	8.3	12	14.3	**84**	**100.0**
50 - 59	64	85.3	2	2.7	9	12.0	**75**	**100.0**
60 and over	86	92.5	1	1.1	6	6.5	**93**	**100.0**
Unknown age	9	50.0	0	0.0	9	50.0	**18**	**100.0**
Total Male	**551**	**78.9**	**40**	**5.7**	**107**	**15.3**	**698**	**100.0**
Female								
0 - 11	12	92.3	0	0.0	1	7.7	**13**	**100.0**
12 - 16	16	84.2	0	0.0	3	15.8	**19**	**100.0**
17 - 24	115	87.8	4	3.1	12	9.2	**131**	**100.0**
25 - 29	56	91.8	3	4.9	2	3.3	**61**	**100.0**
30 - 39	79	88.8	1	1.1	9	10.1	**89**	**100.0**
40 - 49	57	90.5	2	3.2	4	6.3	**63**	**100.0**
50 - 59	48	90.6	2	3.8	3	5.7	**53**	**100.0**
60 and over	101	91.8	2	1.8	7	6.4	**110**	**100.0**
Unknown age	12	44.4	2	7.4	13	48.1	**27**	**100.0**
Total Female	**496**	**87.6**	**16**	**2.8**	**54**	**9.5**	**566**	**100.0**
Unknown Gender	**129**	**80.1**	**10**	**6.2**	**22**	**13.7**	**161**	**100.0**
Total Motor Vehicle Occupants Seriously Injured	**1,176**	**82.5**	**66**	**4.6**	**183**	**12.8**	**1,425**	**100.0**

Table 85 Seat Belt Usage by Motor Vehicle Occupant Type and Injury Severity, Police-Attended Crashes - State

	Injury Severity					
	Fatal		Serious		Total Persons KSI	
Seat Belt Usage by Occupant Type	n	Col %	n	Col %	n	Col %
Driver						
Worn	33	50.8	835	83.2	**868**	**81.2**
Not Worn	19	29.2	39	3.9	**58**	**5.4**
Unknown	13	20.0	130	12.9	**143**	**13.4**
Total Drivers	**65**	**100.0**	**1,004**	**100.0**	**1,069**	**100.0**
Passenger						
Worn	14	48.3	341	81.0	**355**	**78.9**
Not Worn	5	17.2	27	6.4	**32**	**7.1**
Unknown	10	34.5	53	12.6	**63**	**14.0**
Total Passengers	**29**	**100.0**	**421**	**100.0**	**450**	**100.0**
Total Motor Vehicle Occupants	**94**	**-**	**1,425**	**-**	**1,519**	**-**

Table 86 Seat Belt Usage by Motor Vehicle Occupant Type and Injury Severity, Police-Attended Crashes - Metropolitan

	Injury Severity					
	Fatal		Serious		Total Persons KSI	
Seat Belt Usage by Occupant Type	n	Col %	n	Col %	n	Col %
Driver						
Worn	16	72.7	550	86.6	**566**	**86.1**
Not Worn	1	4.5	15	2.4	**16**	**2.4**
Unknown	5	22.7	70	11.0	**75**	**11.4**
Total Drivers	**22**	**100.0**	**635**	**100.0**	**657**	**100.0**
Passenger						
Worn	5	55.6	192	85.7	**197**	**84.5**
Not Worn	1	11.1	6	2.7	**7**	**3.0**
Unknown	3	33.3	26	11.6	**29**	**12.4**
Total Passengers	**9**	**100.0**	**224**	**100.0**	**233**	**100.0**
Total Motor Vehicle Occupants	**31**	**-**	**859**	**-**	**890**	**-**

Table 87 Seat Belt Usage by Motor Vehicle Occupant Type and Injury Severity, Police-Attended Crashes - Regional

	Injury Severity					
	Fatal		Serious		Total Persons KSI	
Seat Belt Usage by Occupant Type	n	Col %	n	Col %	n	Col %
Driver						
Worn	10	38.5	192	80.0	**202**	**75.9**
Not Worn	10	38.5	10	4.2	**20**	**7.5**
Unknown	6	23.1	38	15.8	**44**	**16.5**
Total Drivers	**26**	**100.0**	**240**	**100.0**	**266**	**100.0**
Passenger						
Worn	5	71.4	74	75.5	**79**	**75.2**
Not Worn	0	0.0	9	9.2	**9**	**8.6**
Unknown	2	28.6	15	15.3	**17**	**16.2**
Total Passengers	**7**	**100.0**	**98**	**100.0**	**105**	**100.0**
Total Motor Vehicle Occupants	**33**	**-**	**338**	**-**	**371**	**-**

Table 88 Seat Belt Usage by Motor Vehicle Occupant Type and Injury Severity, Police-Attended Crashes - Remote

	Injury Severity					
	Fatal		Serious		Total Persons KSI	
Seat Belt Usage by Occupant Type	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Driver						
Worn	7	41.2	93	72.1	**100**	**68.5**
Not Worn	8	47.1	14	10.9	**22**	**15.1**
Unknown	2	11.8	22	17.1	**24**	**16.4**
Total Drivers	**17**	**100.0**	**129**	**100.0**	**146**	**100.0**
Passenger						
Worn	4	30.8	75	75.8	**79**	**70.5**
Not Worn	4	30.8	12	12.1	**16**	**14.3**
Unknown	5	38.5	12	12.1	**17**	**15.2**
Total Passengers	**13**	**100.0**	**99**	**100.0**	**112**	**100.0**
Total Motor Vehicle Occupants	**30**	**-**	**228**	**-**	**258**	**-**

4.1.5 Helmets

This section deals with helmet use of motorcyclists and bicyclists killed and seriously injured in crashes reported to police. All tables in this section are restricted to police-attended crashes only.

Table 89 Helmet Usage by Injury Severity, Police-Attended Crashes - State

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Road User	**n**	**n**	**n**	**n**
Motorcyclists				
Fatal	22	4	1	**27**
Serious	277	31	23	**331**
Total Motorcyclists	**299**	**35**	**24**	**358**
Bicyclists				
Fatal	4	2	0	**6**
Serious	67	24	16	**107**
Total Bicyclists	**71**	**26**	**16**	**113**
Total Motorcyclists and Bicyclists	**370**	**61**	**40**	**471**

Table 90 Helmet Usage by Injury Severity, Police-Attended Crashes - Metropolitan

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Road User	**n**	**n**	**n**	**n**
Motorcyclists				
Fatal	15	3	1	19
Serious	212	17	18	247
Total Motorcyclists	227	20	19	266
Bicyclists				
Fatal	2	2	0	4
Serious	63	20	11	94
Total Bicyclists	65	22	11	98
Total Motorcyclists and Bicyclists	**292**	**42**	**30**	**364**

Table 91 Helmet Usage by Injury Severity, Police-Attended Crashes - Regional

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Road User	**n**	**n**	**n**	**n**
Motorcyclists				
Fatal	5	1	0	**6**
Serious	47	7	5	**59**
Total Motorcyclists	**52**	**8**	**5**	**65**
Bicyclists				
Fatal	2	0	0	**2**
Serious	4	2	4	**10**
Total Bicyclists	**6**	**2**	**4**	**12**
Total Motorcyclists and Bicyclists	**58**	**10**	**9**	**77**

Table 92 Helmet Usage by Injury Severity, Police-Attended Crashes - Remote

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Road User	**n**	**n**	**n**	**n**
Motorcyclists				
Fatal	2	0	0	**2**
Serious	18	7	0	**25**
Total Motorcyclists	**20**	**7**	**0**	**27**
Bicyclists				
Fatal	0	0	0	**0**
Serious	0	2	1	**3**
Total Bicyclists	**0**	**2**	**1**	**3**
Total Motorcyclists and Bicyclists	**20**	**9**	**1**	**30**

Table 93 Motorcyclist Fatalities by Helmet Usage by Age Group, Police-Attended Crashes

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Age	**n**	**n**	**n**	**n**
0 - 11	0	0	0	**0**
12 - 16	0	0	0	**0**
17 - 24	2	1	0	**3**
25 - 39	8	0	0	**8**
40 - 59	7	3	0	**10**
60 and over	5	0	1	**6**
Total Motorcyclists	**22**	**4**	**1**	**27**

4.2 Safe Roads and Roadsides

4.2.1 Road Factors

Information on various road factors and environmental conditions are provided in this section. Levels of exposure to different road and environmental condition will vary, and this should be considered when interpreting these figures.

Table 94 Road Factors by Crash Severity

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Road Factor	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Road Classification										
Highway	54	36.5	693	35.7	**747**	**35.7**	12,719	36.6	**13,466**	**36.5**
Main Road	12	8.1	105	5.4	**117**	**5.6**	554	1.6	**671**	**1.8**
Other	82	55.4	1,145	58.9	**1,227**	**58.7**	21,523	61.9	**22,750**	**61.7**
Road Surface										
Sealed	136	91.9	1,861	95.8	**1,997**	**95.5**	34,057	97.9	**36,054**	**97.7**
Unsealed	12	8.1	66	3.4	**78**	**3.7**	601	1.7	**679**	**1.8**
Unknown	0	0.0	16	0.8	**16**	**0.8**	138	0.4	**154**	**0.4**
Road Alignment										
Curve	38	25.7	401	20.6	**439**	**21.0**	6,284	18.1	**6,723**	**18.2**
Straight	110	74.3	1,443	74.3	**1,553**	**74.3**	26,731	76.8	**28,284**	**76.7**
Unknown	0	0.0	99	5.1	**99**	**4.7**	1,781	5.1	**1,880**	**5.1**
Road Gradient										
Level	109	73.6	1,456	74.9	**1,565**	**74.8**	27,416	78.8	**28,981**	**78.6**
Crest of Hill	5	3.4	57	2.9	**62**	**3.0**	510	1.5	**572**	**1.6**
Slope	34	23.0	325	16.7	**359**	**17.2**	5,078	14.6	**5,437**	**14.7**
Unknown	0	0.0	105	5.4	**105**	**5.0**	1,792	5.2	**1,897**	**5.1**
Road Conditions										
Wet	14	9.5	255	13.1	**269**	**12.9**	5,396	15.5	**5,665**	**15.4**
Dry	134	90.5	1,615	83.1	**1,749**	**83.6**	28,476	81.8	**30,225**	**81.9**
Unknown	0	0.0	73	3.8	**73**	**3.5**	924	2.7	**997**	**2.7**
Light										
Daylight	78	52.7	1,214	62.5	**1,292**	**61.8**	25,774	74.1	**27,066**	**73.4**
Dawn or Dusk	3	2.0	69	3.6	**72**	**3.4**	1,964	5.6	**2,036**	**5.5**
Night										
Street Lights On	29	19.6	397	20.4	**426**	**20.4**	5,070	14.6	**5,496**	**14.9**
Street Lights Off	3	2.0	18	0.9	**21**	**1.0**	152	0.4	**173**	**0.5**
No Street Lights	32	21.6	170	8.7	**202**	**9.7**	866	2.5	**1,068**	**2.9**
Subtotal Night	**64**	**43.2**	**585**	**30.1**	**649**	**31.0**	**6,088**	**17.5**	**6,737**	**18.3**
Unknown	3	2.0	75	3.9	**78**	**3.7**	970	2.8	**1,048**	**2.8**
Total Crashes	**148**	**100.0**	**1,943**	**100.0**	**2,091**	**100.0**	**34,796**	**100.0**	**36,887**	**100.0**

4.2.2 Crash Nature

The crash nature describes the type of crash in terms of the initial collision, regardless of subsequent collisions with other vehicles and/or road users. For example, if the front of one vehicle squarely strikes the side of another vehicle and pushes it off the road where it hits a pedestrian, the crash nature would be considered a “Right Angle” crash. Or, if a vehicle hits a pedestrian who is crossing the road and the first vehicle is then hit from behind by a second vehicle, the crash would be classified as a “Hit Pedestrian” crash. The categories of crash nature included in this report have been aggregated based on the most commonly occurring categories.

Figure 18 Crash Nature by Crash Severity

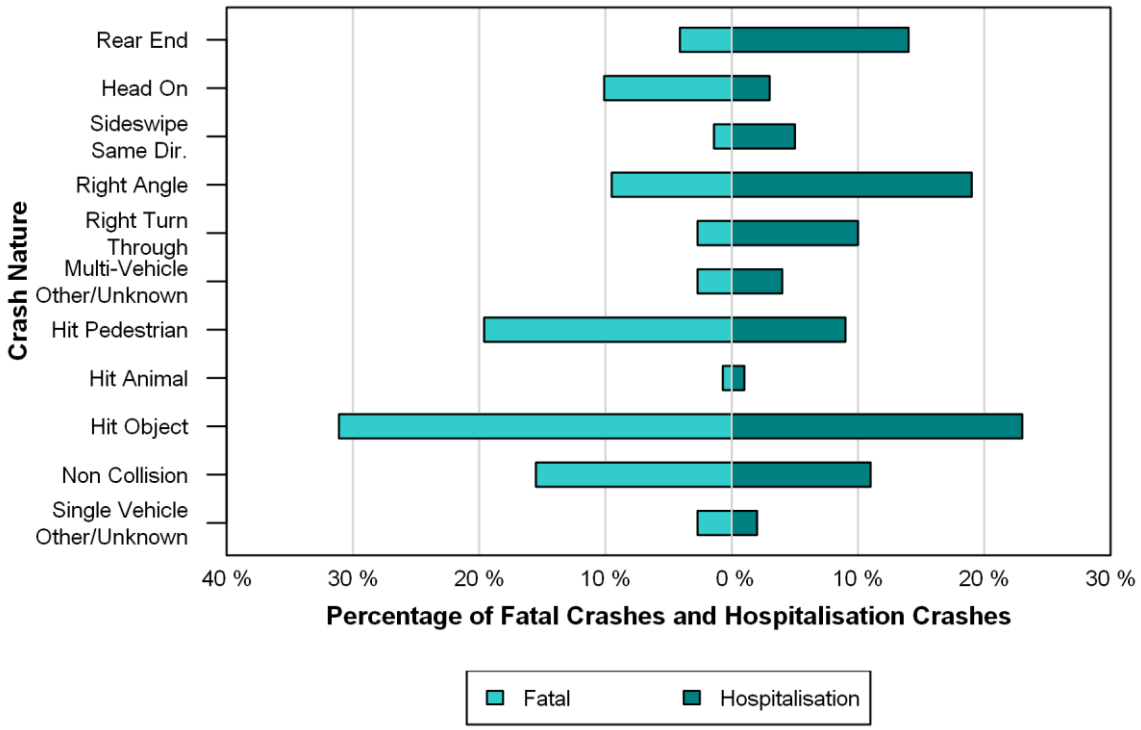


Table 95 Fatal Crashes by Crash Nature and Area of Crash

	Area of Crash							
	Metropolitan		Regional		Remote		Western Australia	
Crash Nature	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Multi-Vehicle Crashes								
Rear End	6	8.2	0	0.0	0	0.0	**6**	**4.1**
Head On	8	11.0	2	4.4	5	16.7	**15**	**10.1**
Sideswipe Same Dir.	1	1.4	1	2.2	0	0.0	**2**	**1.4**
Right Angle	8	11.0	5	11.1	1	3.3	**14**	**9.5**
Right Turn Through	4	5.5	0	0.0	0	0.0	**4**	**2.7**
Other/ Unknown	3	4.1	1	2.2	0	0.0	**4**	**2.7**
Total Multi Vehicle	**30**	**41.1**	**9**	**20.0**	**6**	**20.0**	**45**	**30.4**
Single-Vehicle Crashes								
Hit Pedestrian	23	31.5	5	11.1	1	3.3	**29**	**19.6**
Hit Animal	0	0.0	0	0.0	1	3.3	**1**	**0.7**
Hit Object	13	17.8	20	44.4	13	43.3	**46**	**31.1**
Non Collision	6	8.2	8	17.8	9	30.0	**23**	**15.5**
Other/ Unknown	1	1.4	3	6.7	0	0.0	**4**	**2.7**
Total Single Vehicle	**43**	**58.9**	**36**	**80.0**	**24**	**80.0**	**103**	**69.6**
Total Fatal Crashes	**73**	**100.0**	**45**	**100.0**	**30**	**100.0**	**148**	**100.0**

Table 96 Fatal Crashes by High Priority Crash Type and Area of Crash

	Area of Crash							
	Metropolitan		Regional		Remote		Western Australia	
Crash Type	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Intersection	26	35.6	5	11.1	3	10.0	**34**	**23.0**
Run Off Road	20	27.4	27	60.0	21	70.0	**68**	**45.9**
Head On	8	11.0	2	4.4	5	16.7	**15**	**10.1**
Other	23	31.5	12	26.7	3	10.0	**38**	**25.7**
Total Fatal Crashes	**73**	**100.0**	**45**	**100.0**	**30**	**100.0**	**148**	**100.0**

Note: High Priority Crash Types are not mutually exclusive and therefore some crashes may be counted more than once and percentages will sum to greater than 100%.

Table 97 Hospitalisation Crashes by Crash Nature and Area of Crash

	Area of Crash							
	Metropolitan		Regional		Remote		Western Australia	
Crash Nature	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Multi-Vehicle Crashes								
Rear End	240	17.8	32	8.2	7	3.4	**279**	**14.4**
Head On	34	2.5	21	5.4	10	4.9	**65**	**3.3**
Sideswipe Same Dir.	83	6.2	7	1.8	3	1.5	**93**	**4.8**
Right Angle	298	22.1	50	12.8	15	7.3	**363**	**18.7**
Right Turn Through	173	12.9	14	3.6	2	1.0	**189**	**9.7**
Other/ Unknown	45	3.3	11	2.8	16	7.8	**72**	**3.7**
Total Multi Vehicle	**873**	**64.9**	**135**	**34.5**	**53**	**25.7**	**1,061**	**54.6**
Single-Vehicle Crashes								
Hit Pedestrian	138	10.3	25	6.4	4	1.9	**167**	**8.6**
Hit Animal	5	0.4	7	1.8	4	1.9	**16**	**0.8**
Hit Object	219	16.3	157	40.2	65	31.6	**441**	**22.7**
Non Collision	91	6.8	56	14.3	76	36.9	**223**	**11.5**
Other/ Unknown	20	1.5	11	2.8	4	1.9	**35**	**1.8**
Total Single Vehicle	**473**	**35.1**	**256**	**65.5**	**153**	**74.3**	**882**	**45.4**
Total Hospitalisation Crashes	**1,346**	**100.0**	**391**	**100.0**	**206**	**100.0**	**1,943**	**100.0**

Table 98 Hospitalisation Crashes by High Priority Crash Type and Area of Crash

	Area of Crash							
	Metropolitan		Regional		Remote		Western Australia	
Crash Type	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Intersection	702	52.2	106	27.1	30	14.6	**838**	**43.1**
Run Off Road	302	22.4	202	51.7	142	68.9	**646**	**33.2**
Head On	34	2.5	21	5.4	10	4.9	**65**	**3.3**
Other	375	27.9	79	20.2	31	15.0	**485**	**25.0**
Total Hospitalisation Crashes	**1,346**	**100.0**	**391**	**100.0**	**206**	**100.0**	**1,943**	**100.0**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and percentages will sum to greater than 100%.

Table 99 Serious Crashes by Crash Nature by ARIA Category

	ARIA Category											
	Highly Accessible		Accessible		Moderately Accessible		Remote		Very Remote		Total	
Crash Nature	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Multi-Vehicle Crashes												
Rear End	251	17.1	19	7.5	10	5.4	5	4.1	0	0.0	**285**	**13.6**
Head On	44	3.0	17	6.7	8	4.3	8	6.5	3	4.5	**80**	**3.8**
Sideswipe Same Dir.	84	5.7	7	2.8	2	1.1	0	0.0	2	3.0	**95**	**4.5**
Right Angle	315	21.5	31	12.3	23	12.5	8	6.5	0	0.0	**377**	**18.0**
Right Turn Through	180	12.3	8	3.2	4	2.2	1	0.8	0	0.0	**193**	**9.2**
Other/ Unknown	48	3.3	9	3.6	5	2.7	10	8.1	4	6.1	**76**	**3.6**
Total Multi Vehicle	**922**	**62.9**	**91**	**36.0**	**52**	**28.3**	**32**	**26.0**	**9**	**13.6**	**1,106**	**52.9**
Single-Vehicle Crashes												
Hit Pedestrian	169	11.5	15	5.9	8	4.3	4	3.3	0	0.0	**196**	**9.4**
Hit Animal	6	0.4	5	2.0	1	0.5	1	0.8	4	6.1	**17**	**0.8**
Hit Object	245	16.7	105	41.5	75	40.8	44	35.8	18	27.3	**487**	**23.3**
Non Collisions	100	6.8	33	13.0	39	21.2	42	34.1	32	48.5	**246**	**11.8**
Other/ Unknown	23	1.6	4	1.6	9	4.9	0	0.0	3	4.5	**39**	**1.9**
Total Single Vehicle	**543**	**37.1**	**162**	**64.0**	**132**	**71.7**	**91**	**74.0**	**57**	**86.4**	**985**	**47.1**
Total Serious Crashes	**1,465**	**100.0**	**253**	**100.0**	**184**	**100.0**	**123**	**100.0**	**66**	**100.0**	**2,091**	**100.0**

Table 100 Serious Crashes by High Priority Crash Type by ARIA Category

	ARIA Category											
	Highly Accessible		Accessible		Moderately Accessible		Remote		Very Remote		Total	
Crash Type	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Intersection	751	51.3	63	24.9	37	20.1	18	14.6	3	4.5	**872**	**41.7**
Run Off Road	336	22.9	136	53.8	106	57.6	83	67.5	53	80.3	**714**	**34.1**
Head On	44	3.0	17	6.7	8	4.3	8	6.5	3	4.5	**80**	**3.8**
Other	411	28.1	45	17.8	39	21.2	20	16.3	8	12.1	**523**	**25.0**
Total Serious Crashes	**1,465**	**100.0**	**253**	**100.0**	**184**	**100.0**	**123**	**100.0**	**66**	**100.0**	**2,091**	**100.0**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and percentages will sum to greater than 100%.

4.3 Safe Speeds

4.3.1 Speed Zones

Table 101 Speed Zone by Crash Severity

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Speed Zone (km/h)	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
<50	3	2.0	29	1.5	**32**	**1.5**	785	2.3	**817**	**2.2**
50	20	13.5	429	22.1	**449**	**21.5**	8,746	25.1	**9,195**	**24.9**
60	26	17.6	493	25.4	**519**	**24.8**	10,087	29.0	**10,606**	**28.8**
70	17	11.5	257	13.2	**274**	**13.1**	5,853	16.8	**6,127**	**16.6**
80	14	9.5	193	9.9	**207**	**9.9**	3,101	8.9	**3,308**	**9.0**
90	5	3.4	73	3.8	**78**	**3.7**	493	1.4	**571**	**1.5**
100	12	8.1	107	5.5	**119**	**5.7**	1,933	5.6	**2,052**	**5.6**
110	50	33.8	281	14.5	**331**	**15.8**	1,139	3.3	**1,470**	**4.0**
State Default	0	0.0	37	1.9	**37**	**1.8**	559	1.6	**596**	**1.6**
Unknown	1	0.7	44	2.3	**45**	**2.2**	2,100	6.0	**2,145**	**5.8**
Total Crashes	**148**	**100.0**	**1,943**	**100.0**	**2,091**	**100.0**	**34,796**	**100.0**	**36,887**	**100.0**

4.3.2 Speed Compliance

General road user compliance with speed limits is shown in this section. Percentages shown below are sourced from Main Roads Western Australia publications based on surveys of driving speeds on sections of the metropolitan and regional road networks. Note that for 2008 and 2009, these percentages are based on observations made in non-Metropolitan regions only; for all other years the percentages are based on observations solely in the metropolitan region.

The percentages of vehicles exceeding the speed limit are calculated from surveys conducted by collecting two days of speed data from a subset of sites selected for the 2000 survey by a stratified random sample of speed zones. In each subsequent year, the sites selected varied slightly depending on changes to speed limits, road geometry, or road treatments. The findings of the studies were based solely on data obtained on vehicles travelling under “free flowing” conditions, defined as situations where there is a gap of more than four seconds between vehicles.

Table 102 Percentage of Vehicles Exceeding the Speed Limit by Speed Zone

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Speed Zone	%	%	%	%	%	%	%
60 km/h	41.2	38.2	46.6	48.2	44.3	41.3	-6.8
70 km/h	26.0	21.3	37.4	37.0	33.6	34.0	1.2
80 km/h	29.2	23.5	39.9	34.0	34.8	32.0	-8.0
90 km/h	34.5	33.7	26.6	27.8	31.6	27.6	-12.7
100 km/h	35.0	43.3	20.2	32.3	20.6	31.3	51.9
110 km/h	28.1	30.3	23.8	15.5	22.8	23.7	3.9

Source: For year 2008 and 2009 the percentage of vehicles exceeding the speed limit is based on observations made in non-Metropolitan regions only and is from Main Roads Western Australia "Driver Speed Behaviours on Western Australian Rural Road Network 2000, 2003, 2004, 2005, 2007, 2008 and 2009" (2010). For year 2010, 2011, 2012 and 2013, the percentage of vehicles exceeding the speed limit is based on observations made in the metropolitan region only and is from Main Roads Western Australia "Trends in Driver Speed Behaviours on Perth Metropolitan Road Network 2000 to 2013" (2014).

4.4 Safe Vehicles

4.4.1 Vehicle Type

Table 103 Vehicle Type by Crash Severity

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Vehicle Type	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Sedan/Hatchback	75	37.9	1,433	44.8	**1,508**	**44.4**	35,667	52.1	**37,175**	**51.8**
Station Wagon	13	6.6	366	11.4	**379**	**11.2**	9,832	14.4	**10,211**	**14.2**
Utility	26	13.1	340	10.6	**366**	**10.8**	7,564	11.1	**7,930**	**11.0**
Panel Van, 4WD	20	10.1	184	5.8	**204**	**6.0**	4,545	6.6	**4,749**	**6.6**
Rigid Truck	11	5.6	75	2.3	**86**	**2.5**	1,530	2.2	**1,616**	**2.2**
Articulated Truck	15	7.6	65	2.0	**80**	**2.4**	597	0.9	**677**	**0.9**
Bus (≥12 seats)	0	0.0	34	1.1	**34**	**1.0**	542	0.8	**576**	**0.8**
Multi Seater Van	1	0.5	11	0.3	**12**	**0.4**	250	0.4	**262**	**0.4**
Motorcycle	27	13.6	401	12.5	**428**	**12.6**	1,164	1.7	**1,592**	**2.2**
Moped	0	0.0	1	0.0	**1**	**0.0**	6	0.0	**7**	**0.0**
Bicycle	6	3.0	137	4.3	**143**	**4.2**	603	0.9	**746**	**1.0**
Other/ Unknown	4	2.0	152	4.8	**156**	**4.6**	6,131	9.0	**6,287**	**8.8**
Total Vehicles	**198**	**100.0**	**3,199**	**100.0**	**3,397**	**100.0**	**68,431**	**100.0**	**71,828**	**100.0**

4.4.2 Airbags

This section presents information on the prevalence of airbags. Due to the way airbags are designed, the more serious the crash, the more likely they are to be deployed. Since the impact speed is not measured, the information in these tables cannot be used to infer the effectiveness of airbags. Multiple airbags can also be fitted in a vehicle (i.e. frontal airbags for drivers and front passengers and side airbags, which can be fitted for all seating positions), and the tables below provide information on whether or not an airbag was fitted for individual seating positions. Motor vehicle occupants who did not have an airbag fitted for their seating position were coded in the IRIS database in the same way as those where it was not known if an airbag was fitted for the seating position. Hence, it is not possible to differentiate between such cases.

Table 104 Airbag Usage by Injury Severity

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
Airbag Usage	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Fitted and deployed	30	31.9	492	30.2	**522**	**30.3**	986	14.9	3,570	4.2	**5,078**	**5.4**
Fitted and not deployed	10	10.6	582	35.7	**592**	**34.3**	4,268	64.7	47,599	55.5	**52,459**	**55.8**
Total Airbag Fitted	**40**	**42.6**	**1,074**	**65.9**	**1,114**	**64.6**	**5,254**	**79.6**	**51,169**	**59.7**	**57,537**	**61.2**
Not Fitted/Unknown	54	57.4	556	34.1	**610**	**35.4**	1,345	20.4	34,560	40.3	**36,515**	**38.8**
Total Motor Vehicle Occupants	**94**	**100.0**	**1,630**	**100.0**	**1,724**	**100.0**	**6,599**	**100.0**	**85,729**	**100.0**	**94,052**	**100.0**

Table 105 Motor Vehicle Occupants Killed or Seriously Injured by Airbag Usage by Area

	Area							
	Metropolitan		Regional		Remote		Total	
Airbag Usage	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Fitted and deployed	344	33.8	125	29.8	53	18.6	**522**	**30.3**
Fitted and not deployed	383	37.6	119	28.3	90	31.6	**592**	**34.3**
Total Airbag Fitted	**727**	**71.3**	**244**	**58.1**	**143**	**50.2**	**1,114**	**64.6**
Not Fitted/Unknown	292	28.7	176	41.9	142	49.8	**610**	**35.4**
Total Motor Vehicle Occupants KSI	**1,019**	**100.0**	**420**	**100.0**	**285**	**100.0**	**1,724**	**100.0**

Table 106 Motor Vehicle Occupants Killed or Seriously Injured by Airbag Usage by Occupant Type

	Motor Vehicle Occupant Type					
	Driver		Passenger		Total	
Airbag Usage	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Fitted and deployed	402	33.1	120	23.5	**522**	**30.3**
Fitted and not deployed	429	35.4	163	31.9	**592**	**34.3**
Total Airbag Fitted	**831**	**68.5**	**283**	**55.4**	**1,114**	**64.6**
Not Fitted/Unknown	382	31.5	228	44.6	**610**	**35.4**
Total Motor Vehicle Occupants KSI	**1,213**	**100.0**	**511**	**100.0**	**1,724**	**100.0**

5. OTHER FACTORS

5.1 Temporal Factors

This section provides crash and injury numbers by crash month and day of week for the whole state. Additional tables for the Metropolitan region and Regional and Remote areas are provided in Appendix B.

Table 107 Crash Month by Crash Severity

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Month	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
January	19	12.8	178	9.2	**197**	**9.4**	2,537	7.3	**2,734**	**7.4**
February	11	7.4	138	7.1	**149**	**7.1**	2,837	8.2	**2,986**	**8.1**
March	8	5.4	159	8.2	**167**	**8.0**	3,178	9.1	**3,345**	**9.1**
April	6	4.1	174	9.0	**180**	**8.6**	2,632	7.6	**2,812**	**7.6**
May	21	14.2	172	8.9	**193**	**9.2**	3,329	9.6	**3,522**	**9.5**
June	11	7.4	149	7.7	**160**	**7.7**	2,921	8.4	**3,081**	**8.4**
July	11	7.4	158	8.1	**169**	**8.1**	2,890	8.3	**3,059**	**8.3**
August	10	6.8	195	10.0	**205**	**9.8**	3,148	9.0	**3,353**	**9.1**
September	12	8.1	154	7.9	**166**	**7.9**	2,892	8.3	**3,058**	**8.3**
October	11	7.4	177	9.1	**188**	**9.0**	2,979	8.6	**3,167**	**8.6**
November	13	8.8	170	8.7	**183**	**8.8**	2,910	8.4	**3,093**	**8.4**
December	15	10.1	119	6.1	**134**	**6.4**	2,543	7.3	**2,677**	**7.3**
Total Crashes	**148**	**100.0**	**1,943**	**100.0**	**2,091**	**100.0**	**34,796**	**100.0**	**36,887**	**100.0**

Table 108 Crash Month by Injury Severity

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
Month	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
January	20	12.4	203	8.7	**223**	**8.9**	599	8.1	6,461	7.3	**7,283**	**7.4**
February	13	8.1	175	7.5	**188**	**7.5**	661	8.9	7,006	7.9	**7,855**	**8.0**
March	8	5.0	181	7.7	**189**	**7.5**	713	9.6	8,016	9.1	**8,918**	**9.1**
April	6	3.7	208	8.9	**214**	**8.5**	598	8.0	6,762	7.6	**7,574**	**7.7**
May	25	15.5	199	8.5	**224**	**8.9**	715	9.6	8,460	9.6	**9,399**	**9.5**
June	12	7.5	186	7.9	**198**	**7.9**	615	8.3	7,391	8.4	**8,204**	**8.3**
July	13	8.1	188	8.0	**201**	**8.0**	642	8.6	7,082	8.0	**7,925**	**8.0**
August	11	6.8	237	10.1	**248**	**9.9**	688	9.2	8,054	9.1	**8,990**	**9.1**
September	13	8.1	187	8.0	**200**	**8.0**	563	7.6	7,465	8.4	**8,228**	**8.4**
October	12	7.5	228	9.7	**240**	**9.6**	650	8.7	7,672	8.7	**8,562**	**8.7**
November	13	8.1	209	8.9	**222**	**8.9**	541	7.3	7,441	8.4	**8,204**	**8.3**
December	15	9.3	145	6.2	**160**	**6.4**	454	6.1	6,698	7.6	**7,312**	**7.4**
Total Persons	**161**	**100.0**	**2,346**	**100.0**	**2,507**	**100.0**	**7,439**	**100.0**	**88,508**	**100.0**	**98,454**	**100.0**

Table 109 Day of Week by Crash Severity

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Day of Week	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Monday	15	10.1	240	12.4	**255**	**12.2**	4,803	13.8	**5,058**	**13.7**
Tuesday	17	11.5	269	13.8	**286**	**13.7**	5,368	15.4	**5,654**	**15.3**
Wednesday	22	14.9	245	12.6	**267**	**12.8**	5,571	16.0	**5,838**	**15.8**
Thursday	20	13.5	289	14.9	**309**	**14.8**	5,516	15.9	**5,825**	**15.8**
Friday	17	11.5	317	16.3	**334**	**16.0**	6,042	17.4	**6,376**	**17.3**
Saturday	26	17.6	317	16.3	**343**	**16.4**	4,439	12.8	**4,782**	**13.0**
Sunday	31	20.9	266	13.7	**297**	**14.2**	3,057	8.8	**3,354**	**9.1**
Total Crashes	**148**	**100.0**	**1,943**	**100.0**	**2,091**	**100.0**	**34,796**	**100.0**	**36,887**	**100.0**

6. REGIONAL SUMMARIES

This section contains information on road crashes that occurred in individual regions of Western Australia. Comparison tables are provided containing information for each region, and several maps are included that compare crash and casualty rates across the regions. Finally, there is a sub-section for each region, containing a brief summary for that region and providing more detail on particular road user behaviours or crash information pertinent to that region. The individual sections are designed to highlight particular areas of concern for each region.

The tables and maps in Sections 6.1 and 6.2 refer to serious crashes, although some refer to all serious crashes and others refer only to police-attended serious crashes. Any tables or maps that refer to police-attended serious crashes are clearly labelled as such. All fatal crashes in 2013 were attended by police, however, there were 295 hospitalisation crashes that were not attended by police. Therefore, percentages calculated from counts reported in different tables may vary, and this is most noticeable for regions with a relatively large proportion of hospitalisation crashes that were not attended by police.

6.1 Regional Comparisons

The population of a region should be considered when comparing numbers of crashes across different regions, as a region with a higher population is likely to have a higher number of crashes. The 2013 estimated resident population by *Towards Zero* and Main Roads regions is provided in Table 110.

Table 110 2013 Estimated Resident Population by Region

	2013 Population	
Towards Zero Regions	**n**	**%**
Metropolitan	1,876,181	74.5
Regional	421,455	16.7
Remote	221,685	8.8
Main Roads Regions		
Goldfields	60,917	2.4
Great Southern	61,522	2.4
Kimberley	39,890	1.6
Mid West	56,622	2.2
Pilbara-Gascoyne	76,197	3.0
South West	272,983	10.8
Wheatbelt North	52,233	2.1
Wheatbelt South	22,776	0.9
Total Western Australia	**2,519,321**	**100.0**

Source: Australian Bureau of Statistics, Customised report, 2014.

Table 111 Crash Severity by Region

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
***Towards Zero* Regions**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Metropolitan	73	0.2	1,346	4.3	**1,419**	**4.5**	29,768	95.5	**31,187**	**100.0**
Regional	45	1.1	391	9.8	**436**	**10.9**	3,553	89.1	**3,989**	**100.0**
Remote	30	1.8	206	12.1	**236**	**13.8**	1,472	86.2	**1,708**	**100.0**
Main Roads Regions										
Goldfields	5	1.0	34	6.8	**39**	**7.8**	458	92.2	**497**	**100.0**
Great Southern	3	0.6	49	9.2	**52**	**9.8**	481	90.2	**533**	**100.0**
Kimberley	7	2.7	35	13.6	**42**	**16.3**	215	83.7	**257**	**100.0**
Mid West	7	1.3	53	9.5	**60**	**10.8**	497	89.2	**557**	**100.0**
Pilbara-Gascoyne	10	1.9	62	12.0	**72**	**14.0**	443	86.0	**515**	**100.0**
South West	27	1.0	236	9.0	**263**	**10.1**	2,352	89.9	**2,615**	**100.0**
Wheatbelt North	13	2.5	89	17.5	**102**	**20.0**	408	80.0	**510**	**100.0**
Wheatbelt South	3	1.4	39	18.3	**42**	**19.7**	171	80.3	**213**	**100.0**
Total Crashes	**148**	**0.4**	**1,943**	**5.3**	**2,091**	**5.7**	**34,793**	**94.3**	**36,884**	**100.0**

1. Excludes 3 property damage only crashes for which the region was unknown.

Table 112 Injury Severity by Region

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
***Towards Zero* Regions**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**	**n**	**Row %**
Metropolitan	80	0.1	1,565	1.9	**1,645**	**2.0**	6,087	7.2	76,439	90.8	**84,171**	**100.0**
Regional	48	0.5	492	4.8	**540**	**5.3**	959	9.3	8,769	85.4	**10,268**	**100.0**
Remote	33	0.8	289	7.2	**322**	**8.0**	393	9.8	3,295	82.2	**4,010**	**100.0**
Main Roads Regions												
Goldfields	6	0.5	41	3.2	**47**	**3.7**	96	7.5	1,137	88.8	**1,280**	**100.0**
Great Southern	4	0.3	58	4.4	**62**	**4.7**	131	10.0	1,115	85.2	**1,308**	**100.0**
Kimberley	7	1.1	50	7.5	**57**	**8.6**	85	12.8	521	78.6	**663**	**100.0**
Mid West	8	0.6	66	4.8	**74**	**5.4**	118	8.6	1,175	86.0	**1,367**	**100.0**
Pilbara-Gascoyne	10	0.8	99	8.3	**109**	**9.2**	111	9.3	971	81.5	**1,191**	**100.0**
South West	28	0.4	305	4.4	**333**	**4.8**	622	9.0	5,994	86.3	**6,949**	**100.0**
Wheatbelt North	15	1.4	110	10.0	**125**	**11.4**	133	12.1	841	76.5	**1,099**	**100.0**
Wheatbelt South	3	0.7	52	12.4	**55**	**13.1**	56	13.3	310	73.6	**421**	**100.0**
Total Persons	**161**	**0.2**	**2,346**	**2.4**	**2,507**	**2.5**	**7,439**	**7.6**	**88,503**	**89.9**	**98,449**	**100.0**

1. Excludes 5 uninjured persons in crashes for which the region was unknown.

Table 113 Drivers/Riders *Involved* in Serious Crashes by Gender by Region

	Towards Zero Regions			Main Roads Regions								Total Western Australia
Gender of Drivers/Riders	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
Male												
Fatal	80	43	32	4	2	7	10	11	24	13	4	**155**
Hospitalisation	1,381	327	183	40	37	32	42	56	194	82	27	**1,891**
Total Male	**1,461**	**370**	**215**	**44**	**39**	**39**	**52**	**67**	**218**	**95**	**31**	**2,046**
Female												
Fatal	22	7	2	1	1	0	0	1	3	3	0	**31**
Hospitalisation	776	181	66	11	22	10	22	20	127	18	17	**1,023**
Total Female	**798**	**188**	**68**	**12**	**23**	**10**	**22**	**21**	**130**	**21**	**17**	**1,054**
Unknown gender												
Fatal	1	1	3	0	0	2	0	1	1	0	0	**5**
Hospitalisation	96	15	4	2	2	0	3	2	7	2	1	**115**
Total Unknown gender	**97**	**16**	**7**	**2**	**2**	**2**	**3**	**3**	**8**	**2**	**1**	**120**
Total Drivers/Riders in Serious Crashes	**2,356**	**574**	**290**	**58**	**64**	**51**	**77**	**91**	**356**	**118**	**49**	**3,220**

Table 114 Drivers/Riders *Involved* in Serious Crashes by Age Group by Region

	Towards Zero Regions			Main Roads Regions								Total Western Australia
Age Group of Drivers/Riders	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
0 – 16	10	7	4	0	0	1	1	1	5	2	1	**21**
17 – 24	493	113	61	9	10	12	21	24	70	16	12	**667**
25 – 59	1,362	321	180	36	34	29	38	56	200	79	29	**1,863**
60 and over	292	96	29	7	15	6	13	5	57	17	5	**417**
Unknown age	199	37	16	6	5	3	4	5	24	4	2	**252**
Total Drivers/Riders in Serious Crashes	**2,356**	**574**	**290**	**58**	**64**	**51**	**77**	**91**	**356**	**118**	**49**	**3,220**

Table 115 Serious Crashes by Speed a Factor by Region

	Towards Zero Regions			Main Roads Regions								Total Western Australia
Speed a Factor in Crash	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
Police-Attended Serious Crashes												
Yes	121	46	23	5	2	4	9	7	24	15	3	**190**
No	327	141	78	14	28	18	19	19	74	39	8	**546**
Unknown	752	198	110	18	13	17	26	40	133	37	24	**1,060**
Total police Attended Serious Crashes	**1,200**	**385**	**211**	**37**	**43**	**39**	**54**	**66**	**231**	**91**	**35**	**1,796**
Serious Crashes												
Yes	121	47	23	5	2	4	9	7	24	15	4	**191**
No	329	141	78	14	28	18	19	19	74	39	8	**548**
Unknown	969	248	135	20	22	20	32	46	165	48	30	**1,352**
Total Serious Crashes	**1,419**	**436**	**236**	**39**	**52**	**42**	**60**	**72**	**263**	**102**	**42**	**2,091**

Table 116 Serious Crashes by Highest Driver/Rider BAC in Crash by Region, Police-Attended Crashes

	Towards Zero Regions			Main Roads Regions								Total Western Australia
Highest Driver/Rider BAC in Crash	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
Nil	762	246	109	24	29	18	28	32	155	48	21	**1,117**
<0 to <0.05	18	7	5	2	0	0	3	2	3	1	1	**30**
≥0.05	89	34	27	2	5	7	8	10	13	14	2	**150**
Unknown	319	94	68	9	9	13	14	22	56	28	11	**481**
Total Serious Crashes[1]	**1,188**	**381**	**209**	**37**	**43**	**38**	**53**	**66**	**227**	**91**	**35**	**1,778**

1. Excludes crashes that did not involve a driver/rider (n=18).

Table 117 Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage by Region, Police-Attended Crashes

	Towards Zero Regions			Main Roads Regions								Total Western Australia
Seat Belt Usage	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
Worn	763	281	179	16	38	32	43	63	167	67	34	**1,223**
Not Worn	23	29	38	10	2	8	3	14	16	13	1	**90**
Unknown	104	61	41	9	4	5	3	13	39	20	9	**206**
Total Motor Vehicle Occupants KSI	**890**	**371**	**258**	**35**	**44**	**45**	**49**	**90**	**222**	**100**	**44**	**1,519**

Table 118 Serious Crashes by Crash Type by Region

	Towards Zero Regions			Main Roads Regions								Total Western Australia
	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
Crash Nature												
Head On	42	23	15	3	3	4	2	5	17	4	0	**80**
Right Angle	306	55	16	9	6	4	6	3	38	2	3	**377**
Other/ Unknown Multi-Vehicle[1]	555	66	28	7	7	4	8	9	43	12	4	**649**
Hit Pedestrian	161	30	5	1	2	0	7	2	23	0	0	**196**
Hit Animal	5	7	5	1	1	1	1	2	5	1	0	**17**
Hit Object	232	177	78	9	23	11	15	20	98	58	21	**487**
Non Collision	97	64	85	9	10	16	19	30	32	21	12	**246**
Other/ Unknown Single-Vehicle	21	14	4	0	0	2	2	1	7	4	2	**39**
High Priority Crash Type												
Intersection	728	111	33	10	11	9	12	9	80	10	3	**872**
Run Off Road	322	229	163	19	32	25	30	49	124	80	33	**714**
Head On	42	23	15	3	3	4	2	5	17	4	0	**80**
Other	398	91	34	8	8	7	18	10	54	12	8	**523**
Total Crashes	**1,419**	**436**	**236**	**39**	**52**	**42**	**60**	**72**	**263**	**102**	**42**	**2,091**

Note: High Priority Crash Types are not mutually exclusive and therefore some crashes may be counted more than once and may sum to greater than the numver of crashes.

1. Other Multi-Vehicle crashes include: 'Rear End', 'Sideswipe Same Direction' and 'Right Turn Through' crashes.

Table 119 Serious Crashes by Other Contributing Factors by Region

	Towards Zero Region			Main Roads Regions								Total Western Australia
Factor	Metropolitan n	Regional n	Remote n	Goldfields n	Great Southern n	Kimberley n	Mid West n	Pilbara-Gascoyne n	South West n	Wheatbelt North n	Wheatbelt South n	n
Road Classification												
Highway	497	144	106	14	20	17	28	32	94	34	11	**747**
Main Road	3	90	24	0	12	0	4	13	52	24	9	**117**
Other	919	202	106	25	20	25	28	27	117	44	22	**1,227**
Road Surface												
Sealed	1,406	397	194	27	47	34	53	63	244	92	31	**1,997**
Unsealed	5	34	39	11	4	8	7	8	15	9	11	**78**
Unknown	8	5	3	1	1	0	0	1	4	1	0	**16**
Road Alignment												
Curve	234	140	65	9	15	10	13	16	79	43	20	**439**
Straight	1,114	277	162	30	34	29	44	51	173	57	21	**1,553**
Unknown	71	19	9	0	3	3	3	5	11	2	1	**99**
Road Conditions												
Wet	203	49	17	6	7	1	1	4	36	7	4	**269**
Dry	1,163	371	215	33	43	40	58	66	217	92	37	**1,749**
Unknown	53	16	4	0	2	1	1	2	10	3	1	**73**
Total Serious Crashes	**1,419**	**436**	**236**	**39**	**52**	**42**	**60**	**72**	**263**	**102**	**42**	**2,091**

Table 120 Serious Crashes by Month and Day of Week by Region

	Towards Zero Region			Main Roads Regions								Total Western Australia
	Metropolitan	Regional	Remote	Goldfields	Great Southern	Kimberley	Mid West	Pilbara-Gascoyne	South West	Wheatbelt North	Wheatbelt South	
	n	n	n	n	n	n	n	n	n	n	n	n
Month												
January	138	44	15	0	2	5	4	7	28	9	4	**197**
February	96	32	21	8	4	1	5	4	19	7	5	**149**
March	106	34	27	4	4	6	8	6	20	11	2	**167**
April	125	38	17	2	8	3	7	5	18	7	5	**180**
May	147	23	23	4	3	4	5	8	15	7	0	**193**
June	105	38	17	1	5	4	6	6	26	5	2	**160**
July	116	30	23	5	2	6	4	7	18	9	2	**169**
August	143	38	24	5	8	5	6	6	16	9	7	**205**
September	116	31	19	4	3	0	6	5	20	12	0	**166**
October	125	40	23	1	7	4	4	9	16	16	6	**188**
November	120	47	16	2	2	1	4	6	38	5	5	**183**
December	82	41	11	3	4	3	1	3	29	5	4	**134**
Day of Week												
Monday	179	46	30	8	7	2	5	14	28	8	4	**255**
Tuesday	203	57	26	5	5	4	5	9	41	10	4	**286**
Wednesday	186	48	33	10	4	6	6	5	31	16	3	**267**
Thursday	225	49	35	4	10	6	6	11	27	17	3	**309**
Friday	232	76	26	3	12	6	10	7	43	14	7	**334**
Saturday	208	92	43	5	6	8	17	15	53	21	10	**343**
Sunday	186	68	43	4	8	10	11	11	40	16	11	**297**
Total Serious Crashes	**1,419**	**436**	**236**	**39**	**52**	**42**	**60**	**72**	**263**	**102**	**42**	**2,091**

6.2 Regional Crash and Casualty Rates

This section contains maps showing serious crash and KSI rates across Western Australia. Map 3 shows the overall serious crash rates by region. The Wheatbelt North and Wheatbelt South had the highest serious crash rates of 195.3 and 184.4 serious crashes per 100,000 population, respectively, while the Goldfields region had the lowest rate of 64.0 per 100,000 population.

Map 4 shows the number of serious multi-vehicle crashes per 100,000 population by region. The Metropolitan region had the highest rate of 48.1 per 100,000. The Pilbara-Gascoyne region had the lowest rate (22.3 per 100,000 population).

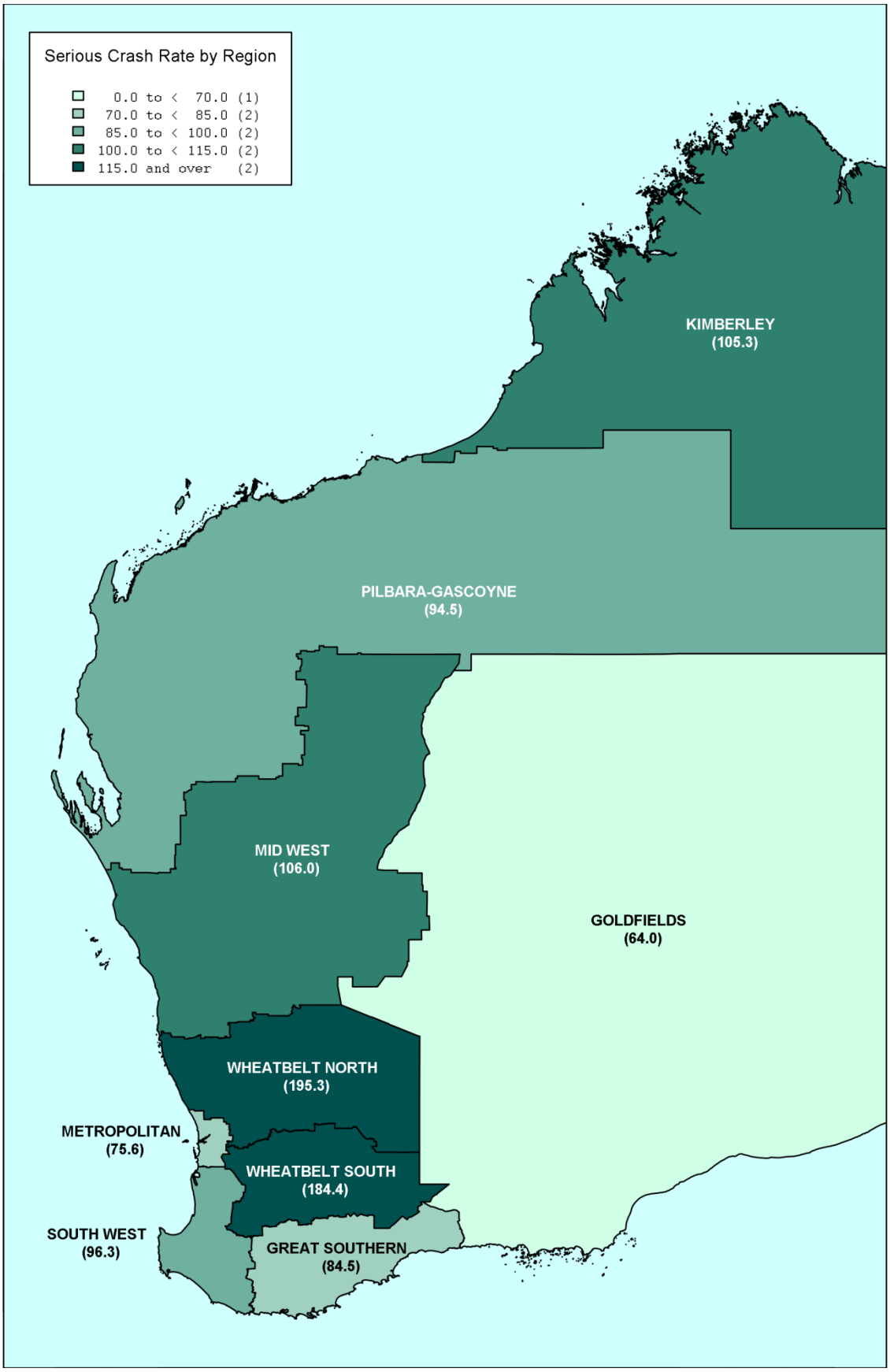
Single-vehicle crash rates by region are shown in Map 5, with the highest rates in the Wheatbelt North and Wheatbelt South (160.8 and 153.7 per 100,000 population, respectively) and the lowest in the Metropolitan region (27.5 per 100,000 population). Of the non-Metropolitan regions, the Goldfields had the lowest serious single-vehicle crash rate (32.8 per 100,000 population).

Speed-related serious crash rates (i.e. the number of police-attended serious crashes where speed was a factor per 100,000 population) are shown in Map 6. The Wheatbelt North had the highest rate (28.7 per 100,000 population), while the Great Southern region had the lowest speed-related serious crash rate (3.3 per 100,000 population).

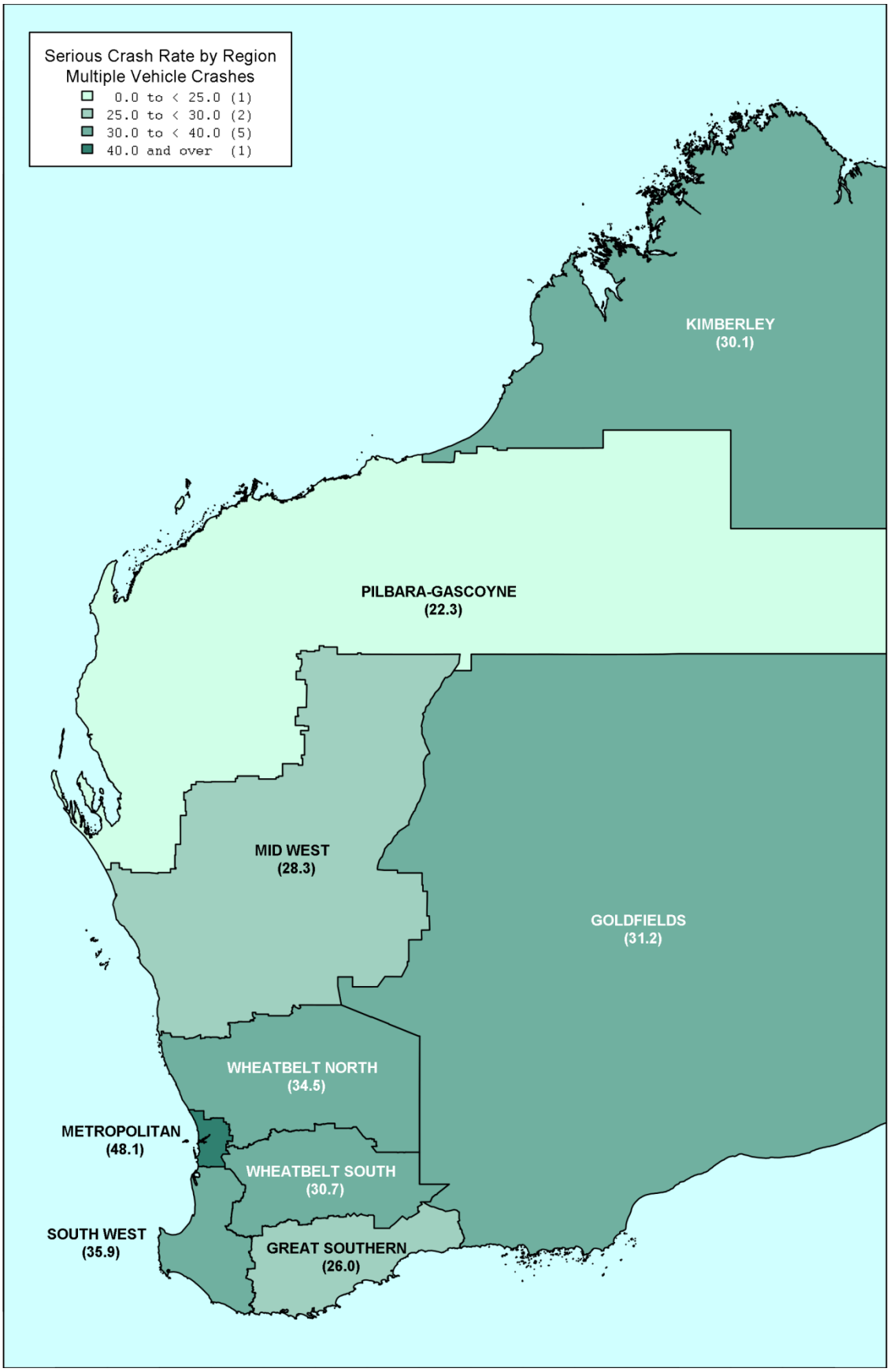
Rates for alcohol-related (i.e. involving at least one driver/rider with a BAC of 0.05 g/100mL or higher), police-attended serious crashes are provided in Map 7. The Wheatbelt North region had the highest rate of alcohol-related serious crashes (26.8 per 100,000 population). The Goldfields, Metropolitan and South West regions had the lowest alcohol-related serious crash rates (3.3, 4.7 and 4.8 per 100,000 population, respectively).

Map 8 shows the number of persons killed or seriously injured in police-attended crashes who were not wearing a seat belt per 100,000 population. The Wheatbelt North and Kimberley had the highest rates (24.9 and 20.1 per 100,000 population, respectively). The Metropolitan, Great Southern and Wheatbelt south regions had the lowest rates, with 1.2, 3.3 and 4.4 per 100,000 population, respectively.

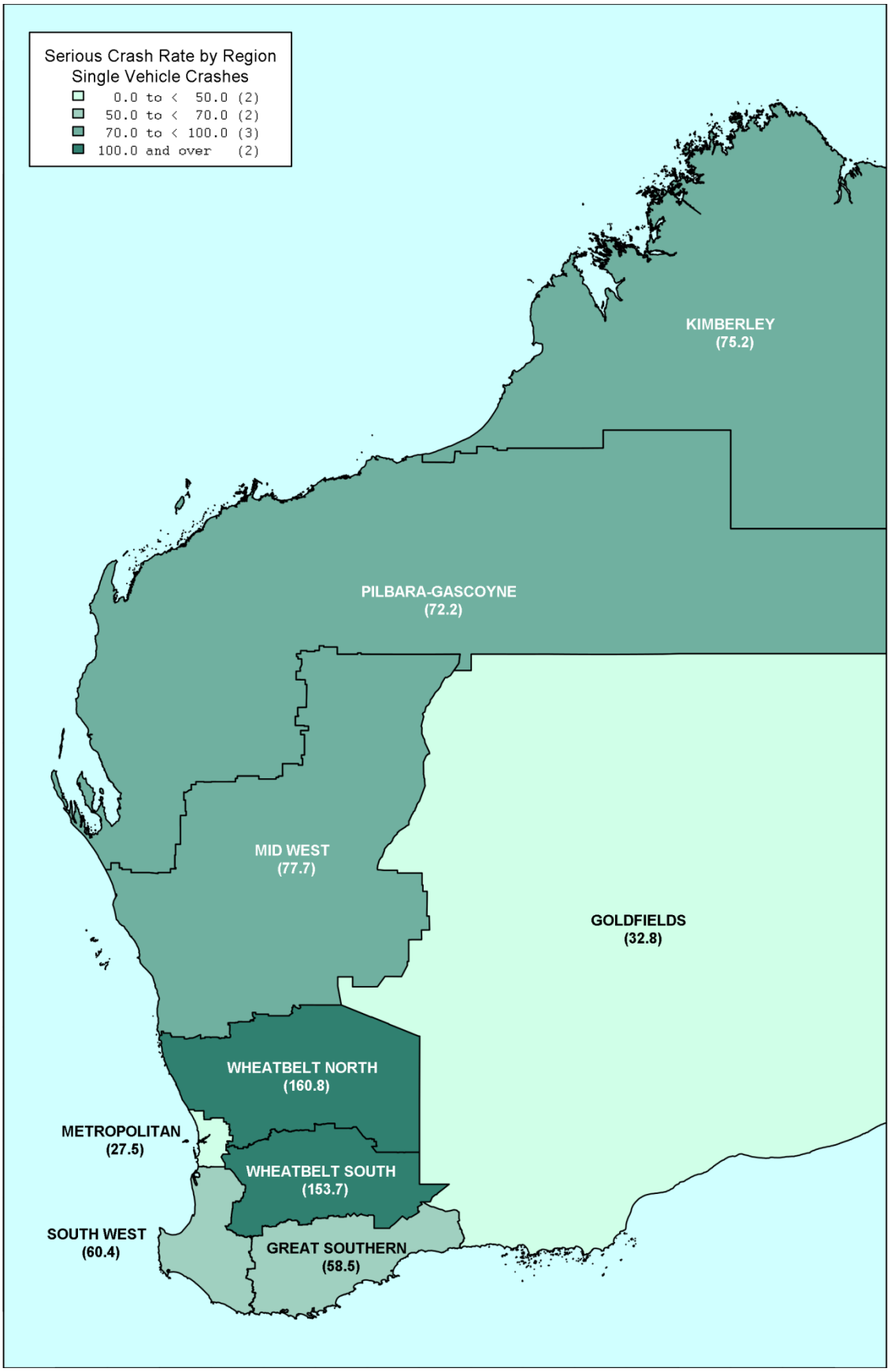
Map 3 Serious Crash Rate per 100,000 Population by Region



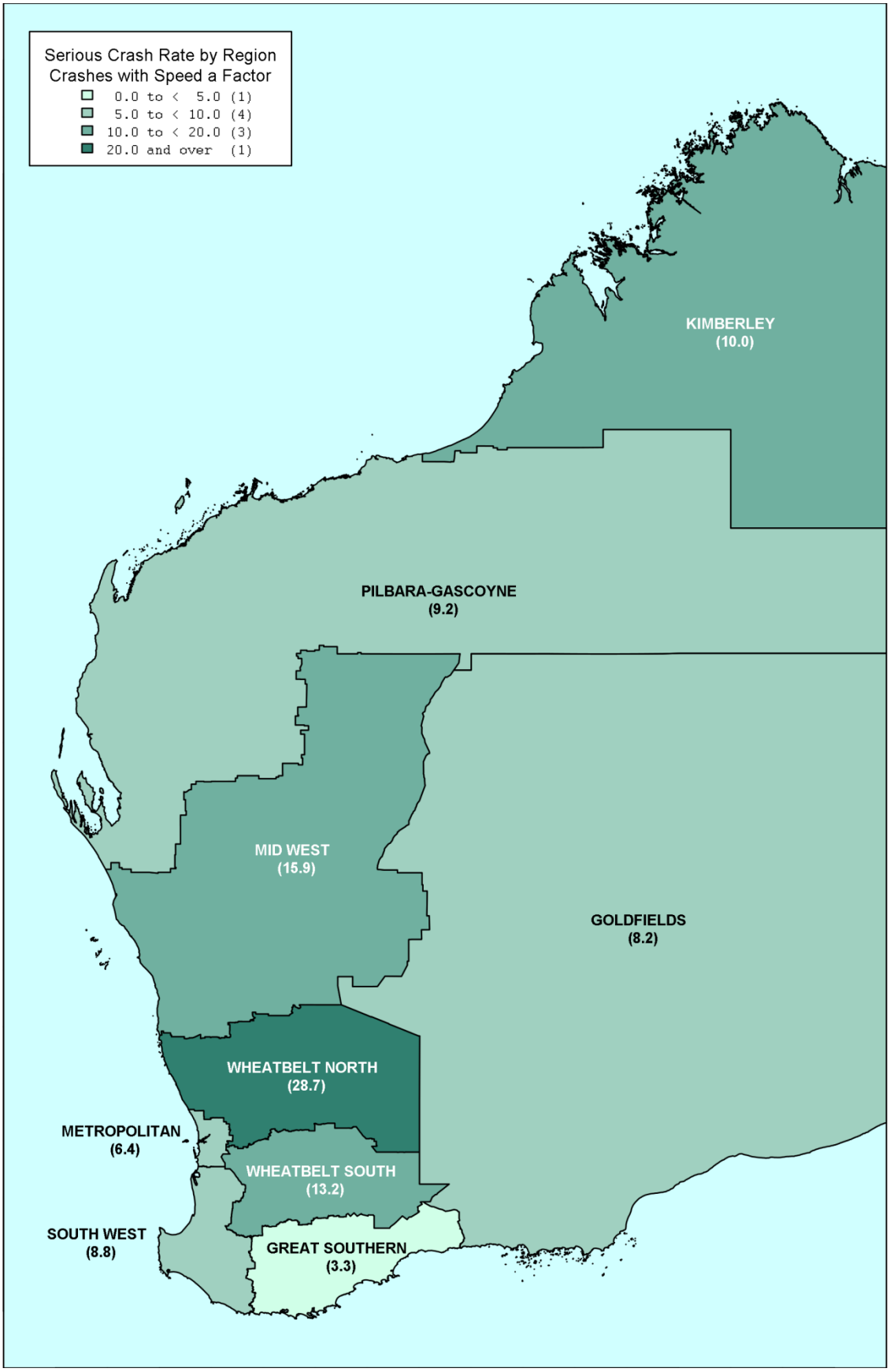
Map 4 Multi-vehicle Serious Crash Rate per 100,000 Population by Region



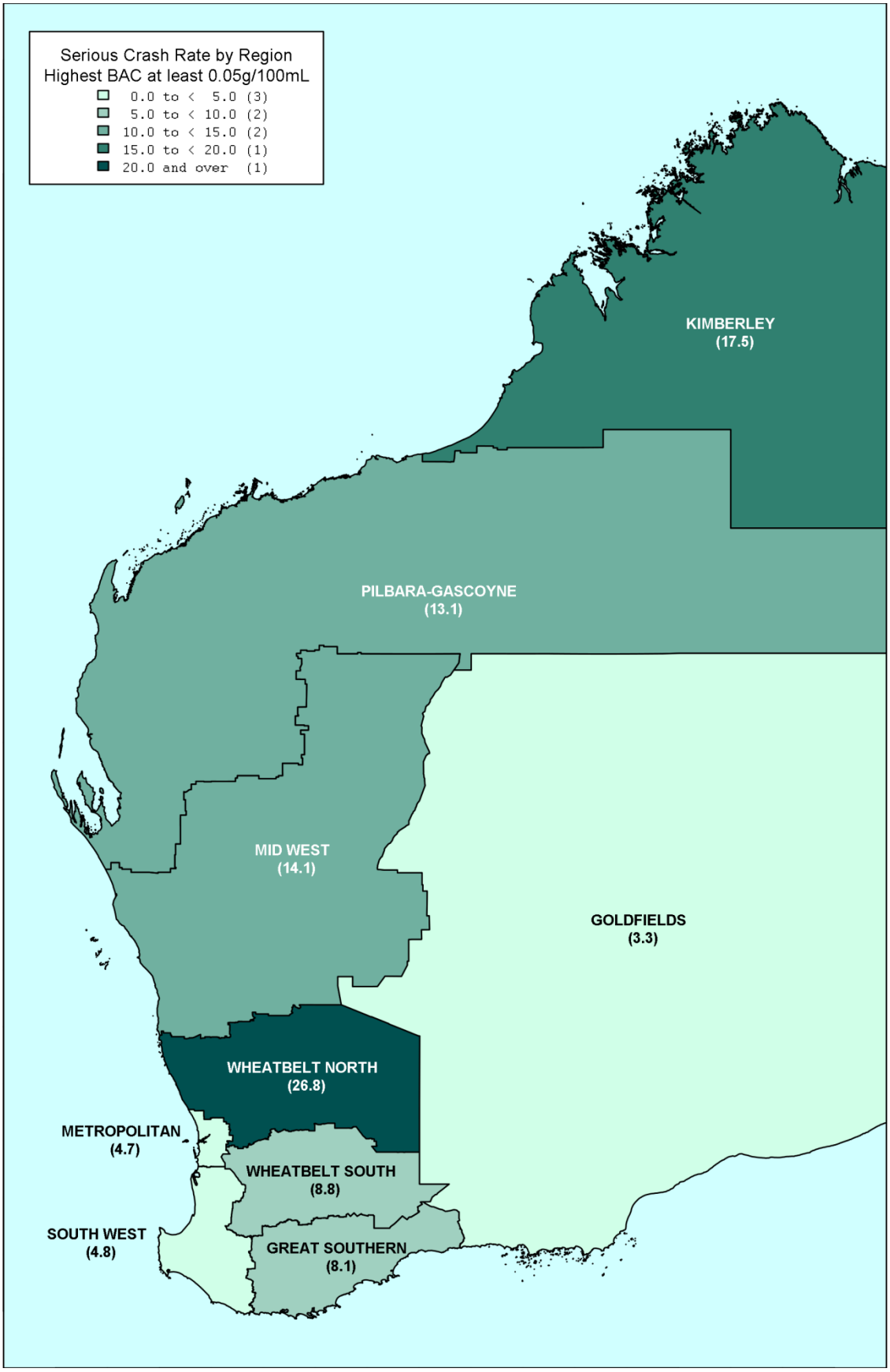
Map 5 Single-Vehicle Serious Crash Rate per 100,000 Population by Region



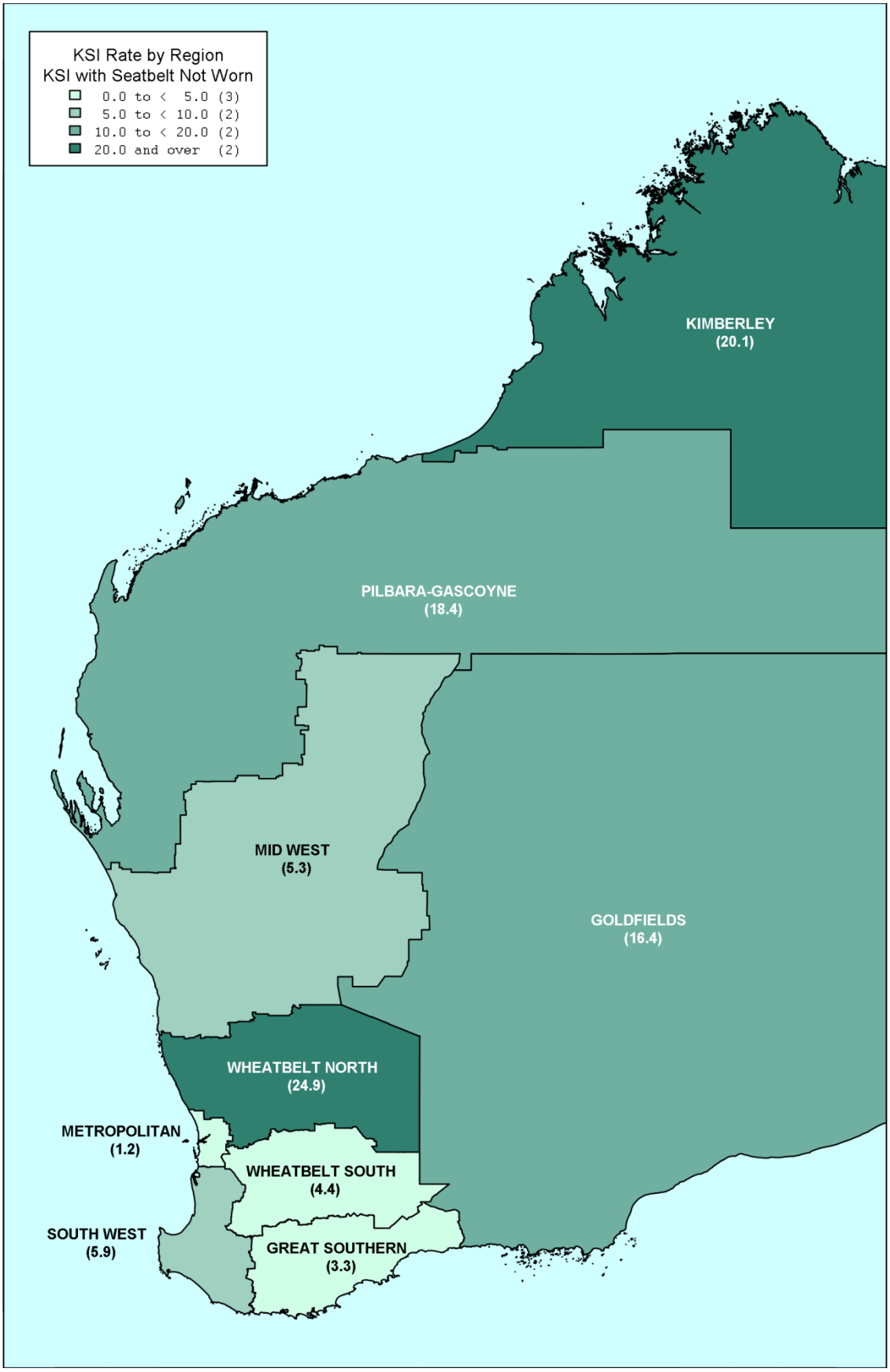
Map 6 Speed-Related Serious Crash Rate per 100,000 Population by Region, Police-Attended Crashes



Map 7 Alcohol-Related Serious Crash Rate per 100,000 Population by Region, Police-Attended Crashes



Map 8 **Seat Belt Not Worn KSI Rate per 100,000 Population by Region, Police-Attended Crashes**



Map 9 shows age and gender standardised KSI rates, which are provided to allow direct comparisons across the regions. For example, it can be seen from Table 18 and Table 21 in Section 2.4 that 17 to 24 year olds have much higher KSI rates than other age groups. Therefore, to determine whether differences in KSI rates across regions can be attributed to differences in the age and gender profiles of each region, the rates were standardised using the demographic breakdown of each region. The standardised rates show what the rates would be if all regions had the same age and gender breakdown as the State as a whole. The effect of the standardisation is to increase the KSI rate in regions that have low proportions (relative to the whole of WA) of "high risk" age and gender groups and decrease the KSI rate in regions with high proportions of "high risk" age and gender groups.

One limitation of this approach is that both the age and gender of persons killed or seriously injured are needed to calculate the standardised rates. This means that any person killed or seriously injured whose age and/or gender was not recorded cannot be included in the standardised KSI rates, leading to underestimates for each region. Overall, age and/or gender was not recorded for 11.1% of persons killed or seriously injured. The minimum percentage was in the Goldfields (8.5%) while the maximum was in the Pilbara-Gasboyne (19.3%). For this reason, Table 121, which shows age and gender standardised KSI rates, also provides the number of people killed or seriously injured in each region for whom both age and gender were recorded and the number for whom age and/or gender was not recorded.

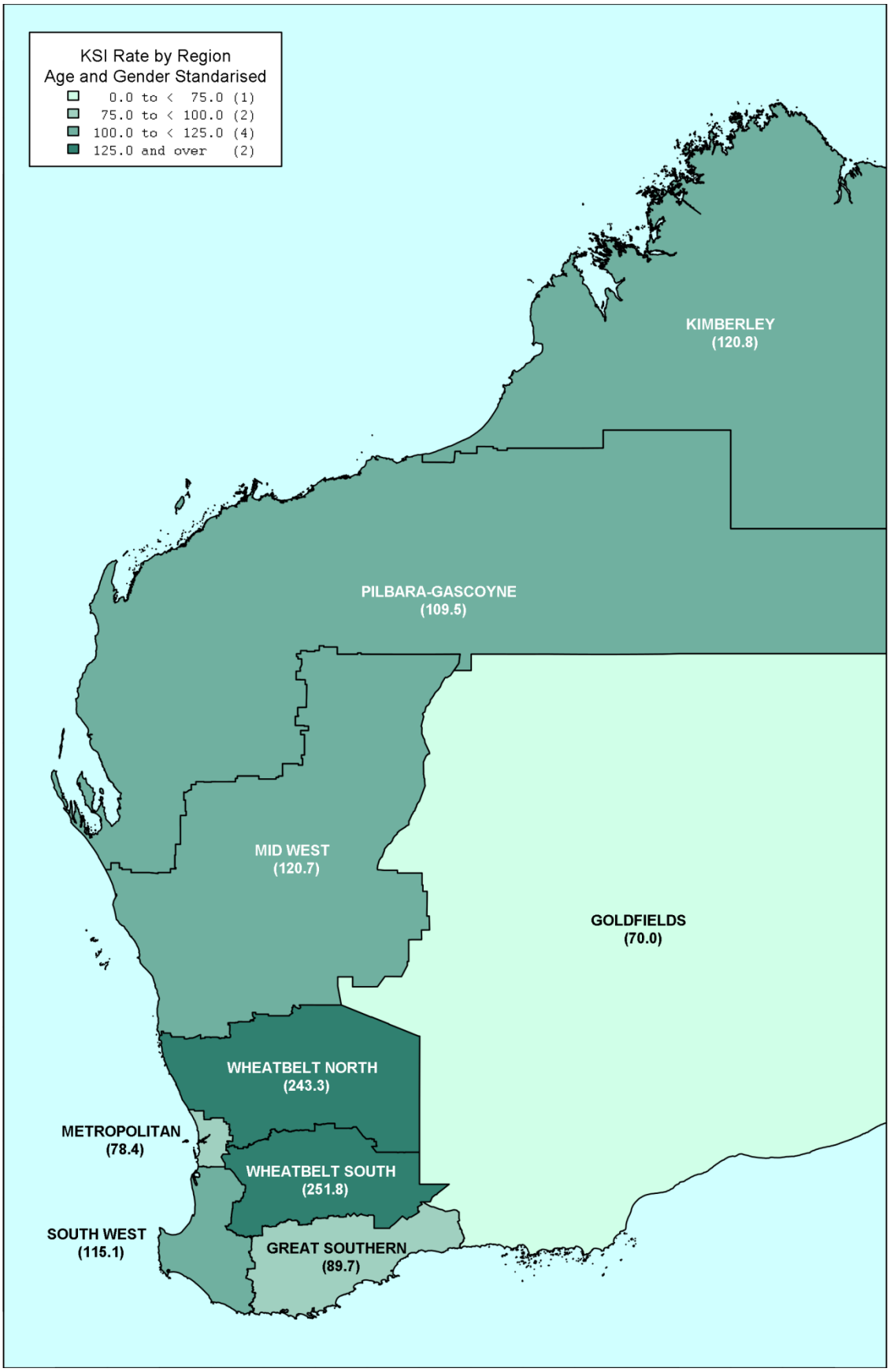
The Goldfields region had the lowest standardised KSI rate at 70.0 per 100,000 population. The Wheatbelt South and Wheatbelt North had the highest age and gender standardised KSI rates (251.8 and 243.3 per 100,000 respectively).

Table 121 Age and Gender Standarised Rates of those Killed or Seriously Injured by Region

	Persons Killed or Seriously Injured (n)			
***Towards Zero* Regions**	**Age and Gender Known**	**Age and/or Gender Unknown**	**Total Persons KSI**	**Age and Gender Standardised KSI Rate[1] (per 100,000 population)**
Metropolitan	1,483	162	1,645	78.4
Regional	479	61	540	123.1
Remote	267	55	322	116.4
Main Roads Regions				
Goldfields	43	4	47	70.0
Great Southern	52	10	62	89.7
Kimberley	47	10	57	120.8
Mid West	66	8	74	122.8
Pilbara-Gascoyne	88	21	109	109.5
South West	289	44	333	115.1
Wheatbelt North	114	11	125	243.3
Wheatbelt South	47	8	55	251.8
Total Western Australia	**2,229**	**278**	**2,507**	N/A

1. Excludes persons of unknown age and/or gender (n=278).

Map 9 Age and Gender Standardised KSI Rate per 100,000 Population by Region



Note: Excludes persons of unknown age and/or gender (n=278).

6.3 Goldfields

There were five fatal crashes in the Goldfields region during 2013 in which six people died. These numbers were lower than the previous two years. Of persons killed or seriously injured where gender was known, 71% were males. The age specific rate for persons killed or seriously injured was by far the highest for persons aged between 17 and 24 years (Table 122). Of persons killed or seriously injured in the Goldfields region, 45% were drivers, 34% were passengers and 19% were motorcyclists (Figure 20). There were no bicyclists killed or seriously injured in the Goldfields in 2013 (Figure 20).

Of police attended serious crashes in the Goldfields, 14% had speed as a factor (Table 115). The speed related serious crash rate for the Goldfields region was 8.2 per 100,000 population (Map 6). One of the five fatal crashes were speed related (Table 123). The Goldfields had the lowest percentage (5%) of serious crashes that were alcohol related (Table 116) and the lowest alcohol related serious crash rate (3.3 per 100,000 population) (Map 7) of all regions. The Goldfields had the highest percentage (29%) of motor vehicle occupants killed or seriously injured who were not wearing a seat belt of all regions (Table 117). The rate of motor vehicle occupants killed or seriously injured who were not wearing a seat belt was 16.4 per 100,000 population (Map 8). One of the four motor vehicle occupant fatalities, were not wearing a seat belt (Table 124).

Over half (51%) of serious crashes in the Goldfields region were single vehicle crashes (Table 125). The Goldfields had the highest percentage of 'Right Angle' crashes of all regions (23%) (Table 118). The region also has the highest percentage of multi-vehicle serious crashes of the non-Metropolitan region (49%) (Table 118). All of the five fatal crashes in the Goldfields were single-vehicle crashes (Table 125).

Figure 19 Fatal Crashes and Fatalities by Year - Goldfields

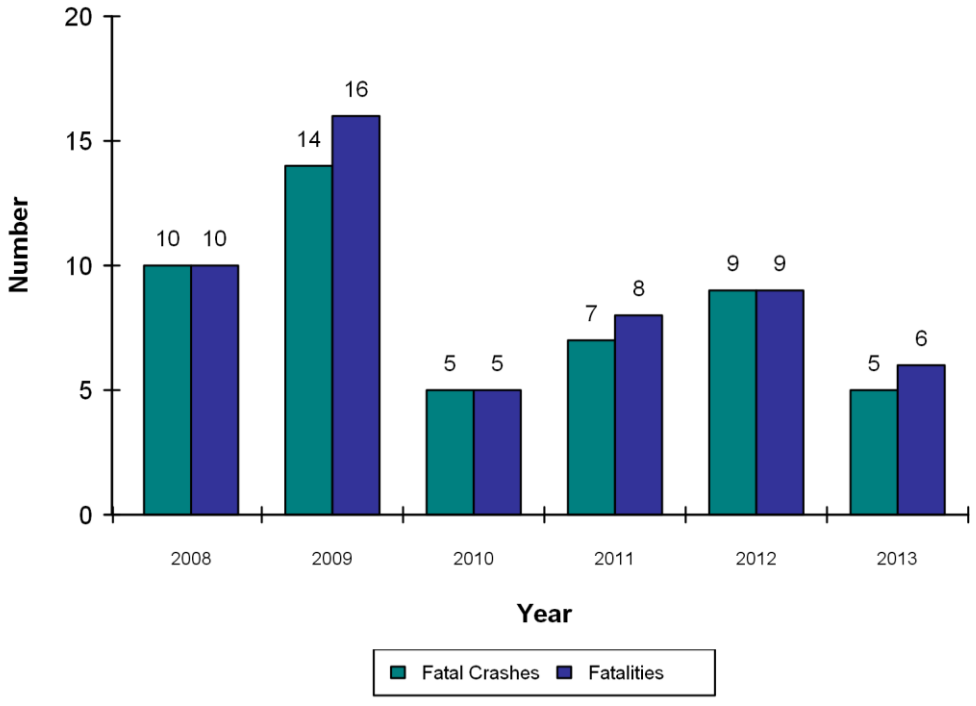


Table 122 Persons Killed or Seriously Injured by Age Group and Gender - Goldfields

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific KSI Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	1	1	**2**	4.3	23.9	13.7
17 - 24	7	3	**10**	21.3	11.6	141.7
25 - 59	19	6	**26**	55.3	52.7	81.0
60 and over	3	3	**6**	12.8	11.8	83.6
Unknown Age	2	0	**3**	6.4	N/A	N/A
Total Persons KSI	**32**	**13**	**47**	**100.0**	**100.0**	**77.2**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 20 Persons Killed or Seriously Injured by Road User Type - Goldfields

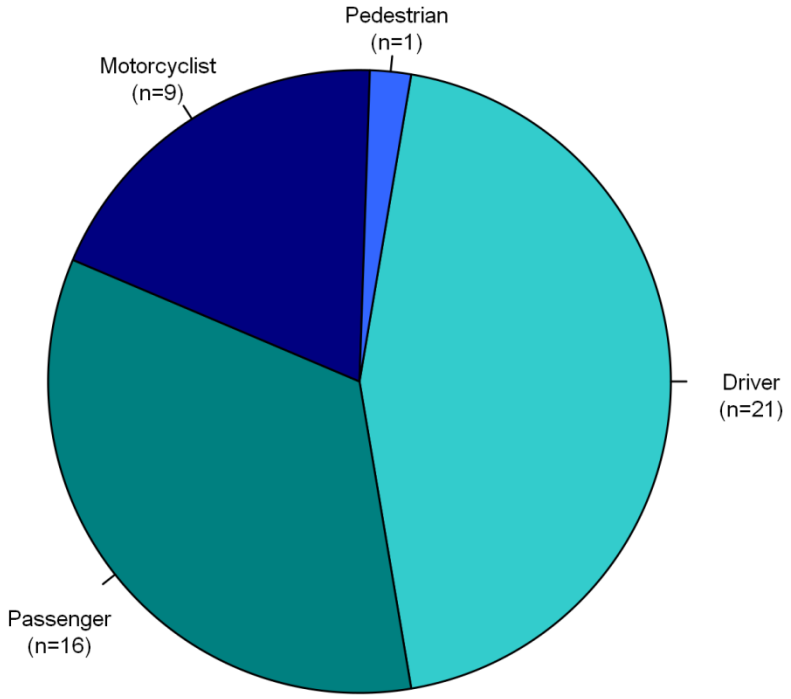


Table 123 Speed a Factor by Crash Severity, Police-Attended Crashes - Goldfields

Speed a Factor in Police-Attended Crashes	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Yes	1	4	**5**
No	1	13	**14**
Unknown	3	15	**18**
Total Police-Attended Crashes	**5**	**32**	**37**

Table 124 Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage by Injury Severity, Police-Attended Crashes - Goldfields

Seat Belt Usage	Injury Severity		
	Fatal	Serious	Total Persons KSI
	n	n	n
Worn	0	16	**16**
Not Worn	1	9	**10**
Unknown	3	6	**9**
Total Motor Vehicle Occupants	**4**	**31**	**35**

Table 125 Crash Nature by Crash Severity - Goldfields

Crash Nature	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Multi-Vehicle Crashes			
Rear End	0	2	**2**
Head On	0	3	**3**
Sideswipe Same Dir.	0	2	**2**
Right Angle	0	9	**9**
Right Turn Through	0	1	**1**
Other/Unknown Multi	0	2	**2**
Total Multi Vehicle	**0**	**19**	**19**
Single-Vehicle Crashes			
Hit Pedestrian	1	0	**1**
Hit Animal	0	1	**1**
Hit Object	3	6	**9**
Non Collision	1	8	**9**
Other/Unknown Single	0	0	**0**
Total Single Vehicle	**5**	**15**	**20**
Total Crashes	**5**	**34**	**39**

Table 126 High Priority Crash Type by Crash Severity - Goldfields

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	10	**10**
Run Off Road	4	15	**19**
Head On	0	3	**3**
Other	1	7	**8**
Total Crashes	**5**	**34**	**39**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.4 Great Southern

There were three fatal crashes in the Great Southern region during 2013, in which four people died. Both the number of crashes and the number of people killed were the lowest for the last six years. Of persons killed or seriously injured where gender was known, 64% were male. The age specific rate for persons killed or seriously injured was by far the highest for persons aged between 17 and 24 years (Table 127). Drivers constituted 68% of persons killed or seriously injured, followed by passengers (21%) and motorcyclists (6%) (Figure 22).

The Great Southern had the lowest percentage of police attended serious crashes that were speed related (5%) (Table 115) and the lowest speed related serious crash rate (3.3 per 100,000 population) (Map 6) of all the regions. In the Great Southern region, 12% of serious crashes were alcohol related (Table 116). The alcohol related serious crash rate was 8.1 per 100,000 population (Map 7). One of the three fatal crashes in the Great Southern region were alcohol related and it involved a driver/rider with very high alcohol readings of greater than 0.15 g/100mL (Table 128). Five per cent of persons killed or seriously injured in the Great Southern were not wearing a seat belt (Table 117) and the Great Southern region had the lowest KSI rate for not wearing a seat belt (3.3 per 100,000 population) of the non-Metropolitan regions (Map 8).

Over two thirds (69%) of serious crashes in the Great Southern region were single vehicle crashes (Table 129). Of the serious crashes in the Great Southern, 44% were 'Hit Object' (Table 129) and 62% were 'Run Off Road' (Table 130).

Figure 21 Fatal Crashes and Fatalities by Year - Great Southern

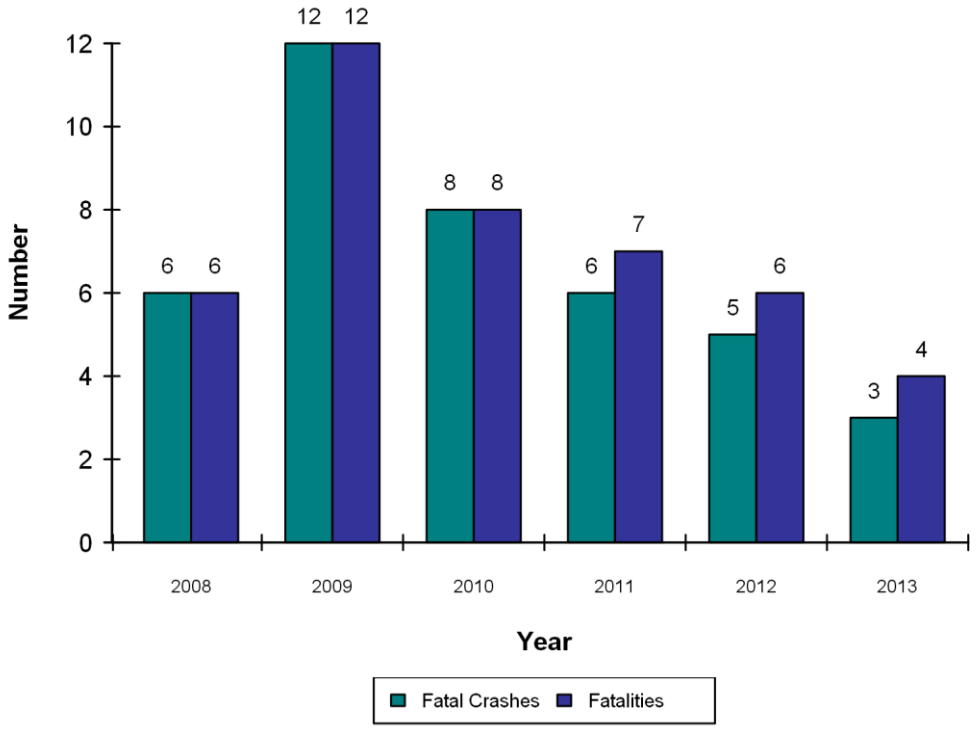


Table 127 Persons Killed or Seriously Injured by Age Group and Gender - Great Southern

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	1	0	**2**	3.2	22.9	14.2
17 - 24	8	3	**11**	17.7	8.4	213.3
25 - 59	14	11	**27**	43.5	45.1	97.4
60 and over	11	4	**16**	25.8	23.6	110.0
Unknown Age	2	2	**6**	9.7	0.0	N/A
Total Persons KSI	**36**	**20**	**62**	**100.0**	**100.0**	**100.8**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 22 Persons Killed or Seriously Injured by Road User Type - Great Southern

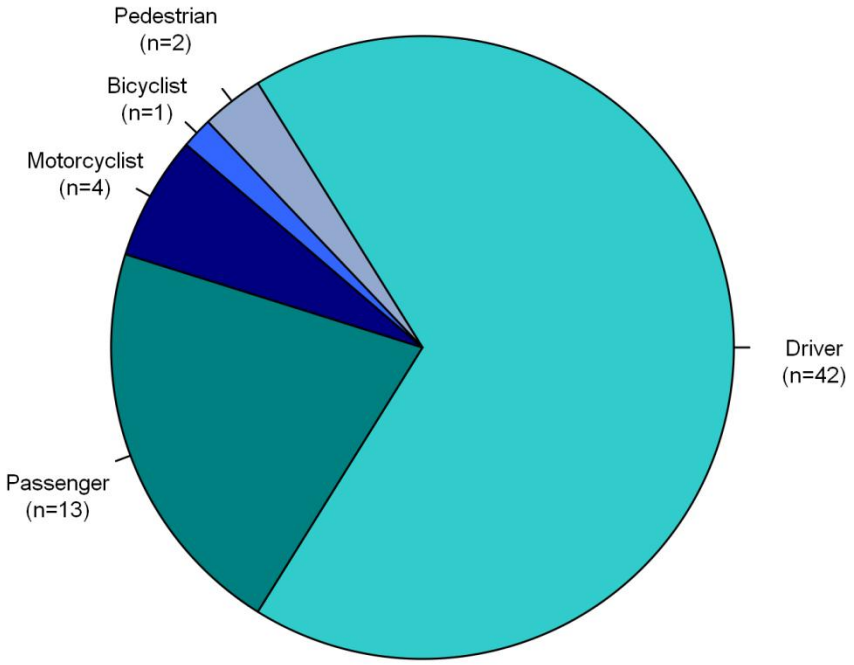


Table 128 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes - Great Southern

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Highest Driver/Rider BAC in Crash (g/100mL)	**n**	**n**	**n**
Nil	2	27	**29**
< 0.05	0	0	**0**
0.05 to < 0.08	0	1	**1**
0.08 to < 0.15	0	3	**3**
≥ 0.15	1	0	**1**
Subtotal ≥ 0.05	**1**	**4**	**5**
Unknown	0	9	**9**
Total Crashes	**3**	**40**	**43**

Table 129 Crash Nature by Crash Severity - Great Southern

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	4	**4**
Head On	0	3	**3**
Sideswipe Same Dir.	0	1	**1**
Right Angle	0	6	**6**
Right Turn Through	0	0	**0**
Other/Unknown Multi	1	1	**2**
Total Multi Vehicle	**1**	**15**	**16**
Single-Vehicle Crashes			
Hit Pedestrian	0	2	**2**
Hit Animal	0	1	**1**
Hit Object	2	21	**23**
Non Collision	0	10	**10**
Other Unknown Single	0	0	**0**
Total Single Vehicle	**2**	**34**	**36**
Total Crashes	**3**	**49**	**52**

Table 130 High Priority Crash Type by Crash Severity - Great Southern

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	11	**11**
Run Off Road	2	30	**32**
Head On	0	3	**3**
Other	1	7	**8**
Total Crashes	**3**	**49**	**52**

Note: High Priority Crash Types are not mutually exclusive and therefore some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.5 Kimberley

There were seven fatal crashes in the Kimberley region during 2013, in which seven people died. Over two thirds (70%) of the persons killed or seriously injured where gender was known were males. The age-specific rate for persons killed or seriously injured was the highest for persons aged between 17 and 24 (Table 131). Drivers accounted for 46% of persons killed or seriously injured in the Kimberley region, followed by passengers (37%) and motorcyclists (14%) (Figure 24).

Of police attended serious crashes in the Kimberley, 10% had speed as a factor (Table 115). The speed related serious crash rate for the Kimberley region was 10.0 per 100,000 population (Map 6). The Kimberley had the highest percentage (18%) of serious crashes that were alcohol related of all the regions (Table 116). The alcohol related serious crash rate for the Kimberley region was 17.5 per 100,000 population (Map 7). Two of the seven fatal crashes in the Kimberley region were alcohol related and both involved driver/riders with very high alcohol readings of greater than 0.15 g/100mL (Table 132). Eighteen per cent of persons killed or seriously injured in the Kimberley region were not wearing a seat belt (Table 117). The rate of motor vehicle occupants killed or seriously injured who were not wearing a seat belt was 20.1 per 100,000 population (Map 8). Four of the seven motor vehicle occupant fatalities, were not wearing a seat belt (Table 133).

Over two thirds (71%) of serious crashes in the Kimberley region were single vehicle crashes (Table 134). The Kimberley had the highest percentage of 'Head On' crashes (10%) and the second highest percentage of 'Non Collision' (38%) of all regions (Table 118). There were no 'Hit Pedestrian' serious crashes in Kimberley in 2013 (Table 134). Six of the seven fatal crashes in the Kimberley were single-vehicle crashes (Table 134). More than half (60%) of the serious crashes were 'Run Off Road' (Table 135) and more than a quarter (26%) were 'Hit Object' (Table 134).

Figure 23 Fatal Crashes and Fatalities by Year - Kimberley

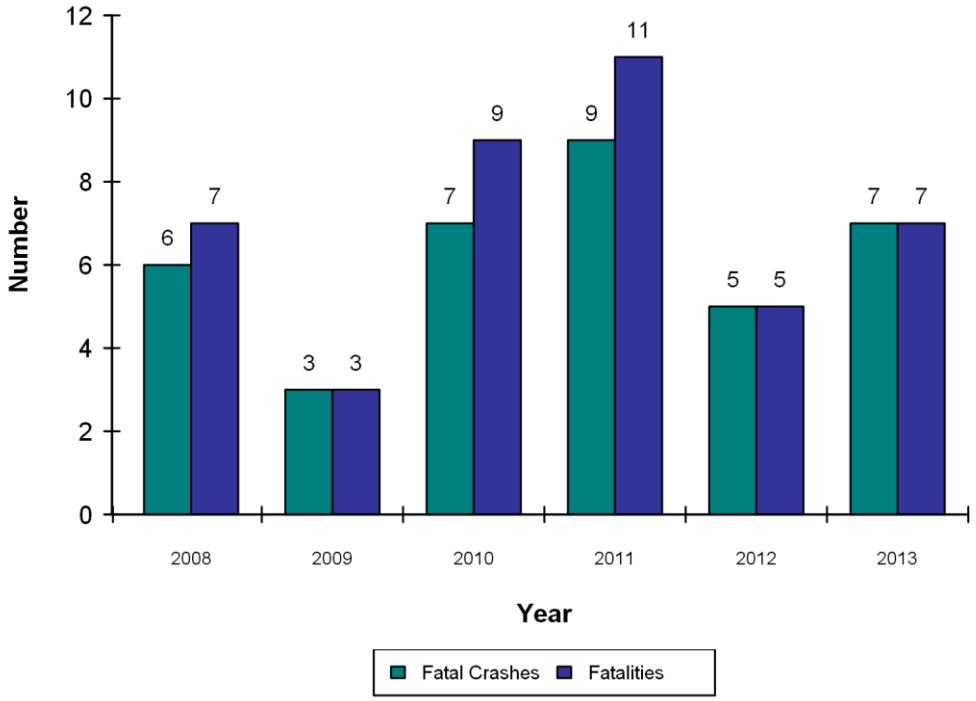


Table 131 Persons Killed or Seriously Injured By Age Group And Gender - Kimberley

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	2	1	**4**	7.0	25.3	39.6
17 - 24	12	5	**21**	36.8	11.5	458.2
25 - 59	18	5	**24**	42.1	54.6	110.2
60 and over	1	3	**5**	8.8	8.6	145.9
Unknown Age	2	1	**3**	5.3	N/A	N/A
Total Persons KSI	**35**	**15**	**57**	**100.0**	**100.0**	**142.9**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 24 Persons Killed or Seriously Injured by Road User Type – Kimberley

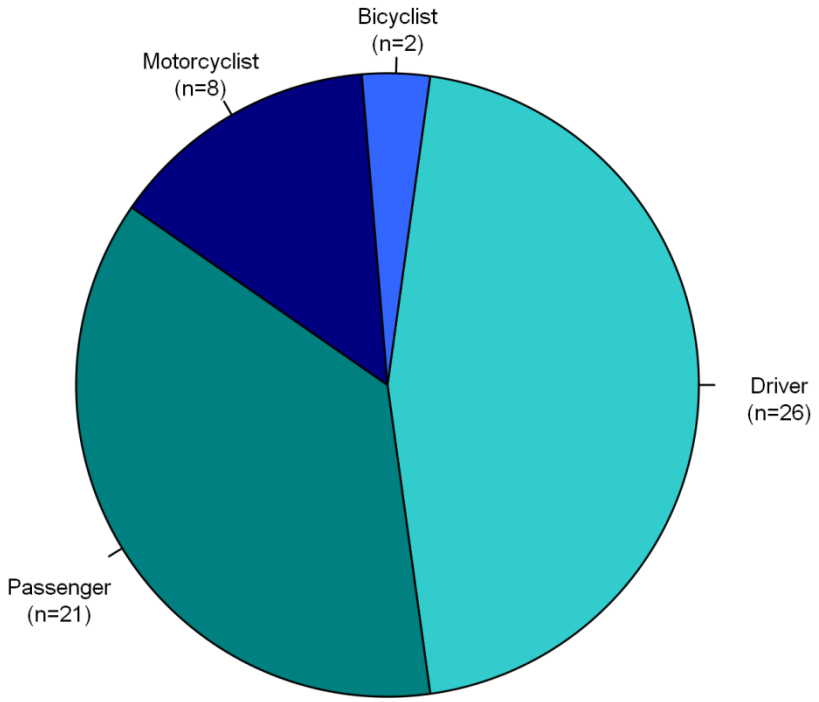


Table 132 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes - Kimberley

Highest Driver/Rider BAC in Crash (g/100mL)	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Nil	3	15	**18**
< 0.05	0	0	**0**
0.05 to < 0.08	0	0	**0**
0.08 to < 0.15	0	4	**4**
≥ 0.15	2	1	**3**
Subtotal ≥ 0.05	**2**	**5**	**7**
Unknown	2	11	**13**
Total Crashes	**7**	**31**	**38**

Table 133 Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage by Injury Severity, Police-Attended Crashes - Kimberley

	Injury Severity		
	Fatal	Serious	Total Persons KSI
Seat Belt Usage	**n**	**n**	**n**
Worn	3	29	**32**
Not Worn	4	4	**8**
Unknown	0	5	**5**
Total Motor Vehicle Occupants	**7**	**38**	**45**

Table 134 Crash Nature by Crash Severity - Kimberley

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	1	**1**
Head On	0	4	**4**
Sideswipe Same Dir.	0	0	**0**
Right Angle	1	3	**4**
Right Turn Through	0	0	**0**
Other/Unknown Multi	0	3	**3**
Total Multi Vehicle	**1**	**11**	**12**
Single-Vehicle Crashes			
Hit Pedestrian	0	0	**0**
Hit Animal	1	0	**1**
Hit Object	2	9	**11**
Non Collision	3	13	**16**
Other/Unknown Single	0	2	**2**
Total Single Vehicle	**6**	**24**	**30**
Total Crashes	**7**	**35**	**42**

Table 135 High Priority Crash Type by Crash Severity - Kimberley

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	1	8	**9**
Run Off Road	4	21	**25**
Head On	0	4	**4**
Other	2	5	**7**
Total Crashes	**7**	**35**	**42**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.6 Mid West

There were seven fatal crashes in the Mid West region during 2013, in which eight people were killed. These numbers were equal to the previous year. Of persons killed or seriously injured where gender was known, almost three quarter (73%) were males. Persons aged 17 to 24 years had the highest age-specific rate for persons killed or seriously injured (Table 136). Drivers accounted for 54% of persons killed or seriously injured, followed by passengers (24%) (Figure 26). There were no bicyclists killed or seriously injured in the Mid West in 2013 (Figure 26).

The Mid West had the highest percentage of police attended serious crashes that were speed related (17%) of the regions (Table 115). The speed related serious crash rate for the Mid West region was 15.9 per 100,000 population (Map 6). Three of the seven fatal crashes were speed related (Table 137). In the Mid West region, 15% of serious crashes were alcohol related (Table 116). The alcohol related serious crash rate for the Mid West region was 14.1 per 100,000 population (Map 7). One of the seven fatal crashes in the Mid West region were alcohol related and it involved a driver/rider with very high alcohol readings of greater than 0.15 g/100mL (Table 138). Six per cent of persons killed or seriously injured in the Mid West region were not wearing a seat belt (Table 117). The rate of motor vehicle occupants killed or seriously injured who were not wearing a seat belt was 5.3 per 100,000 population (Map 8). Almost three quarters (73%) of serious crashes in the Mid West region were single vehicle crashes (Table 139). The Mid West had the highest percentage of 'Hit Pedestrian' crashes of all regions (12%) (Table 118). Of the serious crashes in the Mid West, half (50%) were 'Run Off Road' (Table 140), almost a third (32%) were 'Non Collision' and 25% were 'Hit Object' (Table 139).

Figure 25 Fatal Crashes and Fatalities by Year - Mid West

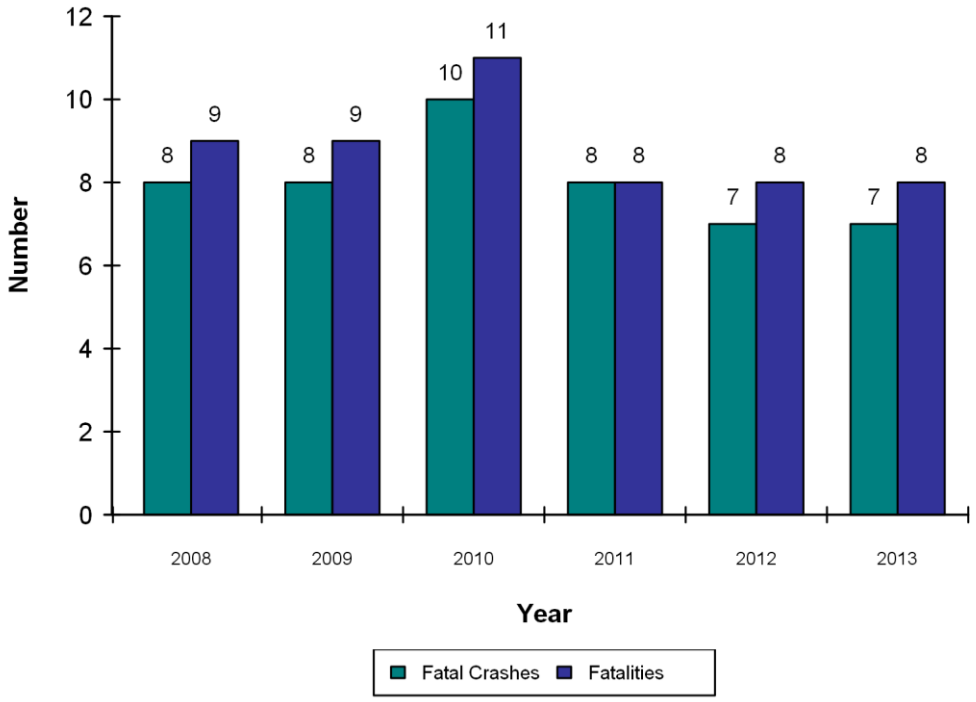


Table 136 Persons Killed or Seriously Injured by Age Group and Gender - Mid West

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	2	3	**8**	10.8	23.7	59.5
17 - 24	14	3	**19**	25.7	9.7	347.2
25 - 59	23	8	**31**	41.9	47.6	114.9
60 and over	9	4	**14**	18.9	19.0	130.5
Unknown Age	1	0	**2**	2.7	N/A	N/A
Total Persons KSI	**49**	**18**	**74**	**100.0**	**100.0**	**130.7**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 26 Persons Killed or Seriously Injured by Road User Type - Mid West

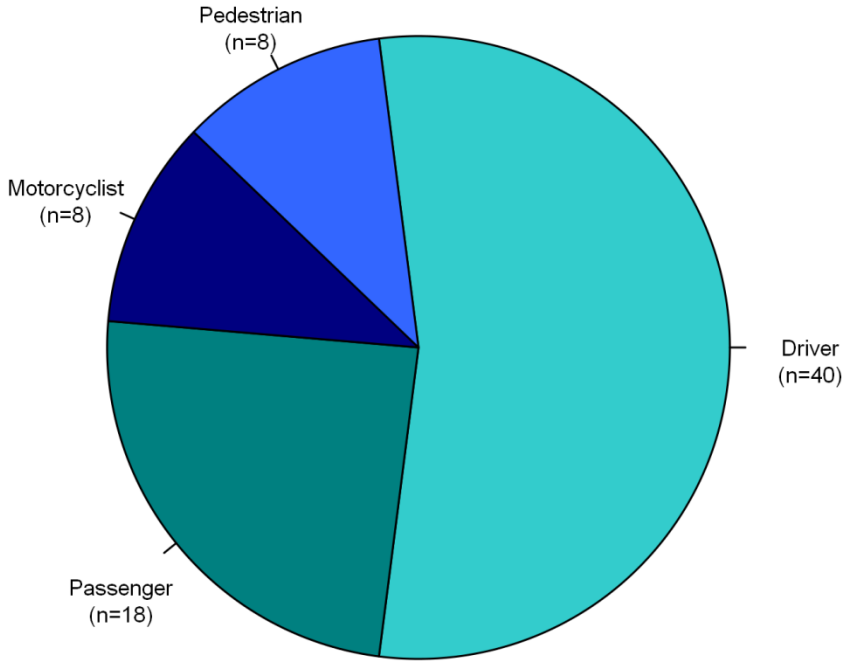


Table 137 Speed a Factor by Crash Severity, Police-Attended Crashes - Mid West

Speed a Factor in Police-Attended Crashes	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Yes	3	6	**9**
No	1	18	**19**
Unknown	3	23	**26**
Total Police-Attended Crashes	**7**	**47**	**54**

Table 138 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes - Mid West

Highest Driver/Rider BAC in Crash (g/100mL)	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Nil	3	25	**28**
< 0.05	2	1	**3**
0.05 to < 0.08	0	3	**3**
0.08 to < 0.15	0	2	**2**
≥ 0.15	1	2	**3**
Subtotal ≥ 0.05	**1**	**7**	**8**
Unknown	1	13	**14**
Total Crashes	**7**	**46**	**53**

1. Excludes crashes that did not involve a driver/rider (n=1).

Table 139 Crash Nature by Crash Severity - Mid West

Crash Nature	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Multi-Vehicle Crashes			
Rear End	0	3	**3**
Head On	2	0	**2**
Sideswipe Same Dir.	0	0	**0**
Right Angle	0	6	**6**
Right Turn Through	0	2	**2**
Other/Unknown Multi	0	3	**3**
Total Multi Vehicle	**2**	**14**	**16**
Single-Vehicle Crashes			
Hit Pedestrian	1	6	**7**
Hit Animal	0	1	**1**
Hit Object	2	13	**15**
Non Collision	2	17	**19**
Other/Unknown Single	0	2	**2**
Total Single Vehicle	**5**	**39**	**44**
Total Crashes	**7**	**53**	**60**

Table 140 High Priority Crash Type by Crash Severity - Mid West

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	1	11	**12**
Run Off Road	4	26	**30**
Head On	2	0	**2**
Other	1	17	**18**
Total Crashes	**7**	**53**	**60**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.7 Pilbara-Gascoyne

There were 10 fatal crashes in the Pilbara-Gascoyne region during 2013, in which 10 people were killed. Of persons killed or seriously injured with known gender, 70% were males. The age-specific rate for persons killed or seriously injured was by far the highest for persons aged between 17 and 24 years (Table 141). Fifty per cent of persons killed or seriously injured in the Pilbara-Gascoyne region were drivers, 39% were passengers and 8% were motorcyclists (Figure 28).

Of police attended serious crashes in the Pilbara-Gascoyne, 11% had speed as a factor (Table 115). The speed related serious crash rate for the Pilbara-Gascoyne region was 9.2 per 100,000 population (Map 6). In the Pilbara-Gascoyne, 15% of serious crashes were alcohol related (Table 116). The alcohol related serious crash rate for the Pilbara-Gascoyne region was 13.1 per 100,000 population (Map 7). Four of the ten fatal crashes in the Pilbara-Gascoyne region were alcohol related (Table 142). Sixteeen per cent of persons killed or seriously injured in the Pilbara-Gascoyne region were not wearing a seat belt (Table 117). The rate of motor vehicle occupants killed or seriously injured who were not wearing a seat belt was 18.4 per 100,000 population (Map 8). Four of the ten motor vehicle occupant fatalities, were not wearing a seat belt (Table 143).

More than three quarter (76%) of serious crashes in the Pilbara-Gascoyne region were single vehicle crashes (Table 144). The Pilbara-Gascoyne region had the highest percentage of 'Non Collision' (42%) and the highest percentage of 'Hit Animal' (3%) of all regions (Table 118). Of the serious crashes in the Pilbara-Gascoyne, more than two thirds (68%) were 'Run Off Road' (Table 145) and 28% were 'Hit Object' (Table 144).

Figure 27 Fatal Crashes and Fatalities by Year - Pilbara-Gascoyne

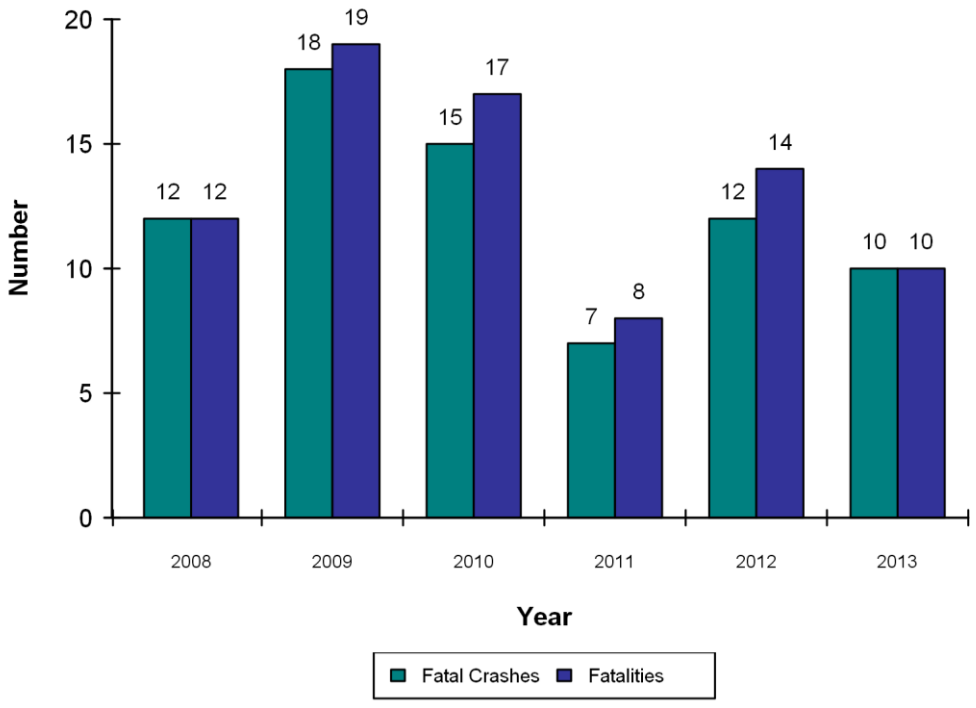


Table 141 Persons Killed or Seriously Injured by Age Group and Gender - Pilbara-Gascoyne

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	2	1	**5**	4.6	19.7	33.3
17 - 24	19	7	**31**	28.4	9.9	412.5
25 - 59	38	16	**62**	56.9	63.5	128.1
60 and over	3	2	**5**	4.6	6.9	95.0
Unknown Age	3	2	**6**	5.5	N/A	N/A
Total Persons KSI	**65**	**28**	**109**	**100.0**	**100.0**	**143.1**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 28 Persons Killed or Seriously Injured by Road User Type - Pilbara-Gascoyne

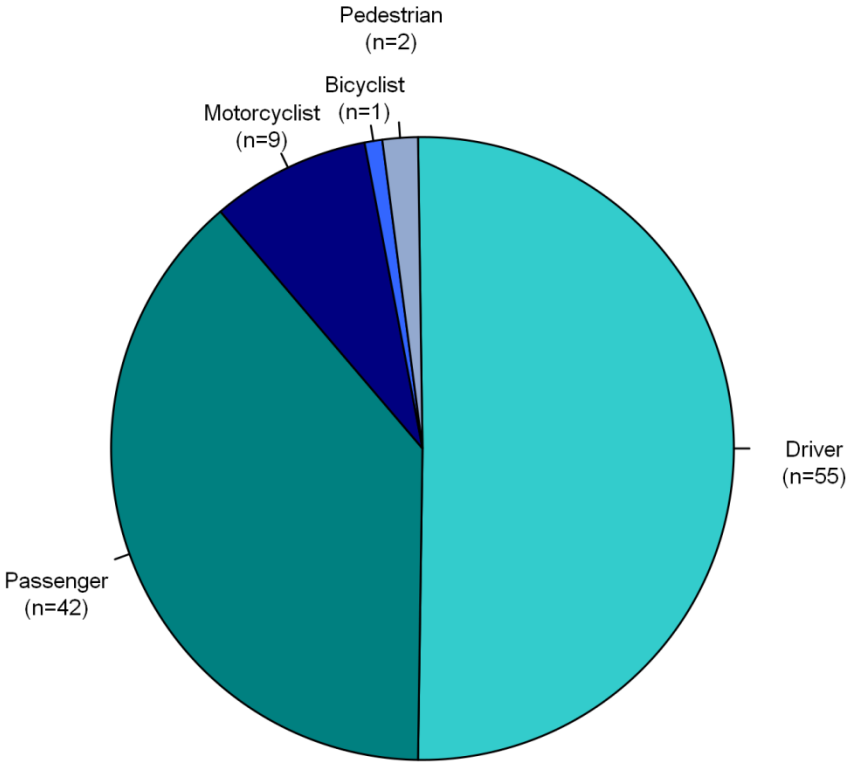


Table 142 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes - Pilbara-Gascoyne

	Crash Severity		
Highest Driver/Rider BAC in Crash (g/100mL)	**Fatal**	**Hospitalisation**	**Total Serious**
	n	**n**	**n**
Nil	3	29	**32**
< 0.05	1	1	**2**
0.05 to < 0.08	1	1	**2**
0.08 to < 0.15	3	3	**6**
≥ 0.15	0	2	**2**
Subtotal ≥ 0.05	**4**	**6**	**10**
Unknown	2	20	**22**
Total Crashes[1]	**10**	**56**	**66**

1. Excludes crashes that did not involve a driver/rider (n=1).

Table 143 Motor Vehicle Occupants Killed or Seriously Injured by Seat Belt Usage by Seat Belt Usage by Injury Severity, Police-Attended Crashes - Pilbara-Gascoyne

	Injury Severity		
	Fatal	**Serious**	**Total Persons KSI**
Seat Belt Usage	**n**	**n**	**n**
Worn	4	59	**63**
Not Worn	4	10	**14**
Unknown	2	11	**13**
Total Motor Vehicle Occupants	**10**	**80**	**90**

Table 144 Crash Nature by Crash Severity – Pilbara-Gascoyne

	Crash Severity		
	Fatal	**Hospitalisation**	**Total Serious**
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	3	**3**
Head On	3	2	**5**
Sideswipe Same Dir.	0	1	**1**
Right Angle	0	3	**3**
Right Turn Through	0	1	**1**
Other/Unknown Multi	0	4	**4**
Total Multi Vehicle	**3**	**14**	**17**
Single-Vehicle Crashes			
Hit Pedestrian	0	2	**2**
Hit Animal	0	2	**2**
Hit Object	3	17	**20**
Non Collision	4	26	**30**
Other/Unknown Single	0	1	**1**
Total Single Vehicle	**7**	**48**	**55**
Total Crashes	**10**	**62**	**72**

Table 145 High Priority Crash Type by Crash Severity - Pilbara-Gascoyne

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	1	8	**9**
Run Off Road	7	42	**49**
Head On	3	2	**5**
Other	0	10	**10**
Total Crashes	**10**	**62**	**72**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.8 South West

There were 27 fatal crashes in the South West region during 2013, in which 28 people died. These numbers were higher than the previous two years. Of persons killed or seriously injured where gender was known, 63% were males. The age-specific rate for persons killed or seriously injured was the highest for persons aged between 17 and 24 years (Table 146). Drivers accounted for more than half (52%) of persons killed or seriously injured, while 23% were passengers and 15% were motorcyclists (Figure 30).

Of police attended serious crashes in the South West, 10% had speed as a factor (Table 115). The speed related serious crash rate for the South West region was 8.8 per 100,000 population (Map 6). The South West had the third lowest percentage (6%) of serious crashes that were alcohol related of all regions (Table 116) and the second lowest alcohol related serious crash rate (4.8 per 100,000 population) of the non-Metropolitan regions (Map 7). Seven per cent of persons killed or seriously injured in the South West region were not wearing a seat belt (Table 117). The rate of motor vehicle occupants killed or seriously injured who were not wearing a seat belt was 5.9 per 100,000 population (Map 8).

Almost two thirds (63%) of serious crashes in the South West region were single vehicle crashes (Table 147). Twenty-three of the 27 fatal crashes in the South West were single-vehicle crashes (Table 147). The South West region had the highest multi-vehicle serious crash rate of all the non-Metropolitan regions (35.9 per 100,000 population) (Map 4). The region also had the highest percentage of 'Intersection' crashes of the non-Metropolitan regions (30%) and the second highest percentage of 'Hit Pedestrian' of the non-Metropolitan region (9%) (Table 118). The South West region has the second highest percentage of multi-vehicle serious crashes of the non Metropolitan region (37%) (Table 118). Of the serious crashes in the South West, more than a third (37%) were single vehicle 'Hit Object' (Table 147).

Figure 29 Fatal Crashes and Fatalities by Year - South West

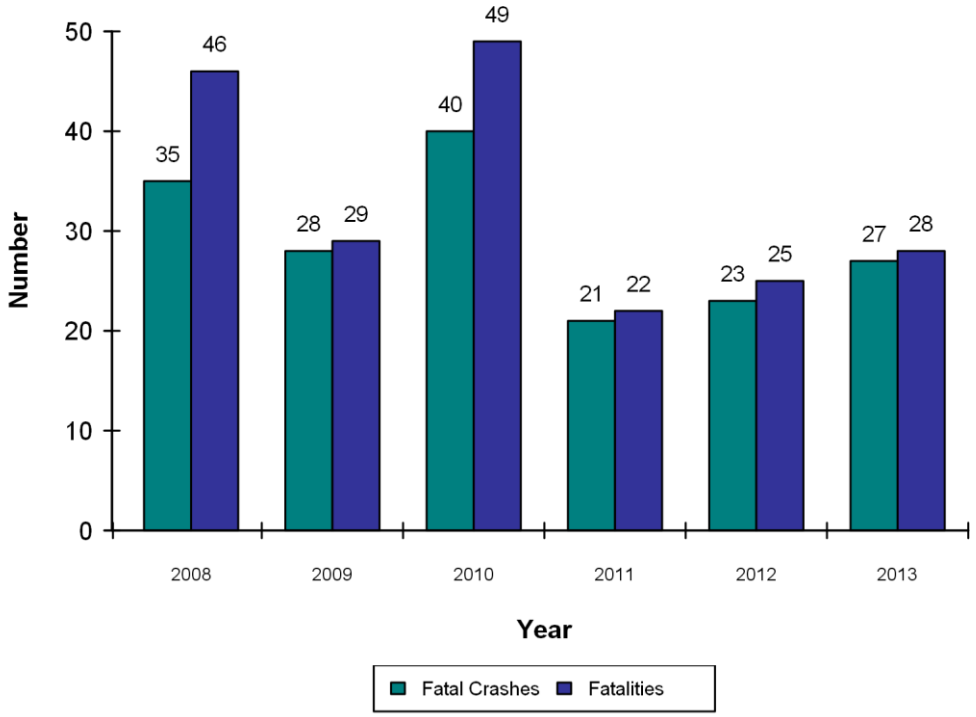


Table 146 Persons Killed or Seriously Injured by Age Group by Gender - South West

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	13	10	**30**	9.0	22.8	48.2
17 - 24	37	21	**62**	18.6	9.1	248.9
25 - 59	102	55	**170**	51.1	45.6	136.7
60 and over	31	20	**55**	16.5	22.5	89.4
Unknown Age	7	5	**16**	4.8	N/A	N/A
Total Persons KSI	**190**	**111**	**333**	**100.0**	**100.0**	**122.0**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 30 Persons Killed or Seriously Injured by Road User Type - South West

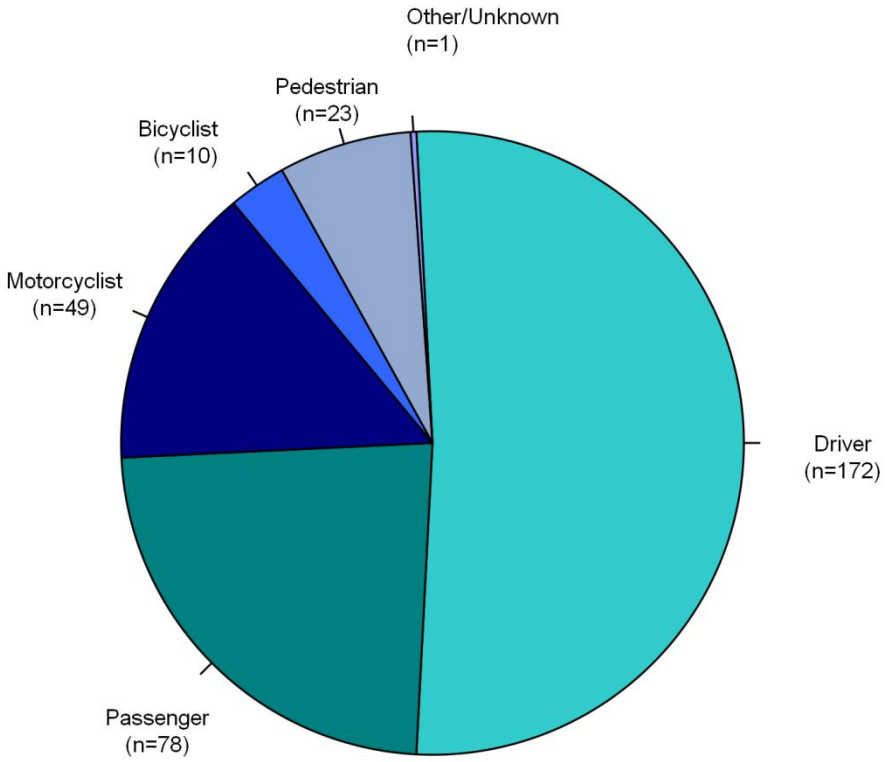


Table 147 Crash Nature by Crash Severity - South West

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	20	**20**
Head On	0	17	**17**
Sideswipe Same Dir.	0	5	**5**
Right Angle	4	34	**38**
Right Turn Through	0	11	**11**
Other/Unknown Multi	0	7	**7**
Total Multi Vehicle	**4**	**94**	**98**
Single-Vehicle Crashes			
Hit Pedestrian	4	19	**23**
Hit Animal	0	5	**5**
Hit Object	11	87	**98**
Non Collision	5	27	**32**
Other/Unknown Single	3	4	**7**
Total Single Vehicle	**23**	**142**	**165**
Total Crashes	**27**	**236**	**263**

Table 148 High Priority Crash Type by Crash Severity - South West

	Crash Severity		
	Fatal	**Hospitalisation**	**Total Serious**
Crash Type	**n**	**n**	**n**
Intersection	5	75	**80**
Run Off Road	16	108	**124**
Head On	0	17	**17**
Other	7	47	**54**
Total Crashes	**27**	**236**	**263**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.9 Wheatbelt North

There were 13 fatal crashes in the Wheatbelt North region during 2013, in which 15 people were killed. These numbers were lower than the previous four years. Of persons killed or seriously injured where gender was known, 72% were males. The age specific rate for persons killed or seriously injured was the highest for persons aged between 17 and 24 years (Table 149). Drivers accounted for more than half (61%) of persons killed or seriously injured, followed by passengers (26%) and motorcyclists (11%) (Figure 32). There were no pedestrians killed or seriously injured in the Wheatbelt North in 2013. The Wheatbelt North had the highest overall serious crash rate (195.3 per 100,000 population) and the second highest age and gender standardised KSI rate (243.3 per 100,000 population) (Map 3 and Map 9).

The Wheatbelt North had the second highest percentage of police attended serious crashes that were speed related (16%) (Table 115) and the highest speed related serious crash rate (28.7 per 100,000 population) of all regions (Map 6). Three of the 13 fatal crashes were speed related (Table 150). In the Wheatbelt North, 15% of serious crashes were alcohol related (Table 116). The Wheatbelt North had the highest alcohol related serious crash rate (26.8 per 100,000 population) of all regions (Map 7). Six of the 13 fatal crashes in the Wheatbelt North region were alcohol related and all involved driver/riders with very high alcohol readings of greater than 0.15 g/100mL (Table 151). Thirteen per cent of persons killed or seriously injured in the Wheatbelt North region were not wearing a seat belt (Table 117). The Wheatbelt North region had the highest KSI rate for not wearing a seat belt (24.9 per 100,000 population) of all regions (Map 8). Six of the 14 motor vehicle occupant fatalities, were not wearing a seat belt (Table 152).

More than four fifths (82%) of serious crashes in the Wheatbelt North region were single vehicle crashes (Table 153), this is the second highest of all regions. The Wheatbelt North region had the second highest multi-vehicle serious crash rate of all the non-Metropolitan regions (34.5 per 100,000 population) (Map 4). The Wheatbelt North region had the highest single-vehicle serious crash rate (160.8 per 100,000 population) of all regions (Map 5). The Wheatbelt North had the highest percentage of ‘Hit Object’ crashes of all regions (57%) (Table 118) and the second highest ‘Run Off Road of all regions (78%) (Table 118). There were no ‘Hit Pedestrian’ serious crashes in the Wheatbelt North in 2013 (Table 153).

Figure 31 Fatal Crashes and Fatalities by Year - Wheatbelt North

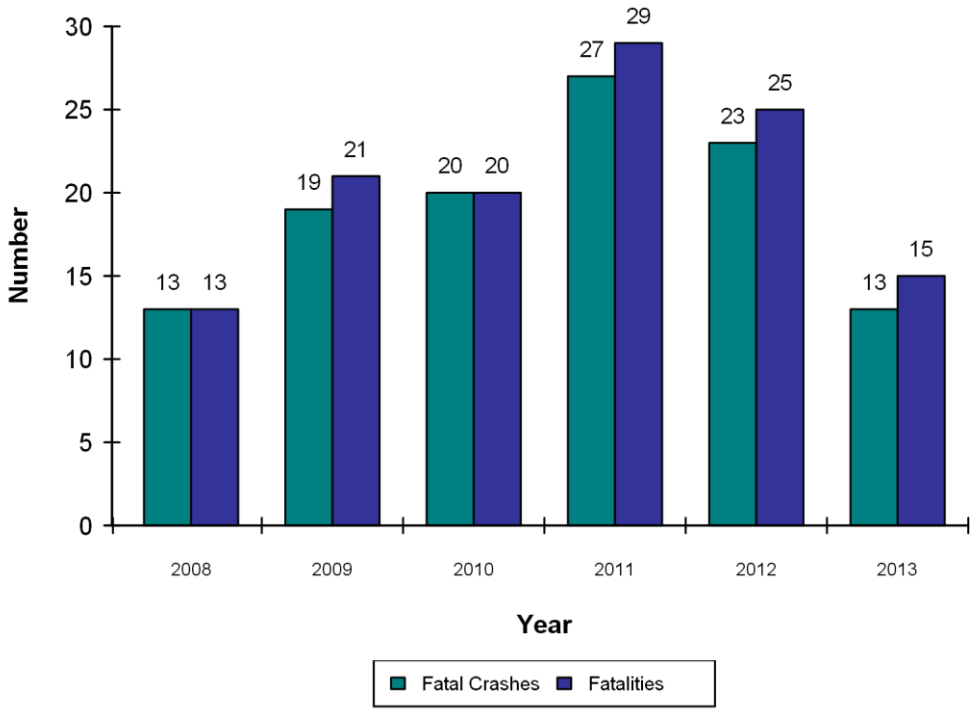


Table 149 Persons Killed or Seriously Injured by Age Group and Gender - Wheatbelt North

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	2	3	**6**	4.8	22.3	51.6
17 - 24	9	6	**19**	15.2	8.3	438.0
25 - 59	59	16	**77**	61.6	46.0	320.4
60 and over	13	6	**19**	15.2	23.4	155.3
Unknown Age	1	2	**4**	3.2	N/A	N/A
Total Persons KSI	**84**	**33**	**125**	**100.0**	**100.0**	**239.3**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 32 Persons Killed or Seriously Injured by Road User Type - Wheatbelt North

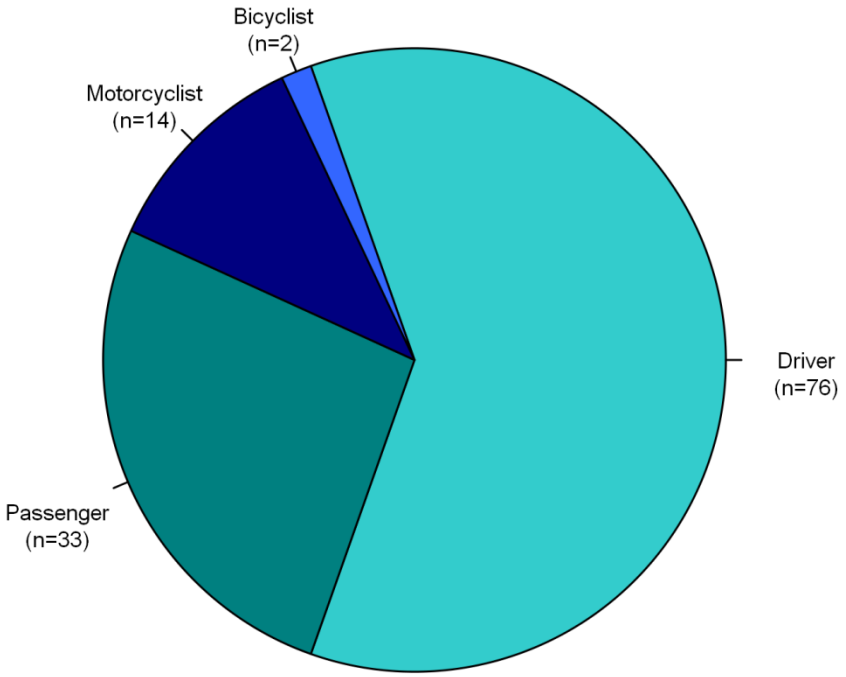


Table 150 Speed a Factor by Crash Severity, Police-Attended Crashes - Wheatbelt North

Speed a Factor in Police-Attended Crashes	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Yes	3	12	**15**
No	5	34	**39**
Unknown	5	32	**37**
Total Police-Attended Crashes	**13**	**78**	**91**

Table 151 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes - Wheatbelt North

	Crash Severity		
Highest Driver/Rider BAC in Crash (g/100mL)	**Fatal**	**Hospitalisation**	**Total Serious**
	n	**n**	**n**
Nil	7	41	**48**
< 0.05	0	1	**1**
0.05 to < 0.08	0	2	**2**
0.08 to < 0.15	0	4	**4**
≥ 0.15	6	2	**8**
Subtotal ≥ 0.05	**6**	**8**	**14**
Unknown	0	28	**28**
Total Crashes[1]	**13**	**78**	**91**

Table 152 Seat Belt Usage by Injury Severity, Police-Attended Crashes - Wheatbelt North

	Injury Severity		
	Fatal	**Serious**	**Total Persons KSI**
Seat Belt Usage	**n**	**n**	**n**
Worn	4	63	**67**
Not Worn	6	7	**13**
Unknown	4	16	**20**
Total Motor Vehicle Occupants	**14**	**86**	**100**

Table 153 Crash Nature by Crash Severity - Wheatbelt North

	Crash Severity		
	Fatal	**Hospitalisation**	**Total Serious**
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	4	**4**
Head On	2	2	**4**
Sideswipe Same Dir.	1	1	**2**
Right Angle	0	2	**2**
Right Turn Through	0	1	**1**
Other/Unknown Multi	0	5	**5**
Total Multi Vehicle	**3**	**15**	**18**
Single-Vehicle Crashes			
Hit Pedestrian	0	0	**0**
Hit Animal	0	1	**1**
Hit Object	8	50	**58**
Non Collision	2	19	**21**
Other/Unknown Single	0	4	**4**
Total Single Vehicle	**10**	**74**	**84**
Total Crashes	**13**	**89**	**102**

Table 154 High Priority Crash Type by Crash Severity - Wheatbelt North

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	10	**10**
Run Off Road	9	71	**80**
Head On	2	2	**4**
Other	2	10	**12**
Total Crashes	**13**	**89**	**102**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

6.10 Wheatbelt South

There were three fatal crashes in the Wheatbelt South region during 2013, in which three people died. Both the number of crashes and the number of people killed were the lowest they have been in the last six years. Of persons killed or seriously injured where gender was known, 53% were males. Despite persons aged 17 to 24 only making up 7% of the Wheatbelt South population, 24% of persons killed or seriously injured fell in this age bracket (Table 155). More than half (53%) of persons killed or seriously injured in the Wheatbelt South were drivers, 42% were passengers and 5% were motorcyclists (Figure 34). There were no bicyclists or pedestrians killed or seriously injured in the Wheatbelt South in 2013. The Wheatbelt South had the second highest overall serious crash rate (184.4 per 100,000 population) and the highest age and gender standardised KSI rate (251.8 per 100,000 population) (Map 3 and Map 9).

Of police attended serious crashes in the Wheatbelt South, 9% had speed as a factor (Table 115). The speed related serious crash rate for the Wheatbelt South region was 13.2 per 100,000 population (Map 6). One of the three fatal crashes was speed related (Table 156). The Wheatbelt South had the second lowest percentage (6%) of serious crashes that were alcohol related of all regions (Table 116). The alcohol related serious crash rate for the Wheatbelt South region was 8.8 per 100,000 population (Map 7). The Wheatbelt South had the lowest percentage (2%) of motor vehicle occupants killed or seriously injured who were not wearing a seat belt of all regions (Table 117) and the second lowest KSI rate for not wearing a seat belt (4.4 per 100,000 population) of the non-Metropolitan regions (Map 8).

Over four fifths (83%) of serious crashes in the Wheatbelt South region were single vehicle crashes (Table 157), this is the highest percentage of all regions. The Wheatbelt South region had the second highest single vehicle serious crash rate (153.7 per 100,000 population) (Map 5). The Wheatbelt South had the highest percentage of ‘Run Off Road’ crashes (79%) and the second highest percentage of ‘Hit Object’ crashes of all regions (50%) (Table 118). There were no ‘Head On’, ‘Hit Pedestrian’ or ‘Hit Animal’ serious crashes in the Wheatbelt South in 2013 (Table 157).

Figure 33 Fatal Crashes and Fatalities by Year - Wheatbelt South

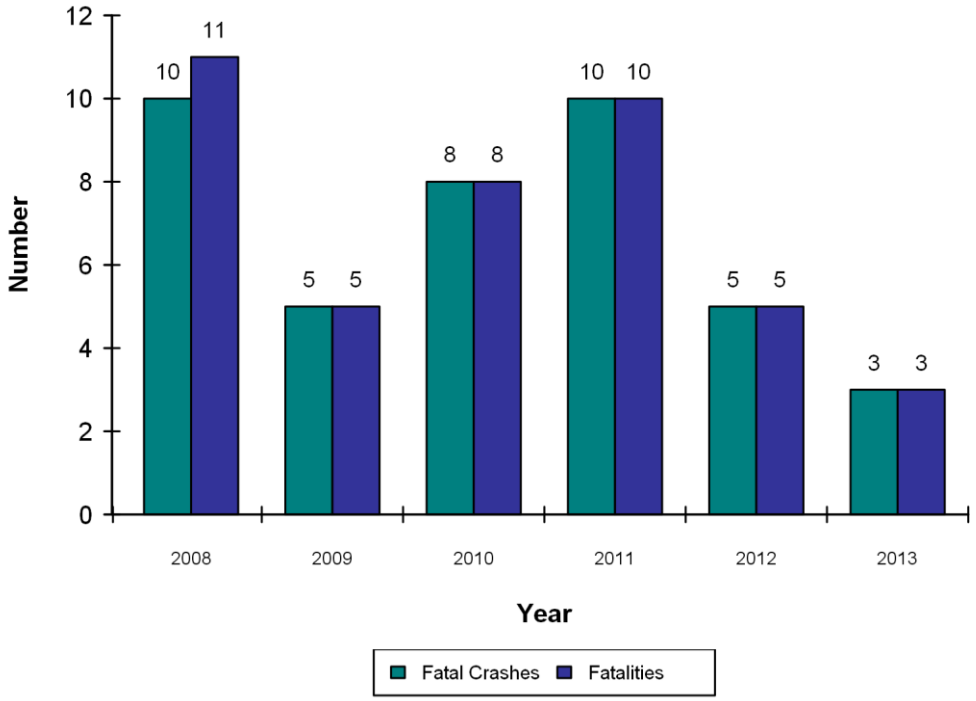


Table 155 Persons Killed or Seriously Injured by Age Group and Gender - Wheatbelt South

	Gender			Percentage of Persons Killed or Seriously Injured	Percentage of Population	Age-Specific Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 16	2	1	**4**	7.3	22.6	77.9
17 - 24	5	7	**13**	23.6	7.2	791.2
25 - 59	15	11	**32**	58.2	45.2	310.5
60 and over	3	3	**6**	10.9	25.0	105.4
Unknown Age	0	0	**0**	0.0	N/A	N/A
Total Persons KSI	**25**	**22**	**55**	**100.0**	**100.0**	**241.5**

Source: Population data from Australian Bureau of Statistics, Customised report, 2014.
1. Includes persons of unknown gender.
2. Age-specific KSI rates per 100,000 population.

Figure 34 Persons Killed or Seriously Injured by Road User Type - Wheatbelt South

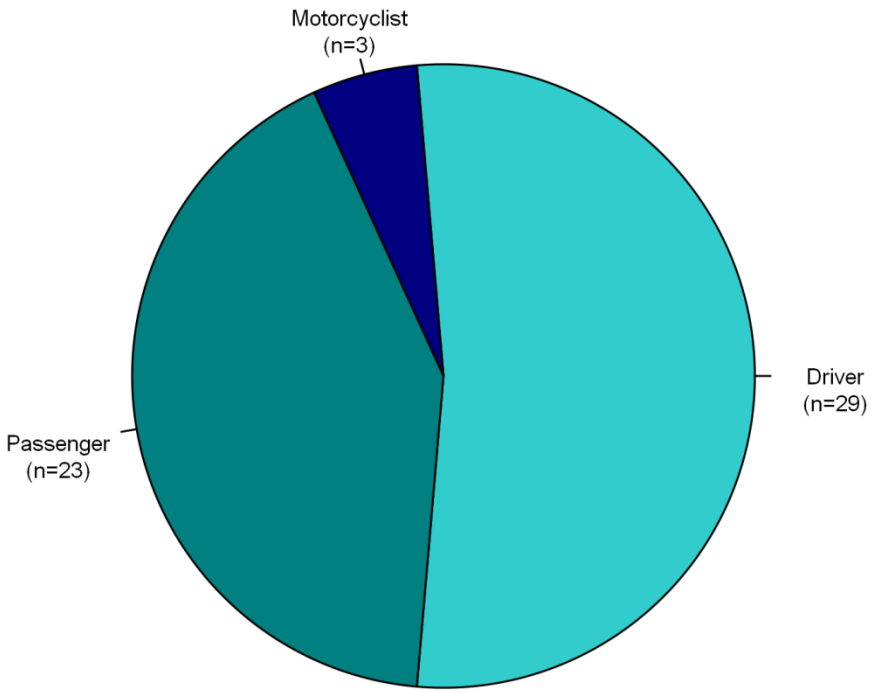


Table 156 Speed a Factor by Crash Severity, Police-Attended Crashes - Wheatbelt South

	Crash Severity		
Speed a Factor in Police-Attended Crashes	**Fatal**	**Hospitalisation**	**Total Serious**
	n	**n**	**n**
Yes	1	2	**3**
No	0	8	**8**
Unknown	2	22	**24**
Total Police-Attended Crashes	**3**	**32**	**35**

Table 157 Crash Nature by Crash Severity - Wheatbelt South

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	2	**2**
Head On	0	0	**0**
Sideswipe Same Dir.	0	0	**0**
Right Angle	1	2	**3**
Right Turn Through	0	0	**0**
Other/Unknown Multi	0	2	**2**
Total Multi Vehicle	**1**	**6**	**7**
Single-Vehicle Crashes			
Hit Pedestrian	0	0	**0**
Hit Animal	0	0	**0**
Hit Object	2	19	**21**
Non Collision	0	12	**12**
Other/Unknown Single	0	2	**2**
Total Single Vehicle	**2**	**33**	**35**
Total Crashes	**3**	**39**	**42**

Table 158 High Priority Crash Type by Crash Severity - Wheatbelt South

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	3	**3**
Run Off Road	2	31	**33**
Head On	0	0	**0**
Other	1	7	**8**
Total Crashes	**3**	**39**	**42**

Note: High Priority Crash Types are not mutually exclusive and, therefore, some crashes may be counted more than once and may sum to greater than the total number of crashes.

7. HOSPITAL INPATIENT DATA

This section presents information on road traffic casualties who were admitted to public and private hospitals in Western Australia during 2013. The data was extracted on 29 May 2014 by the WA Hospital Morbidity Data Collections, Data Integrity, Performance Activity & Quality Division of the Western Australian Department of Health. Hospital inpatient data is captured using the Hospital Morbidity Data System. This data offers an alternative data source to the police-reported data, and it should be noted that some definitions may vary.

The hospital inpatient data presented refers to the number of persons admitted to hospital and not the number of hospital admissions. Multiple admissions by patients often occur for the same injury event, resulting in a need to identify and exclude re-admissions in order to minimise over-counting. Those identified as new injury events are accepted as new admissions and thus, included. If more than 12 months have elapsed since the patient's previous relevant admission, any subsequent hospital admissions are considered to be a new injury event and thus included.

The hospital inpatient data includes only those records where the external cause of injury code indicates that the injuries are the result of a traffic crash (i.e. where the ICD-10-AM external cause of injury code is in the range V00.0 to V89.9 and is identified as a traffic crash). A traffic crash is defined by the National Centre for Classification in Health (NCCH) for ICD-10-AM as "any vehicle crash occurring on a public highway; where a public highway is specified as a traffic way or street which includes the entire width between property lines of land open to the public as a matter of right or custom for purposes of moving persons or property from one place to another".

Previously, persons injured boarding or alighting a vehicle were included in the hospital inpatient data regardless of where the crash occurred. For 2013, such injuries were only included if the place of occurance was a street or highway. This is more closely aligned with the definitition of a road crash as in earlier reports injuries occurring in places such as driveways would have been included in hospital reported data.

The road user types referred to in the police-reported section of this report are defined differently to the road user groups identified by ICD-10-AM and, therefore, are not directly comparable. Hospital inpatient data may include the mode of transport but not whether the person injured was the driver or passenger. This is normally due to insufficient information being provided when the patient is admitted to hospital. In particular, the hospital inpatient data did not record for a relatively large number of motor vehicle occupants whether they were drivers or passengers. For police-reported data, nearly all road users who were identified as motor vehicle occupants were also further identified as either the driver or passenger.

The hospital inpatient data also differs from police-reported data, in that road users who die at the scene of a crash or en-route to hospital are not admitted to hospital and, therefore, are not included in this section of the report. Hence, the number of fatalities reported by hospitals is lower than the true number of people killed in road crashes each year. Additionally, only those casualties requiring admission to hospital are included in inpatient data. Patients presenting to Accident and Emergency departments, but not admitted to hospital, are not included in hospital inpatient data.

For some road user groups (motorcyclists, bicyclists and pedestrians), there are considerably more hospital admissions recorded than the corresponding number of police-reported hospitalisations. One explanation for this may be that these road user groups tend to under-report their crashes to police, but may still require treatment in hospital for their injuries. It is not known why this under-reporting to police exists, but it has been suggested that persons involved in these crashes may not be aware that they are required to report the crash to police, may not be able to report their crash, or may have chosen not to report the crash to police. In addition, some casualties may have occurred off road, but been classified as on road due to incorrect or insufficient information being provided when the patient was admitted.

Table 159 Hospital Inpatients by Injury Severity by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal[1]	29	30	22	32	34	28	**-17.6**
Serious	3,794	3,906	3,975	4,181	4,286	4,281	**-0.1**
Total Hospital Inpatients	**3,823**	**3,936**	**3,997**	**4,213**	**4,320**	**4,309**	**-0.3**

1. The number of fatalities excludes persons killed in road crashes who died before reaching a hospital.

Table 160 Hospital Inpatients by Road User by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Road User Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Motor Vehicle - Driver	1,069	1,056	1,135	1,337	1,292	1,228	**-5.0**
Motor Vehicle - Passenger	644	682	604	622	671	614	**-8.5**
Motor Vehicle - Occupant-Unknown	305	295	255	253	259	257	**-0.8**
Motor Cyclist	855	885	942	946	982	1,025	**4.4**
Pedal Cyclist	491	589	591	586	657	744	**13.2**
Pedestrian	278	317	333	337	326	324	**-0.6**
Other/Unknown	181	112	137	132	133	117	**-12.0**
Total Hospital Inpatients	**3,823**	**3,936**	**3,997**	**4,213**	**4,320**	**4,309**	**-0.3**

Table 161 Hospital Inpatients by Age Group and Gender

	Gender					
	Male		Female		Total	
Age	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
0 - 11	138	4.9	70	4.8	208	**4.8**
12 - 16	147	5.2	56	3.8	203	**4.7**
17 - 20	314	11.1	135	9.2	449	**10.4**
21 - 24	318	11.2	152	10.3	470	**10.9**
25 - 29	350	12.3	171	11.6	521	**12.1**
30 - 39	504	17.8	225	15.3	729	**16.9**
40 - 49	409	14.4	183	12.4	592	**13.7**
50 - 59	310	10.9	174	11.8	484	**11.2**
60 and over	348	12.3	305	20.7	653	**15.2**
Total Hospital Inpatients	**2,838**	**100.0**	**1,471**	**100.0**	**4,309**	**100.0**

Table 162 Hospital Inpatients by Road User Group by Gender

	Gender					
	Male		Female		Total	
Road User Group	n	Col %	n	Col %	n	Col %
Motor Vehicle Driver	687	24.2	541	36.8	**1,228**	**28.5**
Motor Vehicle Passenger	285	10.0	329	22.4	**614**	**14.2**
Motor Vehicle Occupant Unknown	122	4.3	135	9.2	**257**	**6.0**
Motorcyclist	897	31.6	128	8.7	**1,025**	**23.8**
Bicyclist	581	20.5	163	11.1	**744**	**17.3**
Pedestrian	198	7.0	126	8.6	**324**	**7.5**
Other/Unknown	68	2.4	49	3.3	**117**	**2.7**
Total Hospital Inpatients	**2,838**	**100.0**	**1,471**	**100.0**	**4,309**	**100.0**

Table 163 Hospital Inpatients by Road User Group by Age Group

	Road User Group															
	Motor Vehicle Driver		Motor Vehicle Passenger		Motor Vehicle Occupant Unk		Motorcyclist		Bicyclist		Pedestrian		Other/ Unknown		Total	
Age	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
0 – 16[1]	7	0.6	94	15.3	16	6.2	90	8.8	144	19.4	53	16.4	7	6.0	**411**	**9.5**
17 - 20	145	11.8	90	14.7	22	8.6	111	10.8	41	5.5	33	10.2	7	6.0	**449**	**10.4**
21 - 24	147	12.0	90	14.7	23	8.9	140	13.7	33	4.4	24	7.4	13	11.1	**470**	**10.9**
25 - 29	154	12.5	77	12.5	28	10.9	146	14.2	64	8.6	38	11.7	14	12.0	**521**	**12.1**
30 - 39	236	19.2	80	13.0	39	15.2	206	20.1	104	14.0	47	14.5	17	14.5	**729**	**16.9**
40 - 49	156	12.7	50	8.1	31	12.1	170	16.6	137	18.4	30	9.3	18	15.4	**592**	**13.7**
50 - 59	130	10.6	45	7.3	29	11.3	112	10.9	121	16.3	34	10.5	13	11.1	**484**	**11.2**
60 and over	253	20.6	88	14.3	69	26.8	50	4.9	100	13.4	65	20.1	28	23.9	**653**	**15.2**
Total Hospital Inpatients	**1,228**	**100.0**	**614**	**100.0**	**257**	**100.0**	**1,025**	**100.0**	**744**	**100.0**	**324**	**100.0**	**117**	**100.0**	**4,309**	**100.0**

[1] The 0 – 11 and 12 – 16 year old age groups have been combined in this table due to confidentiality reasons.

Table 164 Hospital Inpatients by Indigenous Status by Year

	Year						
	2008	2009	2010	2011	2012	2013	2013 Change from 2012
Indigenous Status	n	n	n	n	n	n	%
Non-indigenous	3,549	3,628	3,725	3,936	4,022	4,043	**0.5**
Indigenous	274	308	272	277	298	266	**-10.7**
Total Hospital Inpatients	**3,823**	**3,936**	**3,997**	**4,213**	**4,320**	**4,309**	**-0.3**

Table 165 Hospital Inpatients by Indigenous Status by Gender

	Indigenous Status					
	Non-Indigenous		Indigenous		Total	
Gender	n	Col %	n	Col %	n	Col %
Male	2,660	65.8	178	66.9	2,838	65.9
Female	1,383	34.2	88	33.1	1,471	34.1
Total Hospital Inpatients	**4,043**	**100.0**	**266**	**100.0**	**4,309**	**100.0**

Figure 35 Hospital Inpatients by Indigenous Status by Age Group

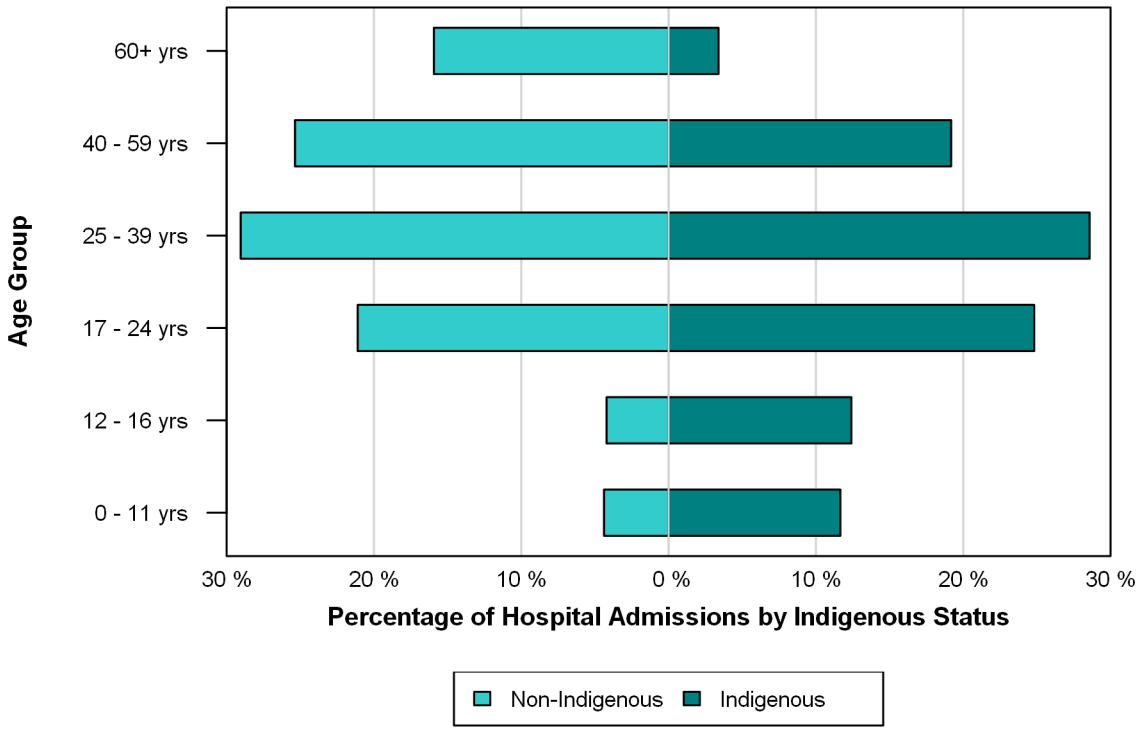


Table 166 Hospital Inpatients by Indigenous Status by Age Group

	Indigenous Status					
	Non-Indigenous		Indigenous		Total	
Age Group	n	Col %	n	Col %	n	Col %
0 - 11	177	4.4	31	11.7	208	4.8
12 - 16	170	4.2	33	12.4	203	4.7
17 - 20	410	10.1	39	14.7	449	10.4
21 - 24	443	11.0	27	10.2	470	10.9
25 - 29	488	12.1	33	12.4	521	12.1
30 - 39	686	17.0	43	16.2	729	16.9
40 - 49	559	13.8	33	12.4	592	13.7
50 - 59	466	11.5	18	6.8	484	11.2
60 and over	644	15.9	9	3.4	653	15.2
Total Hospital Inpatients	**4,043**	**100.0**	**266**	**100.0**	**4,309**	**100.0**

Figure 36 Hospital Inpatients by Indigenous Status by Road User Group

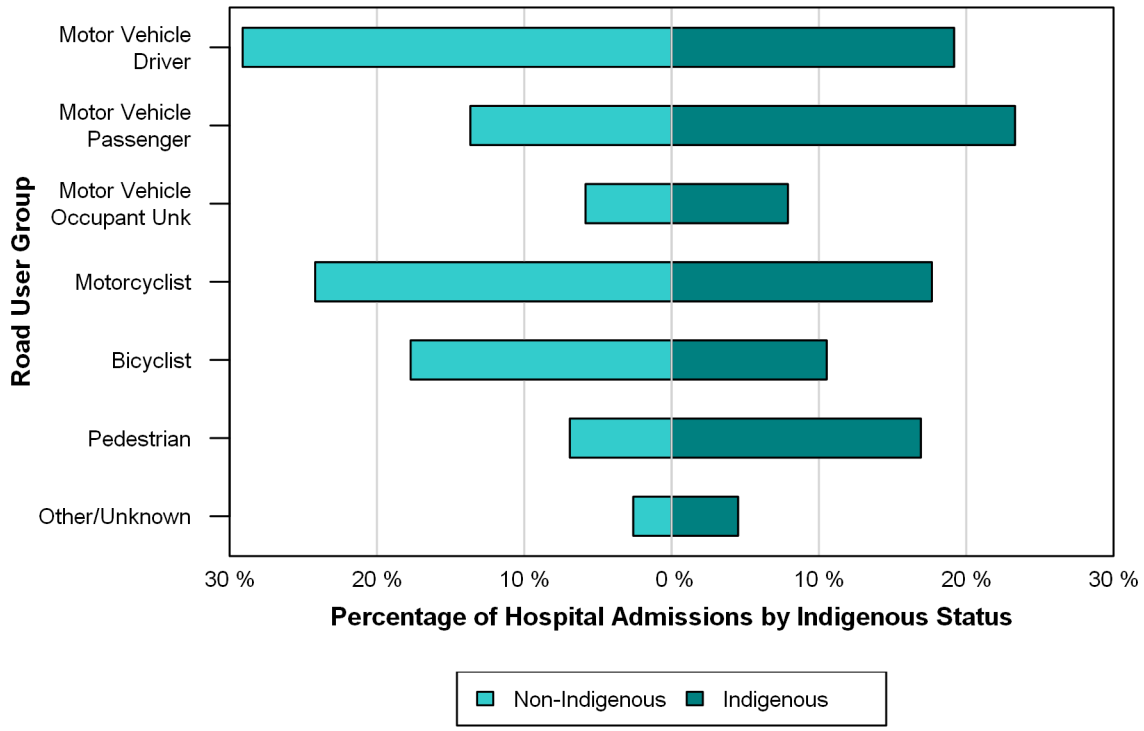


Table 167 Hospital Inpatients by Indigenous Status by Road User Group

	Indigenous Status					
	Non-Indigenous		Indigenous		Total	
Road User Group	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Motor Vehicle Driver	1,177	29.1	51	19.2	1,228	28.5
Motor Vehicle Passenger	552	13.7	62	23.3	614	14.2
Motor Vehicle Occupant Unk	236	5.8	21	7.9	257	6.0
Motorcyclist	978	24.2	47	17.7	1,025	23.8
Bicyclist	716	17.7	28	10.5	744	17.3
Pedestrian	279	6.9	45	16.9	324	7.5
Other/Unknown	105	2.6	12	4.5	117	2.7
Total Hospital Inpatients	**4,043**	**100.0**	**266**	**100.0**	**4,309**	**100.0**

Appendix A Trends Over Time

Appendix A (i) Western Australia Road Crash Trends 1961 to 2013

	Counts and Rates								
		Deaths				Persons Killed or Seriously Injured			
Year	Fatal Crashes	Fatalities	per Vehicle[1]	per Population[2]	per Km[3]	Persons KSI	per Vehicle[1]	per Population[2]	per Km[3]
1961	N/A	172	N/A	22.78	N/A	N/A	N/A	N/A	N/A
1962		177		22.77					
1963		198		24.78					
1964		222		27.14					
1965		252		30.06					
1966		253	7.97	29.28					
1967		256	7.54	28.54					
1968		320	8.74	34.12					
1969		311	7.81	31.84					
1970		351	8.29	35.40					
1971		332	7.33	32.22					
1972	305	340	7.13	32.28					
1973	332	358	7.06	33.50					
1974	303	334	6.21	29.89					
1975	259	304	5.17	26.51					
1976	255	308	4.88	26.14	3.21				
1977	259	290	4.29	24.23	2.84				
1978	304	345	4.96	28.10	3.19				
1979	259	279	3.88	22.38	2.44				
1980	268	293	3.93	23.16	2.50	3,337	44.79	263.77	28.46
1981	217	238	3.08	18.31	1.98	2,989	38.66	229.91	24.85
1982	203	236	2.93	17.63	1.91	3,048	37.82	227.65	24.71
1983	191	203	2.51	14.83	1.57	2,665	32.93	194.66	20.64
1984	203	220	2.65	15.81	1.63	2,882	34.72	207.15	21.37
1985	220	243	2.81	17.13	1.73	3,139	36.23	221.28	22.33
1986	208	228	2.57	15.63	1.57	2,982	33.61	204.38	20.56
1987	193	213	2.35	14.24	1.42	2,832	31.26	189.27	18.94
1988	199	230	2.46	14.98	1.49	2,847	30.42	185.45	18.49
1989	214	242	2.45	15.33	1.55	3,225	32.70	204.32	20.64
1990	181	196	1.89	12.15	1.24	2,824	27.22	175.07	17.82
1991	185	207	1.95	12.65	1.29	2,766	26.05	169.06	17.21
1992	171	200	1.85	12.06	1.21	2,738	25.31	165.13	16.61
1993	190	209	1.88	12.46	1.24	2,777	24.99	165.53	16.42
1994	195	211	1.85	12.39	1.22	2,721	23.82	159.78	15.68
1995	194	209	1.76	12.05	1.18	2,898	24.42	167.15	16.34
1996	220	247	2.04	13.99	1.41	2,839	23.44	160.83	16.19
1997	183	196	1.53	10.92	1.13	3,094	24.08	172.37	17.86
1998	199	223	1.64	12.23	1.25	3,181	23.40	174.52	17.80
1999	189	218	1.62	11.79	1.23	2,740	20.37	148.13	15.48
2000	184	212	1.56	11.31	1.07	2,349	17.30	125.32	11.82
2001	151	165	1.20	8.68	0.89	2,098	15.30	110.35	11.27
2002	159	178	1.27	9.24	0.93	3,056	21.74	158.66	15.95
2003	154	179	1.24	9.17	0.86	3,053	21.22	156.32	14.67
2004	163	179	1.21	9.03	0.84	3,360	22.70	169.47	15.76
2005	151	164	1.07	8.13	0.76	3,239	21.18	160.58	14.96
2006	182	201	1.26	9.76	0.89	2,965	18.52	143.98	13.11
2007	213	235	1.40	11.16	0.97	3,019	18.01	143.34	12.43
2008	185	205	1.17	9.44	0.82	3,097	17.73	142.61	12.36
2009	176	191	1.04	8.53	0.74	2,759	15.09	123.16	10.63
2010	174	191	1.02	8.34	0.73	2,722	14.56	118.82	10.36
2011	163	175	0.91	7.44	0.65	2,644	13.82	112.35	9.89
2012	169	181	0.92	7.42	0.66	2,651	13.4	108.74	9.64
2013	**148**	**161**	**0.79**	**6.39**	**0.57**	**2,507**	**12.24**	**99.51**	**8.80**

N/A - denotes information not available.

1. Rate is per 10,000 motor vehicles registered (see Appendix A (ii)).
2. Rate is per 100,000 estimated resident population (see Appendix A (ii)).
3. Rate is per 100 million estimated kilometres travelled (see Appendix A (ii)).

Appendix A (i) Western Australian Road Crash Trends, 1961 to 2012 *continued*

	Counts and Rates							
	Casualties				Reported Crashes			
Year	Casualties[4]	per Vehicle[1]	per Population[2]	per Km[3]	Crashes	per Vehicle[1]	per Population[2]	per Km[3]
1961	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1962								
1963								
1964								
1965								
1966								
1967								
1968								
1969								
1970								
1971								
1972								
1973								
1974								
1975								
1976	5,799	92	492	60	29,754	471	2,525	310
1977	7,052	104	589	69	33,918	502	2,833	333
1978	8,482	122	691	78	37,163	534	3,027	344
1979	9,225	128	740	81	36,062	501	2,893	316
1980	8,682	117	686	74	33,668	452	2,661	287
1981	8,510	110	655	71	32,375	419	2,490	269
1982	8,616	107	644	70	32,544	404	2,431	264
1983	8,221	102	600	64	32,239	398	2,355	250
1984	8,919	107	641	66	34,550	416	2,483	256
1985	10,114	117	713	72	35,950	415	2,534	256
1986	10,540	119	722	73	38,368	432	2,630	264
1987	10,809	119	722	72	37,093	409	2,479	248
1988	12,117	129	789	79	39,966	427	2,603	260
1989	12,394	126	785	79	39,174	397	2,482	251
1990	11,593	112	719	73	35,206	339	2,183	222
1991	10,986	103	671	68	33,430	315	2,043	208
1992	10,750	99	648	65	32,387	299	1,953	196
1993	11,120	100	663	66	34,441	310	2,053	204
1994	11,210	98	658	65	35,516	311	2,085	205
1995	11,411	96	658	64	37,287	314	2,151	210
1996	11,628	96	659	66	37,386	309	2,118	213
1997	11,726	91	653	68	36,556	285	2,037	211
1998	12,232	90	671	68	39,104	288	2,145	219
1999	12,671	94	685	72	39,549	294	2,138	223
2000	12,211	90	651	61	38,117	281	2,033	192
2001	11,885	87	625	64	37,526	274	1,974	202
2002	10,709	76	556	56	36,366	259	1,888	190
2003	10,276	71	526	49	36,010	250	1,844	173
2004	10,503	71	530	49	37,826	256	1,908	177
2005	10,259	67	509	47	38,905	254	1,929	180
2006	10,457	65	508	46	39,534	247	1,920	175
2007	10,454	62	496	43	41,630	248	1,977	171
2008	10,217	58	470	41	39,298	225	1,810	157
2009	9,672	53	432	37	37,226	204	1,662	143
2010	10,469	56	457	40	39,616	212	1,729	151
2011	10,544	55	448	39	39,456	206	1,677	148
2012	9,242	47	379	34	39,149	198	1,606	142
2013	**8,505**	**42**	**338**	**30**	**36,887**	**180**	**1,464**	**130**

N/A - denotes information not available.

1. Rate is per 10,000 motor vehicles registered (see Appendix A (ii)).
2. Rate is per 100,000 estimated resident population (see Appendix A (ii)).
3. Rate is per 100 million estimated kilometres travelled (see Appendix A (ii)).
4. Casualties include persons killed, persons admitted to hospital, persons requiring medical attention only, and exclude persons injured not requiring medical attention.

Appendix A (ii) Western Australian Demographics, 1961- 2012

	Demographics			
Year	Vehicles[1]	Population[2]	Travel[3]	MDLs[4]
1961	N/A	755,213	N/A	N/A
1962		777,248		
1963		798,895		
1964		818,121		
1965		838,248		
1966	317,400	864,093		
1967	339,400	896,988		
1968	366,100	937,800		
1969	398,100	976,620		
1970	423,200	991,400		
1971	453,000	1,030,500		
1972	476,900	1,053,200		
1973	506,800	1,068,500		
1974	537,900	1,117,400		536,794
1975	587,800	1,146,700		562,764
1976	631,500	1,178,340	9,586	561,264
1977	675,800	1,197,100	*10,197	621,288
1978	695,500	1,227,900	*10,809	654,949
1979	719,700	1,246,600	11,420	675,033
1980	745,000	1,265,100	*11,725	700,398
1981	773,200	1,300,056	*12,030	731,000
1982	806,000	1,338,899	12,336	757,000
1983	809,300	1,369,050	*12,911	781,000
1984	830,000	1,391,237	*13,485	800,000
1985	866,300	1,418,564	14,059	819,200
1986	887,357	1,459,019	*14,506	846,135
1987	906,051	1,496,248	*14,954	879,614
1988	935,761	1,535,167	15,401	918,290
1989	986,245	1,578,434	*15,624	953,857
1990	1,037,655	1,613,049	*15,847	997,719
1991	1,061,643	1,636,067	16,070	1,014,738
1992	1,081,710	1,658,045	*16,487	1,066,548
1993	1,111,030	1,677,669	*16,916	1,100,478
1994	1,142,381	1,703,009	*17,356	1,106,096
1995	1,186,742	1,733,787	17,735	1,141,064
1996	1,210,991	1,765,256	*17,531	1,154,165
1997	1,269,581	1,794,992	*17,328	1,199,053
1998	1,327,203	1,822,668	17,873	1,260,196
1999	1,344,809	1,849,733	17,702	1,258,896
2000	*1,358,075	1,874,459	19,875	1,273,234
2001	1,371,341	1,901,159	18,610	1,288,492
2002	1,405,676	1,926,111	19,160	1,270,966
2003	1,438,441	1,953,070	20,810	1,320,777
2004	1,480,206	1,982,637	21,324	1,341,116
2005	1,529,615	2,017,088	21,647	1,360,598
2006	1,600,566	2,059,381	22,616	1,389,332
2007	1,676,495	2,106,139	24,289	1,480,873
2008	1,746,579	2,171,700	25,053	1,716,446
2009	1,828,346	2,240,250	25,962	1,790,500
2010	1,870,068	2,290,845	26,285	1,677,489
2011	1,912,739	2,353,409	26,740	1,739,251
2012	1,977,756	2,437,994	27,500	1,794,329
2013	**2,048,388**	**2,519,321**	**28,482**	**1,855,367**

N/A - Denotes information not available.

* Denotes estimated figure.

1. Motor vehicles registered. From 1997 onwards, data taken from ABS, Motor Vehicle Census, Catalogue No. 9309.0.
2. Estimated resident population. From 1983, population data taken from ABS, Catalogue No. 3101.0 for June.
3. Estimated kilometres travelled (million). Data taken from ABS, Survey of Motor Vehicle Use, Catalogue No. 9208.0. 2008, 2009 and 2011 estimates based on average kilometres travelled per vehicle (interpolated between 2007, 2010 and 2012 figures) and number of registered vehicles.
4. Western Australian Motor Driver Licences on record (Department of Transport).

Appendix B Additional Crash and Injury Tables

Appendix B (i) Crash Severity by Month - Metropolitan

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Month	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
January	7	9.6	131	9.7	**138**	**9.7**	2,180	7.3	**2,318**	**7.4**
February	8	11.0	88	6.5	**96**	**6.8**	2,463	8.3	**2,559**	**8.2**
March	2	2.7	104	7.7	**106**	**7.5**	2,693	9.0	**2,799**	**9.0**
April	3	4.1	122	9.1	**125**	**8.8**	2,262	7.6	**2,387**	**7.7**
May	14	19.2	133	9.9	**147**	**10.4**	2,870	9.6	**3,017**	**9.7**
June	5	6.8	100	7.4	**105**	**7.4**	2,495	8.4	**2,600**	**8.3**
July	5	6.8	111	8.2	**116**	**8.2**	2,429	8.2	**2,545**	**8.2**
August	4	5.5	139	10.3	**143**	**10.1**	2,725	9.2	**2,868**	**9.2**
September	4	5.5	112	8.3	**116**	**8.2**	2,498	8.4	**2,614**	**8.4**
October	6	8.2	119	8.8	**125**	**8.8**	2,519	8.5	**2,644**	**8.5**
November	7	9.6	113	8.4	**120**	**8.5**	2,505	8.4	**2,625**	**8.4**
December	8	11.0	74	5.5	**82**	**5.8**	2,129	7.2	**2,211**	**7.1**
Total Crashes	**73**	**100.0**	**1,346**	**100.0**	**1,419**	**100.0**	**29,768**	**100.0**	**31,187**	**100.0**

Appendix B (ii) Crash Severity by Month - Regional

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Month	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
January	8	17.8	36	9.2	**44**	**10.1**	255	7.2	**299**	**7.5**
February	3	6.7	29	7.4	**32**	**7.3**	266	7.5	**298**	**7.5**
March	4	8.9	30	7.7	**34**	**7.8**	342	9.6	**376**	**9.4**
April	3	6.7	35	9.0	**38**	**8.7**	253	7.1	**291**	**7.3**
May	4	8.9	19	4.9	**23**	**5.3**	301	8.5	**324**	**8.1**
June	5	11.1	33	8.4	**38**	**8.7**	296	8.3	**334**	**8.4**
July	3	6.7	27	6.9	**30**	**6.9**	322	9.1	**352**	**8.8**
August	1	2.2	37	9.5	**38**	**8.7**	294	8.3	**332**	**8.3**
September	4	8.9	27	6.9	**31**	**7.1**	282	7.9	**313**	**7.8**
October	2	4.4	38	9.7	**40**	**9.2**	326	9.2	**366**	**9.2**
November	4	8.9	43	11.0	**47**	**10.8**	295	8.3	**342**	**8.6**
December	4	8.9	37	9.5	**41**	**9.4**	321	9.0	**362**	**9.1**
Total Crashes	**45**	**100.0**	**391**	**100.0**	**436**	**100.0**	**3,553**	**100.0**	**3,989**	**100.0**

Appendix B (iii) Crash Severity by Month - Remote

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Month	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
January	4	13.3	11	5.3	**15**	**6.4**	102	6.9	**117**	**6.9**
February	0	0.0	21	10.2	**21**	**8.9**	106	7.2	**127**	**7.4**
March	2	6.7	25	12.1	**27**	**11.4**	143	9.7	**170**	**10.0**
April	0	0.0	17	8.3	**17**	**7.2**	117	7.9	**134**	**7.8**
May	3	10.0	20	9.7	**23**	**9.7**	158	10.7	**181**	**10.6**
June	1	3.3	16	7.8	**17**	**7.2**	130	8.8	**147**	**8.6**
July	3	10.0	20	9.7	**23**	**9.7**	139	9.4	**162**	**9.5**
August	5	16.7	19	9.2	**24**	**10.2**	128	8.7	**152**	**8.9**
September	4	13.3	15	7.3	**19**	**8.1**	112	7.6	**131**	**7.7**
October	3	10.0	20	9.7	**23**	**9.7**	134	9.1	**157**	**9.2**
November	2	6.7	14	6.8	**16**	**6.8**	110	7.5	**126**	**7.4**
December	3	10.0	8	3.9	**11**	**4.7**	93	6.3	**104**	**6.1**
Total Crashes	**30**	**100.0**	**206**	**100.0**	**236**	**100.0**	**1,472**	**100.0**	**1,708**	**100.0**

Appendix B (iv) Injury Severity by Month - Metropolitan

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
Month	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
January	7	8.8	149	9.5	**156**	**9.5**	499	8.2	5,633	7.4	**6,288**	**7.5**
February	10	12.5	110	7.0	**120**	**7.3**	559	9.2	6,084	8.0	**6,763**	**8.0**
March	2	2.5	115	7.3	**117**	**7.1**	568	9.3	6,895	9.0	**7,580**	**9.0**
April	3	3.8	139	8.9	**142**	**8.6**	487	8.0	5,876	7.7	**6,505**	**7.7**
May	16	20.0	150	9.6	**166**	**10.1**	609	10.0	7,331	9.6	**8,106**	**9.6**
June	5	6.3	119	7.6	**124**	**7.5**	505	8.3	6,344	8.3	**6,973**	**8.3**
July	7	8.8	126	8.1	**133**	**8.1**	502	8.2	6,044	7.9	**6,679**	**7.9**
August	5	6.3	161	10.3	**166**	**10.1**	573	9.4	7,100	9.3	**7,839**	**9.3**
September	4	5.0	131	8.4	**135**	**8.2**	474	7.8	6,546	8.6	**7,155**	**8.5**
October	6	7.5	149	9.5	**155**	**9.4**	518	8.5	6,581	8.6	**7,254**	**8.6**
November	7	8.8	129	8.2	**136**	**8.3**	440	7.2	6,410	8.4	**6,986**	**8.3**
December	8	10.0	87	5.6	**95**	**5.8**	353	5.8	5,595	7.3	**6,043**	**7.2**
Total Persons	**80**	**100.0**	**1,565**	**100.0**	**1,645**	**100.0**	**6,087**	**100.0**	**76,439**	**100.0**	**84,171**	**100.0**

Appendix B (v) Injury Severity by Month - Regional

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
Month	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
January	8	16.7	39	7.9	**47**	**8.7**	72	7.5	621	7.1	**740**	**7.2**
February	3	6.3	34	6.9	**37**	**6.9**	74	7.7	667	7.6	**778**	**7.6**
March	4	8.3	38	7.7	**42**	**7.8**	99	10.3	797	9.1	**938**	**9.1**
April	3	6.3	41	8.3	**44**	**8.1**	80	8.3	646	7.4	**770**	**7.5**
May	5	10.4	24	4.9	**29**	**5.4**	74	7.7	749	8.5	**852**	**8.3**
June	6	12.5	47	9.6	**53**	**9.8**	86	9.0	750	8.6	**889**	**8.7**
July	3	6.3	35	7.1	**38**	**7.0**	92	9.6	702	8.0	**832**	**8.1**
August	1	2.1	43	8.7	**44**	**8.1**	71	7.4	663	7.6	**778**	**7.6**
September	4	8.3	33	6.7	**37**	**6.9**	64	6.7	679	7.7	**780**	**7.6**
October	3	6.3	52	10.6	**55**	**10.2**	93	9.7	778	8.9	**926**	**9.0**
November	4	8.3	58	11.8	**62**	**11.5**	75	7.8	794	9.1	**931**	**9.1**
December	4	8.3	48	9.8	**52**	**9.6**	79	8.2	923	10.5	**1,054**	**10.3**
Total Persons	**48**	**100.0**	**492**	**100.0**	**540**	**100.0**	**959**	**100.0**	**8,769**	**100.0**	**10,268**	**100.0**

Appendix B (vi) Injury Severity by Month - Remote

	Injury Severity											
	Fatal		Serious		Total Persons KSI		Minor		None/Unknown		Total	
Month	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
January	5	15.2	15	5.2	**20**	**6.2**	28	7.1	207	6.3	**255**	**6.4**
February	0	0.0	31	10.7	**31**	**9.6**	28	7.1	252	7.6	**311**	**7.8**
March	2	6.1	28	9.7	**30**	**9.3**	46	11.7	324	9.8	**400**	**10.0**
April	0	0.0	28	9.7	**28**	**8.7**	31	7.9	240	7.3	**299**	**7.5**
May	4	12.1	25	8.7	**29**	**9.0**	32	8.1	380	11.5	**441**	**11.0**
June	1	3.0	20	6.9	**21**	**6.5**	24	6.1	297	9.0	**342**	**8.5**
July	3	9.1	27	9.3	**30**	**9.3**	48	12.2	336	10.2	**414**	**10.3**
August	5	15.2	33	11.4	**38**	**11.8**	44	11.2	289	8.8	**371**	**9.3**
September	5	15.2	23	8.0	**28**	**8.7**	25	6.4	240	7.3	**293**	**7.3**
October	3	9.1	27	9.3	**30**	**9.3**	39	9.9	313	9.5	**382**	**9.5**
November	2	6.1	22	7.6	**24**	**7.5**	26	6.6	237	7.2	**287**	**7.2**
December	3	9.1	10	3.5	**13**	**4.0**	22	5.6	180	5.5	**215**	**5.4**
Total Persons	**33**	**100.0**	**289**	**100.0**	**322**	**100.0**	**393**	**100.0**	**3,295**	**100.0**	**4,010**	**100.0**

Appendix B (vii) Crash Severity by Day Of Week - Metropolitan

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Day of Week	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Monday	10	13.7	169	12.6	**179**	**12.6**	4,142	13.9	**4,321**	**13.9**
Tuesday	9	12.3	194	14.4	**203**	**14.3**	4,694	15.8	**4,897**	**15.7**
Wednesday	11	15.1	175	13.0	**186**	**13.1**	4,876	16.4	**5,062**	**16.2**
Thursday	11	15.1	214	15.9	**225**	**15.9**	4,738	15.9	**4,963**	**15.9**
Friday	8	11.0	224	16.6	**232**	**16.3**	5,157	17.3	**5,389**	**17.3**
Saturday	7	9.6	201	14.9	**208**	**14.7**	3,691	12.4	**3,899**	**12.5**
Sunday	17	23.3	169	12.6	**186**	**13.1**	2,470	8.3	**2,656**	**8.5**
Total Crashes	**73**	**100.0**	**1,346**	**100.0**	**1,419**	**100.0**	**29,768**	**100.0**	**31,187**	**100.0**

Appendix B (viii) Crash Severity by Day of Week - Regional

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Day of Week	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Monday	2	4.4	44	11.3	**46**	**10.6**	469	13.2	**515**	**12.9**
Tuesday	6	13.3	51	13.0	**57**	**13.1**	471	13.3	**528**	**13.2**
Wednesday	7	15.6	41	10.5	**48**	**11.0**	496	14.0	**544**	**13.6**
Thursday	5	11.1	44	11.3	**49**	**11.2**	548	15.4	**597**	**15.0**
Friday	3	6.7	73	18.7	**76**	**17.4**	636	17.9	**712**	**17.8**
Saturday	12	26.7	80	20.5	**92**	**21.1**	522	14.7	**614**	**15.4**
Sunday	10	22.2	58	14.8	**68**	**15.6**	411	11.6	**479**	**12.0**
Total Crashes	**45**	**100.0**	**391**	**100.0**	**436**	**100.0**	**3,553**	**100.0**	**3,989**	**100.0**

Appendix B (ix) Crash Severity by Day of Week - Remote

	Crash Severity									
	Fatal		Hospitalisation		Total Serious		Other		Total	
Day of Week	n	Col %	n	Col %	n	Col %	n	Col %	n	Col %
Monday	3	10.0	27	13.1	**30**	**12.7**	192	13.0	**222**	**13.0**
Tuesday	2	6.7	24	11.7	**26**	**11.0**	203	13.8	**229**	**13.4**
Wednesday	4	13.3	29	14.1	**33**	**14.0**	198	13.5	**231**	**13.5**
Thursday	4	13.3	31	15.0	**35**	**14.8**	229	15.6	**264**	**15.5**
Friday	6	20.0	20	9.7	**26**	**11.0**	248	16.8	**274**	**16.0**
Saturday	7	23.3	36	17.5	**43**	**18.2**	226	15.4	**269**	**15.7**
Sunday	4	13.3	39	18.9	**43**	**18.2**	176	12.0	**219**	**12.8**
Total Crashes	**30**	**100.0**	**206**	**100.0**	**236**	**100.0**	**1,472**	**100.0**	**1,708**	**100.0**

Appendix C P72 Form

WA Police Report of Road Traffic Crash

WESTERN AUSTRALIA POLICE
REPORT OF ROAD TRAFFIC CRASH

P72

THERE IS NO COMPULSION TO REPORT A TRAFFIC CRASH IF:

- Damage to ALL VEHICLES and/or PROPERTY is LESS than $1000, and
- There is NO INJURY TO ANY PERSON involved in this crash, and
- The PROPERTY OWNER has been advised of your details, and
- The crash is NOT a Hit and Run crash

Local No.
Crash No.

Please print clearly. Please enter as many details as possible. Where more than two parties involved - use an additional form.

1) *POLICE USE ONLY* ☐ **POLICE CRASH** **OFFICER ON DUTY (Y/N)**.....

Police Officer attending scene: Name.....PD No. ..... Sub District/Unit.....

Crash attended at: (time).....(date)..... Police Crash (Y/N)..... Photographs (Y/N)..... Scene Marked (Y/N).....

DRIVER 1 – Prelim. *POS / NEG* BAC 0.__ __ __CALC TO 0.__ __ __ **DRIVER 2** – Prelim. *POS / NEG* BAC 0. __ __ __CALC TO 0. __ __ __

Blood test taken (Y/N)..... Driver Number..... **Contributing factors** - Excessive Speed (Yes / No) / Fatigue (Yes / No) / Inattention (Yes / No) / Unknown

2) PRECISE LOCATION OF CRASH

NAME OF SUBURB, TOWN OR LOCALITY.....POSTCODE.....

A) OCCURRED AT THE INTERSECTION OF.....

AND.....

OR

B) ON..... ..... Metres N / S / E / W OF.....

(street crash occurred on) .....Kilometres (nearest cross street, landmark etc)

AREA SPEED ZONE .....KPH

3) DAY OF CRASH ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

TIME OF CRASH __ __ __ __ 24 hours

DATE OF CRASH ...../...../.....

4) HIT AND RUN (Y/N)..... Driver (M/F)..... Estimated age..... Description of Driver .....

Description of Vehicle (include any accessories fitted to vehicle).....

NUMBER OF VEHICLES INVOLVED IN CRASH - __ __

5) INVOLVED VEHICLE 1 – YOUR Details SEATBELT WORN (Y/N) ..... PURPOSE OF TRAVEL: PRIVATE / BUSINESS

DRIVER'S FAMILY NAME.....GIVEN NAMES..... SEX: (M/F) .....

ADDRESS.....SUBURB.....POSTCODE.....

OCCUPATION.....EMPLOYER.....

PHONE No.: Work.....Home.....Mobile..... DATE OF BIRTH...../...../.....

DRIVERS LICENCE: No..... STATE OF ISSUE..... LICENCE CLASS/ES.....

LICENCE TYPE (Ordinary, Probationary, Learner, Expired, Cancelled etc.)..... EXPIRY DATE...../...../.....

VEHICLE MAKE AND MODEL..... COLOUR..... BODY TYPE.....

HEAVY VEHICLES: Configuration No:..... (see page 4 for ID number) Was it Loaded (Yes/No)..... Type of load .....

REGISTRATION No.....STATE OF REGISTRATION.....EXPIRY DATE...../...../.....No. OF OCCUPANTS __ __

OWNERS NAME..... ADDRESS.....

OWNERS INSURANCE COMPANY..... DESCRIPTION OF DAMAGE.....

VEHICLE TOWED (Y/N) ..... POLICE AUTHORITY (Y/N)..... TOWING COMPANY.....

WHERE TOWED .....

6) INVOLVED VEHICLE 2 SEATBELT WORN (Y/N) ..... PURPOSE OF TRAVEL: PRIVATE / BUSINESS

DRIVER'S FAMILY NAME.....GIVEN NAMES..... SEX: (M/F) .....

ADDRESS.....SUBURB.....POSTCODE.....

OCCUPATION.....EMPLOYER.....

PHONE No.: Work.....Home.....Mobile..... DATE OF BIRTH...../...../.....

DRIVERS LICENCE: No..... STATE OF ISSUE..... LICENCE CLASS/ES.....

LICENCE TYPE (Ordinary, Probationary, Learner, Expired, Cancelled etc.)..... EXPIRY DATE...../...../.....

VEHICLE MAKE AND MODEL..... COLOUR..... BODY TYPE.....

HEAVY VEHICLES: Configuration No :.....(see page 4 for ID number)...Was it Loaded (Yes/No)..... Type of load.....

REGISTRATION No.....STATE OF REGISTRATION.....EXPIRY DATE...../...../.....No. OF OCCUPANTS __ __

OWNERS NAME..... ADDRESS.....

OWNERS INSURANCE COMPANY..... DESCRIPTION OF DAMAGE.....

VEHICLE TOWED (Y/N) ..... POLICE AUTHORITY (Y/N)..... TOWING COMPANY.....

WHERE TOWED .....

7) INJURIES AND ALL PERSONS IN YOUR VEHICLE: – refer to KEY below when completing involved persons details:

KEY: Include one of the following for Position	PERSON	INJURY	SEATBELT/HELMET	AIRBAG
Seating position 10. Back of the vehicle/wagon 11. Towed device 12. Bus seat 9 6 3 / 8 5 2 / 7 4 1 / 13. On tray (utility/truck) 14. Riding externally on vehicle 99. Unknown For M/C or Cyclist use 1 and 4	1. Driver / Rider 2. Passenger 3. Pedestrian	1. Killed 4. Admitted to hospital as inpatient 2. Injured, medical treatment only 5. Injured, no medical treatment 6. No injury	1. Worn 2. Not worn 3. Child restraint worn 4. Child restraint not worn 5. Unknown	1. Deployed 2. Fitted not deployed 3. Not fitted

INJURIES AND ALL INVOLVED PERSONS : (include drivers) Enter full details for each person. (Your vehicle is vehicle No 1)	Veh No	Seating Position	Person	Injury	Seatbelt / Helmet	AIRBAG
1 NAME:						
ADDRESS			Date of Birth		/ /	
2 NAME:						
ADDRESS			Date of Birth		/ /	
3 NAME:						
ADDRESS			Date of Birth		/ /	
4 NAME:						
ADDRESS			Date of Birth		/ /	
5 NAME:						
ADDRESS			Date of Birth		/ /	
6 NAME:						
ADDRESS			Date of Birth		/ /	
7 NAME:						
ADDRESS			Date of Birth		/ /	
8 NAME:						
ADDRESS			Date of Birth		/ /	

CRASH FEATURES (Cross all appropriate boxes)

8) TRAFFIC CONTROL
- ☐ 1. Traffic Lights
- ☐ 2. Stop Sign
- ☐ 3. Give Way Sign
- ☐ 4. Pedestrian Crossing
- ☐ 5. School Crossing
- ☐ 6. No Sign or Control
- ☐ 7. Other – specify:

.....

Rail Level Crossing
- ☐ 8. Boom Gates
- ☐ 9. Flashing Lights Only
- ☐ 10. Stop Sign
- ☐ 11. Give Way
- ☐ 12. Unguarded

9) ROAD FEATURE
- ☐ 1. 4 Way intersection (crossroads)
- ☐ 2. 3 Way Junction / T Junction
- ☐ 3. Multiple intersection
- ☐ 4. Roundabout
- ☐ 5. Median opening
- ☐ 6. Slow Point (eg. speed hump)
- ☐ 7. Railway crossing
- ☐ 8. Bridge
- ☐ 9. Subway
- ☐ 10. Driveway
- ☐ 11. Pedestrian Island
- ☐ 12. No special feature
- ☐ 13. Other – specify:

.....

10) ROAD ALIGNMENT
- ☐ 1. Left Curve ☐ 2. Right Curve
- ☐ 3. Straight

12) ROAD GRADE
- ☐ 1. Level
- ☐ 2. Crest of Hill
- ☐ 3. Up Slope ☐ 4. Down Slope

14) ATMOSPHERIC CONDITIONS
- ☐ 1. Clear
- ☐ 2. Fog / mist
- ☐ 3. Raining
- ☐ 4. Smoke, dust
- ☐ 5. Overcast
- ☐ 6. Sun Glare
- ☐ 7. Other – .....

11) ROAD CONDITION
- ☐ 1. Wet
- ☐ 2. Dry

13) ROAD SURFACE
- ☐ 1. Sealed
- ☐ 2. Unsealed
- ☐ 3. Off road

15) LIGHTING
- ☐ 1. Daylight
- ☐ 2. Dawn or Dusk

Darkness
- ☐ 3. Street lights on
- ☐ 4. Street lights off
- ☐ 5. Street lights not provided

16) ESTIMATE of combined damage of ALL vehicles AND property: Less than $1000 ☐ Over $1000 ☐

17) Type of Crash (Cross all appropriate boxes)

(1) Vehicle to Vehicle Collisions
- ☐ 1. Right turn into oncoming vehicle
- ☐ 2. Right angle collision
- ☐ 3. Side impact - same direction
- ☐ 4. Side impact - opposite direction
- ☐ 5. Head on collision
- ☐ 6. Rear end collision
- ☐ 7. Collision with parked vehicle
- ☐ 8. Collision with one vehicle reversing

(2) Single Vehicle Collision

On Road
- ☐ 1. Struck pedestrian
- ☐ 2. Struck animal
- ☐ 3. Struck object
- ☐ 4. Overturned
- ☐ 5. Fall from moving vehicle

OR

Off Road
- ☐ 6. Struck pedestrian
- ☐ 7. Struck animal
- ☐ 8. Struck object
- ☐ 9. Overturned
- ☐ 10. Fall from moving vehicle

If you hit an object, state each object and distance of each object from the road.....metres

3 Vehicle Movement Prior to Crash (Select appropriate vehicle numbers and enter into boxes, e.g. V 1, V 2 or V3

A Direction	Veh	B Lane	Veh		Veh	C Approach	Veh
1 North bound		1 1st lane (kerb or left)		5 Left turn lane		1 Approaching intersection	
2 South bound		2 2nd lane		6 Merge lane		2 Within intersection	
3 East bound		3 3rd lane		7 Shoulder		3 Not related with intersection	
4 West bound		4 Right turn lane		8 On wrong side of road		4 Into driveway	
						5 Out of driveway	

D Action	Veh		Veh	E Other	Veh		Veh
1 Straight ahead		5 Overtaking right side		1 Proceeding normally		4 Out of control	
2 Right turn		6 Overtaking left side		2 Slowing		5 Changing lanes	
3 Left turn		7 Backing		3 Stopped		6 Turn - Into parking	
4 U-turn		8 Parked				7 Turn - Out of parking	

18) INDEPENDENT Witnesses (Not Passengers)		Telephone Number		
NAME	ADDRESS	Work	Home	Mobile

19) DESCRIPTION and DETAILS of CRASH - Briefly describe how the crash happened, **stating clearly speeds of vehicles before and at impact: if vehicle lights on, if vehicle fitted with roo bar/bull bar, and if Ambulance attended.**

1. What colour were the Traffic Control Lights (Red / Amber / Green) facing: **you** .....

2. How far were you from the vehicle / pedestrian when you first sighted them / it.....

3. Did you sound your horn (Y/N) .....

20) Sketch of Locality

Label all vehicles and objects

1. Show street names
2. Show control signs, road markings
3. Show all objects struck and by which vehicle
4. Select appropriate symbols for diagram
5. Show **NORTH** point

PEDESTRIAN

VEHICLE 1 1 (front)

VEHICLE 2 2 (front)

21) Number of sheets used to report this crash:.....

I understand and acknowledge that this form may be adduced in evidence in any court proceedings resulting from the investigation of this crash. Information may be released in accordance with the Western Australia Police Service Privacy Statement.

Please retain a copy of this form as it may be required by your Insurance Company and/or Solicitor. ***Costs apply for additional copies.***

22) *ONLY SIGN AT TIME FORM IS HANDED TO RECEIVING OFFICER*

Signature..... Time.....24 Hours Date ...../...../.....

Police / Staff Signature..... Print Surname ..... PD No.....

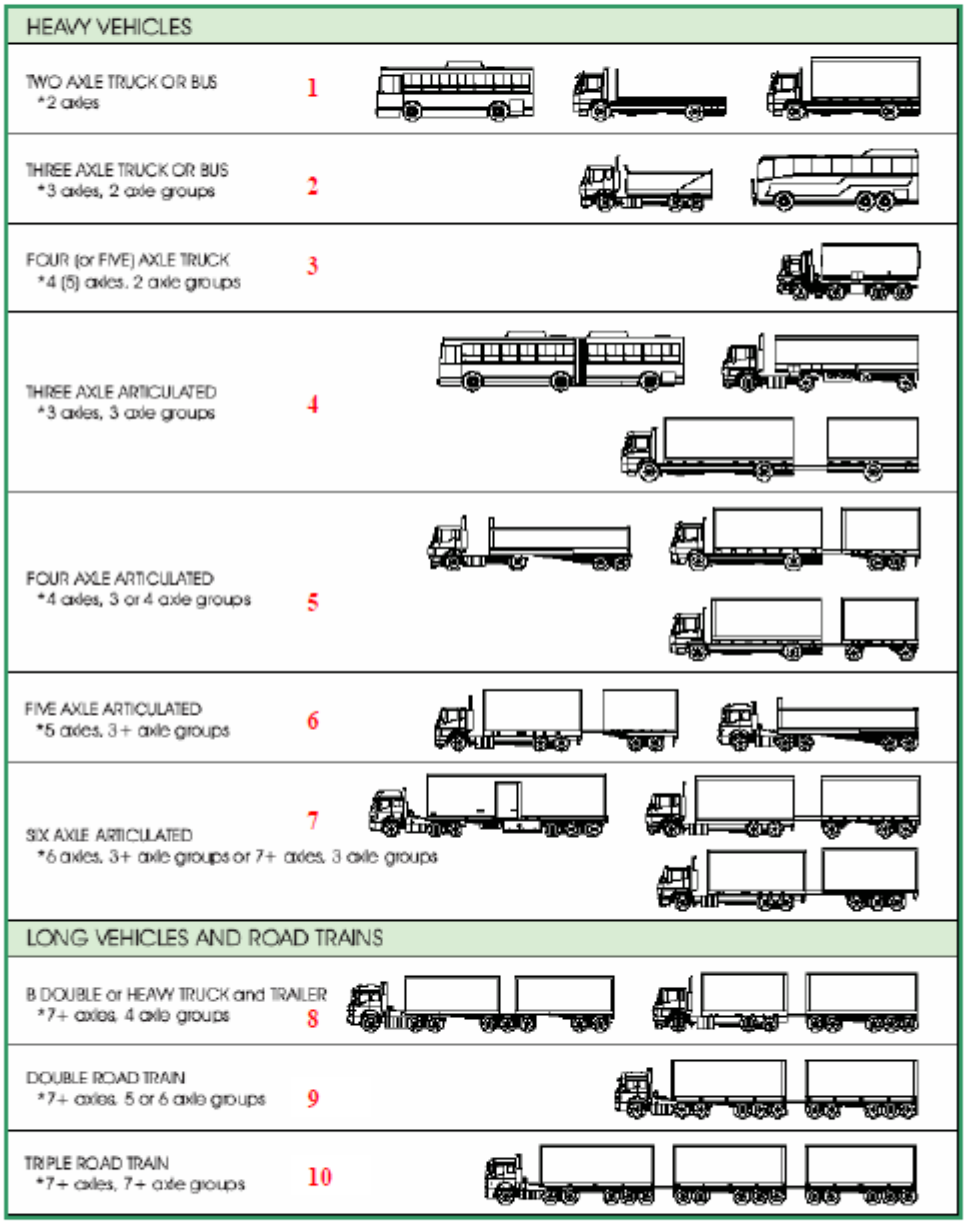
Sub District / Unit..... A/L.....

For self-reported crashes only

Copy provided ☐Yes ☐No - Reason if No.....

Heavy vehicle identification chart

Select the number of the vehicle configuration which best suits the Heavy Vehicle involved in your crash and place the number on the P72 Crash detail form at the heading of Heavy Vehicle Configuration.



WESTERN AUSTRALIA POLICE SERVICE P72 – ADDITIONAL VEHICLES

`6a) INVOLVED VEHICLE 3 SEATBELT WORN (Y/N) ..... PURPOSE OF TRAVEL: PRIVATE / BUSINESS

DRIVER'S FAMILY NAME.....GIVEN NAMES..... SEX: (M/F) .....

ADDRESS.....SUBURB.....POSTCODE.....

OCCUPATION.....EMPLOYER.....

PHONE No.: Work.....Home.....Mobile..... DATE OF BIRTH...../...../.....

DRIVERS LICENCE: No.....STATE OF ISSUE.....LICENCE CLASS/ES.....

LICENCE TYPE (Ordinary, Probationary, Learner, Expired, Cancelled etc.)..... EXPIRY DATE...../...../.....

VEHICLE MAKE AND MODEL..... COLOUR..... BODY TYPE.....

HEAVY VEHICLES: Configuration.....Was it Loaded (Yes/No)..... Type of load .....

REGISTRATION No.....STATE OF REGISTRATION.....EXPIRY DATE...../...../.....No. OF OCCUPANTS __ __

OWNERS NAME..... ADDRESS.....

OWNERS INSURANCE COMPANY..... DESCRIPTION OF DAMAGE.....

VEHICLE TOWED (Y/N) ..... POLICE AUTHORITY (Y/N)..... TOWING COMPANY.....

WHERE TOWED .....

6b) INVOLVED VEHICLE 4 SEATBELT WORN (Y/N) ..... PURPOSE OF TRAVEL: PRIVATE / BUSINESS

DRIVER'S FAMILY NAME.....GIVEN NAMES..... SEX: (M/F) .....

ADDRESS.....SUBURB.....POSTCODE.....

OCCUPATION.....EMPLOYER.....

PHONE No.: Work.....Home.....Mobile..... DATE OF BIRTH...../...../.....

DRIVERS LICENCE: No.....STATE OF ISSUE.....LICENCE CLASS/ES.....

LICENCE TYPE (Ordinary, Probationary, Learner, Expired, Cancelled etc.)..... EXPIRY DATE...../...../.....

VEHICLE MAKE AND MODEL..... COLOUR..... BODY TYPE.....

HEAVY VEHICLES: Configuration.....Was it Loaded (Yes/No)..... Type of load .....

REGISTRATION No.....STATE OF REGISTRATION.....EXPIRY DATE...../...../.....No. OF OCCUPANTS __ __

OWNERS NAME..... ADDRESS.....

OWNERS INSURANCE COMPANY..... DESCRIPTION OF DAMAGE.....

VEHICLE TOWED (Y/N) ..... POLICE AUTHORITY (Y/N)..... TOWING COMPANY.....

WHERE TOWED .....

6c) INVOLVED VEHICLE 5 SEATBELT WORN (Y/N) ..... PURPOSE OF TRAVEL: PRIVATE / BUSINESS

DRIVER'S FAMILY NAME.....GIVEN NAMES..... SEX: (M/F) .....

ADDRESS.....SUBURB.....POSTCODE.....

OCCUPATION.....EMPLOYER.....

PHONE No.: Work.....Home.....Mobile..... DATE OF BIRTH...../...../.....

DRIVERS LICENCE: No.....STATE OF ISSUE.....LICENCE CLASS/ES.....

LICENCE TYPE (Ordinary, Probationary, Learner, Expired, Cancelled etc.)..... EXPIRY DATE...../...../.....

VEHICLE MAKE AND MODEL..... COLOUR..... BODY TYPE.....

HEAVY VEHICLES: Configuration.....Was it Loaded (Yes/No)..... Type of load .....

REGISTRATION No.....STATE OF REGISTRATION.....EXPIRY DATE...../...../.....No. OF OCCUPANTS __ __

OWNERS NAME..... ADDRESS.....

OWNERS INSURANCE COMPANY..... DESCRIPTION OF DAMAGE.....

VEHICLE TOWED (Y/N) ..... POLICE AUTHORITY (Y/N)..... TOWING COMPANY.....

WHERE TOWED .....

6d) INVOLVED VEHICLE 6 SEATBELT WORN (Y/N) ..... PURPOSE OF TRAVEL: PRIVATE / BUSINESS

DRIVER'S FAMILY NAME.....GIVEN NAMES..... SEX: (M/F) .....

ADDRESS.....SUBURB.....POSTCODE.....

OCCUPATION.....EMPLOYER.....

PHONE No.: Work.....Home.....Mobile..... DATE OF BIRTH...../...../.....

DRIVERS LICENCE: No.....STATE OF ISSUE.....LICENCE CLASS/ES.....

LICENCE TYPE (Ordinary, Probationary, Learner, Expired, Cancelled etc.)..... EXPIRY DATE...../...../.....

VEHICLE MAKE AND MODEL..... COLOUR..... BODY TYPE.....

HEAVY VEHICLES: Configuration.....Was it Loaded (Yes/No)..... Type of load .....

REGISTRATION No.....STATE OF REGISTRATION.....EXPIRY DATE...../...../.....No. OF OCCUPANTS __ __

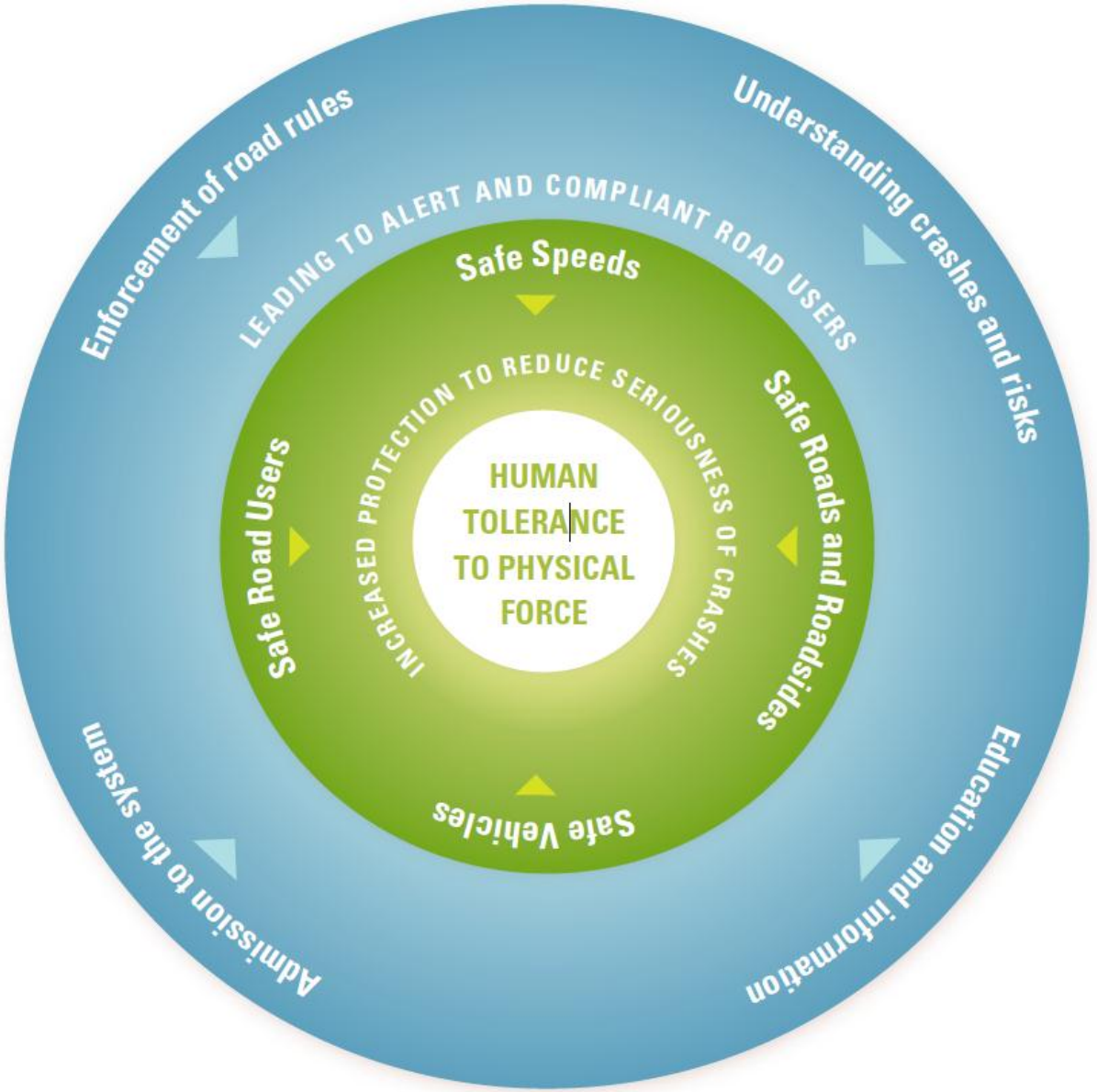
OWNERS NAME..... ADDRESS.....

OWNERS INSURANCE COMPANY..... DESCRIPTION OF DAMAGE.....

VEHICLE TOWED (Y/N) ..... POLICE AUTHORITY (Y/N)..... TOWING COMPANY.....

WHERE TOWED .....

Appendix D Safe Systems Diagram



The Safe System (adapted from Australian Transport Council, 2007)

Appendix E Road Safety-Related Legislation and Other Initiatives

The following is a brief listing of road safety-related legislation and other initiatives, which could have contributed to reductions in road crashes and injury in WA.

1919 **First Road Traffic Act** introduced.

1953 **First Traffic Control signals** introduced (West Perth Subway).

1954 **Stop sign** regulation introduced.

1960 (circa) **Amphometer Speed Detection Device** introduced (Air pressure tapes).

1964 **Probationary Licence Scheme** introduced.

1968 **First Breath Analysis Apparatus** used.

1968 **Preliminary Breath Testing** introduced. (Aico Test - a tube with crystals that changed colour)

1968 **Blood alcohol concentration (BAC)** limits of:

- 0.08gm%; and
- 0.15gm% (driving under the influence - DUI).

1969 **On-the-spot** traffic infringement notices (TIN) introduced.

1969 **Seat belts** required to be fitted to motor car front seats.

1970 **Legal drinking age** changed from 21 years to 18 years.

1971 **Seat belts** required to be fitted to motor cars for all seats and wearing of seat belts made compulsory.

1971 **Head Supports** required to be fitted for all cars manufactured on or after January 1 1972.

1974 **Road Traffic Act 1974** and its regulations enacted bringing all traffic enforcement under police control. (Previously most rural and several Metropolitan Local Councils controlled traffic enforcement in their areas)

1974 **Compulsory Wearing of Safety Helmets.** Motorcycle riders required to wear an approved protective helmet. Pillion passengers of six years of age and older also required to wear an approved helmet.

1974 **Motoring went Metric** (Mph to Km/h)

1975 **Demerit points** introduced an accrual of 12 points results in a three month suspension of licence.

1977 **Child restraints** required to be used for children aged 1 to 7 years old (older must wear seat belts).

1977 **Speed Gun JF 100 Mobile Radar Detection Device** introduced (operated from within the patrol vehicle.

1978 **Maximum speed of 60km/h** introduced in built-up areas, except where zoned for a different speed limit.

1978 **Maximum speed of 110 km/h** introduced in areas other than those zoned otherwise, or in built-up areas.

1979 **Preliminary Breath Testing Apparatus "Liar*' Electronic introduced.**

1979 **Drivers responsible for children aged one to seven years wearing seat belt.**

1979 **Red light cameras** introduced for use at traffic light controlled intersections.

1981 **Road Traffic Board** established to administer the Road Traffic Act.

1982 **Infra Red (Digitector)** high volume speed detection device introduced.

1982 **BAC limit of 0.02gm% for probationary drivers** introduced with a penalty of cancellation of probationary licence and a $100 fine.

1986 **Fairy Slant Radar Speed Detection Devices** introduced.

1987 **Breath Analysis Evidentiary Equipment improved -** DRAGER 71 10 introduced.

1987 **Motor Vehicle (Third Party Insurance) Act 1943** amended to limit cover to injury caused through "driving of a motor vehicle", following a High Court decision.

1988 **Random breath testing (RBT)** introduced.

1988 **Speed Camera Radars** introduced.

1989 **Penalty for failing to wear a seat belt** increased from $50 to $100.

1989 **Seat belt exemption** for passengers over 70 years of age repealed.

1989 **Prime Minister's 10 point road safety package** was devised.

1990 **Penalties** for most traffic offences increased.

1991 **Speed limiting device** legislation for heavy vehicles introduced.

1992 **Compulsory bicycle helmet wearing legislation** came into effect. From July 1, 1992 a rider had the opportunity to buy a helmet or be fined and from January 1, 1993 a rider was fined if found not to be wearing a correctly fastened helmet. Helmet subsidy scheme applied.

1992 **Maximum speed limit for drivers of heavy vehicles** increased to 100km/h.

1992 **Penalties** increased for speeding offences committed by drivers of heavy vehicles.

1993 **BAC limit of 0.05gm%** introduced. Penalties of $100 and three demerit points were applied.

1993 **Local traffic area 40km/h** legislation introduced.

1993 **Threshold on General Damages** introduced to eliminate non-pecuniary loss for minor personal injury claims.

1994 **Speed limits** (max) increased for:

- probationary drivers from 80km/h to 90km/h where applicable; and
- freeways from 90km/h to 100km/h.

1995 **Seat belt regulations repealed and new regulations became effective.** From January 1st all children, regardless of age were to be correctly restrained.

1995 **Revised Towed agricultural implements regulations** introduced impacting on the use of agricultural implements being towed on the road.

1995 **Suspension of motor driver's licence** for non-payment of fines introduced.

1995 **Young Offenders Act** introduced.

1996 **Restricted use of right lane** regulation introduced regardless of speed limit - all vehicles to keep left unless overtaking, intending to turn right, or providing good reason for being in the right hand lane. (Note – changed to apply to 90km/h roads and higher in 2000).

1997 **Alcohol Preliminary Testing Units with electrical digital reading** capabilities (LION SD 400) introduced.

1997 **Road Safety Council (RSC)** formed to replace the Traffic Board of Western Australia.

1998 **Penalties** for some traffic offences increased (and penalty units introduced).

1999 **New Practical driving assessment** introduced as first component of the Graduated Driver Training and Licensing System (March).

2000 **Road Traffic Code 2000** commenced (1 December 2000) with provisions similar to the Australian Road Rules (apart from a few exceptions).

2000 **Restricted use of right lane regulation** applied to roads where speed limit 90km/h or greater (all vehicles are required to keep left unless overtaking, intending to turn right, or providing good reason for being in the right hand lane).

2001 **Regulation prohibiting passengers riding in the open load space** of some vehicles (utilities) introduced on 1 January, 2001.

2001 **Road Traffic Act 1974 amended** to give effect to the Graduated Driver Training and Licensing system for novice drivers. Probation period extended from 1 to 2 years or until 19 years of age (whichever is the greater period).

2001 **Probationary licences** no longer cancelled for non-payment of Fines (only suspension of licence).

2001 **Using a Hand-held Mobile Phone** whilst driving banned from July 1, 2001.

2001 **National driver licence classes and minimum standard assessment vehicles** for testing of drivers introduced (7 May).

2001 **Compulsory Photographs and signatures on licence** (7 May).

2001 **Industry training and assessment for MC licence applications**

2001 **Default built-up area speed limit** reduced from 60km/h to 50km/h. Applied to all roads in a built-up area except within a speed zone in which another speed limit is signed (1 December).

2002 **Speed limit of 90km/h for Probationary drivers** removed (6 February).

2002 **Hazard perception test** introduced for learner drivers.

2002 **A trial of Double Demerit points** during holiday periods introduced for offences in relation to speeding, drink driving and failure to use restraints.

2002 **Heavy Vehicle Accreditation Scheme** implemented (requiring the introduction of a quality systems approach to the management of heavy vehicle maintenance and driver fatigue).

2002 **Road Safety Council Act 2002 passed.** Under the Act the functions of the Road Safety Council and administration of the Road Trauma Trust Fund were transferred from the *Road Traffic Act 1974.*

2002 **Road Traffic (Vehicle Standards) Rules and Regulations 2002** introduced.

2004 **Road Traffic Amendment (Impounding and Confiscation of Vehicles) Act 2004.** This amendment allows police to impound vehicles and suspend driver's licences for reckless and dangerous driving.

2004 **Automatic Number Plate Recognition Devices** introduced.

2004 **Double Demerit Points for Nominated Offences** (Drink Driving 0.05%<0.08%, Speeding, Not wearing a Seat Belt and Occupying Open Load Spaces) gazetted into legislation for nominated dates.

2004 **Road Traffic Act amended to introduce hoon legislation**, including inter alia, 48 hour impounding (December).

2004 **Redefinition of "driving"** by the High Court to exclude claims for personal injury arising from vehicles not in motion.

2005 **Changes for converting overseas licences** commenced 1 January. Testing of licence holders from non-recognised countries for all classes of licence. Licence holders from recognised countries tested for classes other than car and motorcycle.

2006 **Final phase of the Open Load Space** regulations came into effect prohibiting the carriage of passengers in the load space of utilities, panel vans and trucks (1 January).

2006 **Owner-onus regulations** came into effect requiring responsible persons (vehicle owners) to identify who was driving their vehicle at a particular time and introducing an offence for failing to take reasonable measures to ensure that if a request for the identity of a driver is made in relation to the vehicle, the responsible person will be able to comply (1 January).

2006 **New regulations for push-type motorised scooters** introduced. Electric motors with 200W or less power permitted and only to be used where wheeled recreational devices permitted (29 December).

2007 **Penalties increased for speeding, seat belts and penalties for other offences amended** (January) based on review by Road Safety Council. Fines for seat belt non-wearing increased further in April 2007.

2007 **Indemnity** for persons reporting unsafe or dangerous drivers (6 July).

2007 **New drug driving laws** introduced (12 October).

2008 **Zero BAC for novice drivers introduced** (previously 0.02% BAC).

2008 **Night time driving restrictions for novices in their first 6 months on a probationary licence (p1)** introduced (1 July).

2008 **Fines increased for some speeding and seat belt offences** (1 March)– light vehicles: 20km/h to 29km/h increased from 5PU ($250) to 6PU ($300), 30km/h-39km/h increased from 7PU ($350) to 14 PU ($700). Heavy vehicles 20km/h – 29km/h increased from 7PU to 8PU, 30km/h – 39km/h increased from 10PU to 17PU. Driver responsibility extended from passengers under 16 to all passengers (irrespective of age) with fines increasing depending on numbers of unrestrained passengers and whether driver restrained or not. If driver restrained but passengers not: 1 passenger=10PU, 2=12PU, 3=14PU, 4 or more 16PU. Penalties greater if driver also not wearing a seat belt.

2008 **Driving in contravention of a driver's licence class condition** constitute unlicensed driving (30 June).

2008 **Licences with photographs and signatures** valid for 10 years (30 June).

2008 **Learners permit validity** extended from 1 to 3 years (30 June).

2008 **Compulsory surrender of all driver's licence** documents (i.e. driver's licence cards) at commencement of a licence disqualification or cancellation. (30 June).

2008 **Disqualification of a WA driver's licence in another Australian jurisdiction** recognised in WA (30 June).

2008 **Overseas visitor licence** 12 month recognition replaced by allowance to drive while visitor (30 June).

2008 **New demerit point disqualification period** based on the number of demerit points accrued introduced with good behaviour option and double disqualification if re-offence in probationary period. No extraordinary licences able to be obtained in period (June 2008).

2008 **Penalties increased for 'hoon' behaviour** including roadside impounding for 1 week for first offence (July).

2009 **Definition of unauthorised driving offences amended.** Broaden circumstances where a vehicle could be impounded for unauthorised driving offences. Roadside impoundment unauthorised driving offences increased to 28 days. Hoon impounding offences increased to 3 months roadside impoundment for a second charge (1 July).

2009 **Enhanced Speed Enforcement Program commenced** to upgrade entire traffic camera fleet and processing systems to digital (July).

2010 **Hoon legislation amended to remove the requirement of circumstances of aggravation.** All s.60 Reckless driving offences are now impounding offences. (1 January).

2010 **Novice Driver Graduated Demerit Point Scheme**

From 1 December 2010 a novice driver who hold a licence up to 1 year are restricted to 3 demerit points in that year and 7 demerit points over 2 years. Any demerit points accumulated above theserestrictions will result in a 3 month disqualification period.

2010 **Immediate Disqualification for drivers charged with drink driving offences.**

Drivers who are charged with an offence of drving with a BAC 08 and above are served with a notice disqualifying the person from driving for a period of 2 months.

2010 **Introduction of Redflex Red light/speed cameras and Vitronic PoliScan digital speed cameras** into the speed camera fleet (July).

2010 **Child car restraints regulations** amended to ensure that children aged under seven years are restrained in an age-appropriate restraint. Children under four years are also restricted from being seated in the front seat of a vehicle with two or more rows (1 October).

2010 **Restraints regulations** amended to ensure all passengers are restrained in either a seat belt or child restraint. The total number of passengers must, therefore, not be greater than the total number of seat belts (1 October).

2011 **Hands-free use of mobile phones whilst driving** banned for all functions except making and receiving a phone call and use of the satellite navigation function (1 March).

2011 Last of the wet film **Multanova radar speed cameras** retired (April).

2011 **Penalties increased for certain drink and drug driving offences** (1 October).

2011 **Zero Blood Alcohol Concentration (BAC) applicable to a prescribed class of drivers** introduced. (1 October).

2011 **LTI TruCam hand held speed cameras** introduced into the speed camera fleet (August).

2011 **First fixed site speed camera** installed on Mitchell Freeway (December).

2012 **Mandatory Supervised Learner Driving Hours** increased from 25 hours over six months after the Practical Driving Assessment to 50 hours in total, with 25 hours now required before the Practical test (November).

2012 **Mandatory medical assessments for drivers aged 75 and 78 cease** as there is a requirement for all driver's licence holders, regardless of age, to advise they have a medical condition and/or take any medication that may affect their ability to drive a vehicle (April)

2013 **Learner Approved Motorcycle Scheme (LAMS)** introduced which increased the range, frame size and style of suitable scooters and motorcycles that can be ridden on an R-E class licence (January).

2013 **Removal of practical driving test requirement for over 85s** based upon research into older driver behaviour suggesting older drivers do not pose an unacceptable road safety risk and requiring a mandatory PDA is potentially discriminatory (December).

2013 **EPTs permitted to be used** by tour operators in certain areas (April)

2013 **Extension of changes for converting overseas licences** to provide for an experienced driver recognition category. This category recognises a person's driving experience and age (minimum 25 years old) as a substitute for novice driver licensing measures (March).

GLOSSARY OF TERMS

Alcohol-Related Crash: A crash that involved at least one driver/rider with a BAC of 0.05 g/100mL or above.

ARIA: (Accessibility/Remoteness Index of Australia). A geographical measure of remoteness. For more information see < http://www.gisca.adelaide.edu.au >.

Articulated Truck: A vehicle consisting of a prime mover having no significant load carrying area, but with a turn-table device that can be linked to a trailer. With or without a trailer the Gross Combination Mass (i.e., the combined prime mover and trailer) must exceed 3.5 tonnes.

BAC: Blood alcohol concentration measured as grams of alcohol per 100mL of blood. A BAC of 0.05 g/100mL is equivalent to a BAC of 0.05 gm%.

Bicycle: A vehicle with one or more wheels that is designed to be propelled by human power through a belt, chain or gears. It does not include a wheelchair, wheeled recreational device, wheeled toy, or any vehicle with an auxiliary motor capable of generating a power output over 200 watts (whether or not the motor is operating).

Bicyclist: A person riding a bicycle, including pillion passengers.

Child Restraint: A device used for restraining a young child travelling in a motor vehicle (e.g. baby capsule, baby seat, booster seat, etc.).

Child Road User: A road user under 17 years of age.

Col %: Column percentage.

Crash Severity: Derived from the most serious injury in a crash. The three levels are:

1. Fatal crash – involved a fatality;
2. Hospitalisation Crash – involved a person who was seriously injured, but no fatalities;
3. Other – involved minor or no/unknown injuries only.

Driver: Any person that is driving a vehicle (excluding a motorcycle, bicycle, animal or animal drawn vehicle).

Driver/Rider: Any person in control of a vehicle (excluding a bicycle, animal or animal drawn vehicle). Includes motor vehicle drivers and motorcycle riders, but excludes motor vehicle passengers and motorcycle pillion and sidecar passengers.

Drivers/Riders *Involved* in Crashes: All persons in control of vehicles (excluding bicycles, animals and animal drawn vehicles) that were in crashes. Includes drivers/riders who were not injured as well as those who were injured or killed.

Fatal Crash: A road crash in which at least one person was killed immediately or died within 30 days of the crash, as a result of the crash.

Fatality: A person who was killed immediately or died within 30 days of the day of a road crash as a result of the crash.

Helmet: A protective device worn on the head to prevent injuries in the event of a crash. Motorcyclists and bicyclists are required by legislation to wear a helmet that meets Australian standards.

Hospital Admissions: The total number of times road users were admitted to hospital as a result of road crashes. A single road user can be admitted to hospital more than once for treatment of injuries sustained in a single crash and each admission is counted, hence the number of hospital admissions will be higher than the number of people admitted to hospital as a result of road crashes.

Hospitalisation Crash: A road crash that involved at least one serious injury but no fatalities.

In Scope Crashes: Crashes that occur on state or local roads, or any roads that are open to public access (e.g. Kings Park, CALM roads and laneways). Does not include crashes that occur off road or in car parks. Does not include collisions that occur due to a medical condition, suicide attempts or police chases.

Injury Severity: The level of injury sustained by a person involved in a crash. The four levels used in this report are:

1. Fatal – the person died within 30 days of the crash, due to injuries received in the crash;
2. Serious – the person was admitted to hospital as an inpatient for treatment of injuries sustained in the crash, but did not die within 30 days of the crash. (In earlier volumes of this series of reports, the term hospitalised was used instead of serious injury);
3. Minor – the person was injured and may have received medical attention, but was not admitted to hospital as an inpatient. Includes injuries for which no medical treatment was required;
4. None/Unknown – the person was not injured or it was not recorded whether any injuries were sustained.

KSI: Killed or seriously injured.

KSI Rate: Number of persons killed or seriously injured per specified unit. In this report the following KSI rates are provided:

1. per 10,000 registered vehicles,
2. per 100 million vehicle kilometres travelled and
3. per 100,000 population.

Mature Adult Road User: A road user aged 25 to 59 years.

Medical Attention Crash: A road crash in which the most serious injury resulted in a person requiring medical treatment, but without being admitted to hospital.

Metropolitan: The area equivalent to the Perth Statistical Division as defined by the Australian Bureau of Statistics.

Minor Injuries: Injuries from a road crash in which the person was not admitted to hospital. Includes injuries such as sprains and bruises, which may not require medical treatment.

Motorcycle: A motor vehicle with two or three wheels. Includes motor vehicles that have a sidecar attached, motor scooters, mopeds, trail bikes and mini-bikes.

Motorcycle Pillion: A pillion or sidecar passenger of a motorcycle.

Motorcycle Rider: A person riding a motorcycle, motor scooter, moped, trail bike or mini-bike. Excludes pillion and sidecar passengers – see Motorcycle Pillion.

Motorcyclists: A motorcycle rider or motorcycle pillion.

Motor Vehicle Occupant: An occupant of a motorised vehicle, excluding motorcycles, tractors and trailer type vehicles (caravans, campers etc.). Excludes occupants and riders of non-motorised transport, such as bicycles, animal drawn vehicles and ridden animals.

Multi-Vehicle Crash: A crash involving two or more moving vehicles.

n: Number.

N/R: Not reported. Where a count is less than ten, percentage changes are not reported.

Off-Road: Locations that are not classified as roads. Includes car parks, cycle paths, beaches, parking areas, petrol stations, driveways and recreational areas.

'Other' Road User: Persons riding an animal or persons in an animal drawn vehicle.

Out of Scope Crashes: Crashes that occur due to a medical condition, deliberate acts (e.g. suicide attempts), police chases or in off-road locations such as beaches, car parks, cycle paths, driveways, petrol stations, recreational areas or ramps at boat harbours.

Passenger: Any person other than the driver travelling in a motor vehicle. Excludes persons riding on an animal, bicycle or motorcycle and persons in an animal drawn vehicle.

Pedestrian: A person on foot or sitting or lying, a person in or on a wheeled recreational device or wheeled toy, an occupant of a non-motorised wheelchair, an occupant of a motorised wheelchair/gopher, a person pushing a motorised or non-motorised wheelchair. Includes a person on roller skates, in-line skates or a skateboard, but excludes a person riding a bicycle. Also includes a person who has just alighted from a vehicle.

Persons Killed or Seriously injured: The number of fatalities and persons seriously injured as the result of a crash. Includes persons who were killed outright or died within 30 days of the day of the road crash as a result of the crash and persons admitted to hospital as a result of a road crash and who did not die from injuries sustained in the crash within 30 days of the crash.

Person Seriously Injured: A person admitted to hospital as a result of a road crash and who does not die from injuries sustained in the crash within 30 days of the crash.

Region: Subdivisions of Western Australia used by Main Roads Western Australia.

Restraint: A device designed to hold a person within the body of a vehicle and limit movement during a crash, thereby reducing severity of injury. Includes inertia reel and fixed lap or sash seat belts, and child restraints such as capsules. (See also Seat belt).

Rider: Used as an abbreviation for Motorcycle Rider in some tables and graphs. A person riding a motorcycle, motor scooter, moped, trail bike or mini-bike. Excludes bicycle riders, motorcycle pillion and sidecar passengers.

Rigid Truck: A vehicle constructed primarily for load carrying with a gross vehicle mass (GVM) exceeding 3.5 tonnes.

Road: Any thoroughfare, highway or road that is open to or used by the public for the purpose of driving or riding of motor vehicles.

Road Crash: Any unpremeditated incident where in the course of the use of any vehicle on a road that was not temporarily closed off to the public, a person is injured or property is damaged. The crash must involve vehicle movement. Does not include collisions that occur due to a medical condition, deliberate acts (e.g. suicide attempts) or police chases.

Road User: Includes drivers, passengers, motorcycle riders, motorcycle pillion, bicycle riders, persons riding an animal, persons in an animal drawn vehicle and pedestrians.

Road User Groups: Categories used to separate different road users. These categories are used for hospital admission data only and are not directly comparable with the 'Road User Types' used for police-reported data.

Road User Types: Categories used to separate different road users. These categories are used for police-reported data only and are not directly comparable with the 'Road User Groups' used for hospital admission data.

Run-Off-Road Crash: Crashes in which a vehicle involved exits the carriageway, through a loss of control, swerving to avoid a collision or for other reasons. After the vehicle has left the carriageway it may also collide with a person, object, or vehicle, or it may roll over, and/or a person may fall or be ejected from the vehicle.

Seat belt: A device designed to hold a person within the body of a vehicle and limit movement during a crash, thereby reducing severity of injury. Includes inertia reel and fixed lap or sash seat belts, and child restraints such as capsules. The device must meet the relevant Australian Vehicle Design Rules and the Australian Standards. Drivers and passengers of motor vehicles must wear seat belts.

Senior Adult Road User: A road user aged 60 years or over.

Serious Crash: A road crash that resulted in at least one fatality and/or where at least one person was seriously injured.

Serious Injury Rate: The number of persons seriously injured per specified unit. In this report the following serious injury rates are provided:

1. per 10,000 registered vehicles;
2. per 100 million vehicle kilometres travelled; and
3. per 100,000 population.

Seriously Injured: Admitted to hospital as an inpatient for treatment of injuries sustained in a crash, but did not die within 30 days of the crash.

Single-Vehicle Crash: A crash in which only one moving vehicle was involved. Includes collisions with pedestrians, animals and fixed objects such as a tree, pole, bridge, dropped load, or parked vehicle, and includes non-collisions such as a roll-over.

Speeding: A vehicle is considered to be speeding if it travels at excessive speed for the prevailing conditions, or above the posted speed limit.

Speed-Related Crash: A crash in which speed was found to be a factor in causing the road crash.

Vehicle: Includes motor vehicles, trailers, trams, bicycles, animal drawn vehicles or animals that are being ridden and motorised golf buggies. Excludes non-motorised wheelchairs, motorised wheelchairs/gophers, trains, wheeled recreational devices and wheeled toys.

Wheelchair: A chair mounted on two or more wheels that is built to transport a person who is unable to walk or has difficulty in walking. Does not include a pram, stroller or trolley.

Wheeled Recreational Device: A wheeled device built to transport a person that is propelled by human power or gravity and ordinarily used for recreation or play. Includes in-line skates, roller skates, skateboards and similar wheeled devices. Does not include a golf buggy, pram, stroller, trolley, bicycle, wheelchair or wheeled toy.

Wheeled Toy: A child's pedal car, child's scooter, child's tricycle or a similar toy. Does not include a bicycle.

Young Adult Road User: A road user aged 17 to 24 years.

FEEDBACK QUESTIONNAIRE

We would appreciate your comments on this report. Please complete this questionnaire and return it to the address below.

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