REPORTED ROAD CRASHES
IN WESTERN AUSTRALIA 2011

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TITLE
Reported Road Crashes in Western Australia 2011

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ABSTRACT
This report presents information on road crashes that occurred in Western Australia in 2011. There were 39,457 police-reported road crashes involving 76,182 vehicles and 2,644 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

In 2011, 175 police-reported road crash fatalities occurred on Western Australian roads. This figure was eight per cent lower than the 2010 figure of 193. The number of people seriously injured in police-reported road crashes also dropped by two per cent, from 2,531 in 2010 to 2,469 in 2011.

While any reduction in road crash fatalities or serious injuries is good news, it does not give us a reason to be complacent. Western Australia still has a higher fatality rate per 100,000 residents (7.4) than the whole of Australia (5.7) and is ranked second worst of all Australian states and territories. This is largely due to the high proportion of Western Australian fatalities (58%) occurring on regional and remote roads.

Launched in 2008, the State Government's Towards Zero strategy ambitiously aims to reduce the number of deaths and serious injuries on our roads by 11,000 by 2020. Based on the Safe System approach, it recognises that driver behaviour is not the only contributing factor to road trauma. Instead, it focuses on the four key cornerstones of Safe Road Use, Safe Roads and Roadsides, Safe Speeds and Safe Vehicles.

Produced annually, this crash book helps track our progress in the fight to reduce road trauma and is a useful tool for the road safety community. It provides us with a clear breakdown of the road safety statistics for each year and gives us the opportunity to target areas of high priority with education campaigns and other supporting initiatives.

In 2011, speed and alcohol remained contributing factors in many of the fatal and serious injury crashes.

Speed played a role in 27% of the fatal crashes and 68% of these were single vehicle incidents. These figures were even higher when considering motorcycles only, with 55% of motorcyclist fatalities occurring in speed-related crashes.

More than one-fifth (22%) of police-attended fatal crashes and 10% of serious injury crashes involved a driver or rider with a blood alcohol limit of 0.05g/100ml or above. The clear majority (89%) of these were male.

When considering the age of those killed on our roads, the number of fatalities among drivers aged 60-plus increased by 34% but those in the 25 to 39 and 40 to 59 year age brackets dropped by 24% and 22% respectively.

While this may be some indication that our road safety messages are reaching younger road users, males continue to display more careless and high risk behaviours than their female counterparts.

Of all fatalities reported in 2011, 74% were male while the number of fatalities for females actually dropped by 21%. Almost one-third of the males killed in road crashes were not wearing a seatbelt, compared to 17% of females.

Failure to wear helmets also contributed to one of the 25 motorcylist fatalities and two of the three cyclist fatalities. Furthermore, more than one-fifth of cyclists seriously injured in crashes were not wearing a helmet.

This is a senseless and tragic loss of life that may have been prevented with a simple change of behaviour.

With support from the State Government, community and other road agencies, the Road Safety Council will continue to implement the four cornerstones of Towards Zero for a safe system to reduce the devastating effects of road trauma.

In addition to speed and impaired driving, we will be giving priority to the improvement of urban intersections, which are the scene of more than one-quarter of metropolitan fatal crashes. Initiatives that counteract the high numbers of fatal 'run-off road' crashes in regional and remote areas and inform the market to demand safer vehicles are high on our agenda going forward.

Professor Murray Lampard APM
Independent Chair
Road Safety Council

KEY ROAD CRASH FACTS FOR 2011

Fatalities

- In 2011, there were 175 police-reported road crash fatalities in Western Australia, which was 16 lower than in 2010.
- The number of fatalities was 8% lower than the previous year.

Persons Seriously Injured

- In 2011, there were 2,469 people seriously injured in police-reported road crashes, compared to 2,531 in 2010.
- The number of persons seriously injured was 2% lower than the previous year.

Trends in Crashes

- The fatality rate per 100,000 population for Western Australia was 7.4 (ranked 7th out of all Australian States and Territories), compared to 5.7 for the whole of Australia.
- Of fatal crashes, 42% occurred in the Metropolitan region, 35% occurred in Regional areas and 23% in Remote areas.
- Of hospitalisation crashes, 70% occurred in the Metropolitan region, 19% occurred in Regional areas and 11% in Remote areas.
- In 2011, the number of fatalities in the 60 years or older age group was 34% higher than the previous year, where the 25 to 39 year and 40 to 59 year ages groups were lower by 24% and 22%, respectively. The number of fatalities for females decreased by 21% from 2010.

All Road Users

- Of all fatalities, 74% were male and 26% were female.
- Of all fatalities, 25% were aged between 17 and 24 years and 24% were aged between 25 and 39 years.
- Almost half (49%) of all fatalities were drivers, 21% were passengers, 14% were motorcyclists and 14% were pedestrians.

Child Road Users

- Children aged 16 years and under made up 8% of all persons killed or seriously injured.
- The highest proportion of child road users who were killed or seriously injured were passengers (57%) followed by pedestrians with 28%.
- Of child motor vehicle occupants in police-attended crashes who were killed or seriously injured, 18% were not wearing a seat belt, compared to 7% of all persons.
- Five of the seven (71%) child bicyclists who were killed or seriously injured were not wearing helmets.
- Of all children killed or seriously injured, 34% were killed or seriously injured between 3pm to 6pm.
- Of all accidents where children were killed or seriously injured, 22% occurred on a Saturday.

Young Adult Road Users

- Persons aged 17 to 24 years made up 24% of all persons killed or seriously injured.
- Of young adult road users who were killed or seriously injured, 54% were drivers, 26% were passengers and 12% were motorcyclists.
- Of young adult road users who were killed or seriously injured in police-attended crashes, 19% were in crashes where speed was a factor. In comparison, of all persons killed or seriously injured in police-attended crashes, 14% were in crashes where speed was factor.
- Of young adult road users who were killed or seriously injured in police-attended crashes, 13% were in alcohol-related crashes (i.e. involving a driver/rider with a BAC of 0.05 g/100mL or above), compared to 10% for all persons killed or seriously injured in police-attended crashes.

Mature Adult Road Users

- Persons aged 25 to 59 years accounted for 51% of all persons killed or seriously injured.
- Over half (54%) of mature adult road users who were killed or seriously injured were drivers, 21% were motorcyclists and 14% were motor vehicle passengers.

Senior Adult Road Users

- Persons aged 60 years and over made up 12% of all persons killed or seriously injured.
- Of senior adult road users who were killed or seriously injured, 65% were drivers, 14% were passengers, 9% were motorcyclists and 9% were pedestrians.
- More than half (59%) of senior adult drivers/riders involved in serious crashes were in 'Intersection' crashes. This compares with 48% of all drivers/riders involved in serious crashes.

Speed

- Speed was a factor in 27% of police-attended fatal crashes.
- The percentage of police-attended fatal crashes that were speed-related was highest in the Metropolitan region (35%) and lowest in the Regional *Towards Zero* region (19%).
- More than half (55%) of motorcyclist fatalities occurred in speed-related crashes attended by police.
- More than two thirds (68%) of speed-related fatal crashes attended by police were single-vehicle crashes and 80% of these were 'Hit Object' crashes.

Alcohol

- More than one fifth (22%) of police-attended fatal crashes involved a driver/rider with a BAC of 0.05 g/100mL or above.
- Among road users killed or seriously injured, 11% were involved in alcohol-related crashes attended by police (i.e. crashes involving a driver/rider with a BAC of 0.05 g/100mL or above).
- The majority (89%) of drivers/riders *involved* in alcohol-related police-attended fatal crashes were male.
- Seven of the 24 pedestrian fatalities in police-attended crashes had a BAC of 0.05 g/100mL or above.

Illegal Drugs

- Almost one fifth (17%) of the 161 fatalities matched to the crash data had illegal drugs detected in their systems.
- More than a third (36%) of the 42 fatalities from age group 17 to 24 matched to the crash data had illegal drugs detected in their systems.
- More than a fifth (22%) of the 23 motorcyclist fatalities matched to the crash data had illegal drugs detected in their systems. Just over one fifth (21%) of the pedestrian fatalities matched to the crash data 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 17% of female motor vehicle occupant fatalities in police-attended crashes were not wearing a seat belt.

Helmets

- One of the 25 motorcyclist fatalities in police-attended crashes was not wearing a helmet.
- Of the three bicyclist fatalities in police-attended crashes, two were not wearing helmets.
- More than one fifth (21%) of bicyclists seriously injured in crashes attended by police were not wearing a helmet.

Crash Nature

- Single-vehicle crashes constituted 66% of all fatal crashes.
- Single-vehicle crashes accounted for 87% of fatal crashes in Remote areas, 74% of fatal crashes in Regional areas and 47% of fatal crashes in the Metropolitan region.
- More than a quarter (27%) of fatal crashes in the Metropolitan region occurred at an intersection.
- In Remote areas, 68% of fatal crashes were ‘Run Off Road’ crashes, compared to 60% of fatal crashes in Regional areas and 31% of fatal crashes in the Metropolitan region.
- In Remote areas, 5% of fatal crashes were ‘Head On’ crashes, compared to 18% in the Metropolitan region and 11% in Regional areas.

Hospital Inpatient Data

- Hospital inpatient data showed there were 4,234 people admitted to hospital due to road crashes, of whom 32 people died after admission to hospital.
- Indigenous Australians made up 7% of hospital inpatients resulting from road crashes.
- Almost two thirds (32%) of hospital inpatients were motor vehicle drivers and 22% were motorcyclists.

Key Performance Indicators

The key performance indicators 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 2006	2007	2008	2009	2010	2011	2011 Change from 2010
Number of hospitalised bed days							
Cumulative length of stay (days)	28,213.71	28,755.76	31,219.20	31,561.40	29,886.48	26,716.54	-10.6
Average length of stay (days)	8.3	8.0	8.1	8.0	7.4	6.3	-15.2
Cost of crashes to the WA community (2011 dollars)[1]							
Cost ($m) – Human Capital	2,257.0	2,391.6	2,329.9	2,121.9	2,146.8	2,085.0	-2.9
Cost ($m) – Willingness to pay	-	3,229.4	2,975.3	2,793.6	2,826.8	2,711.9	-4.1
Number of serious crashes by *Towards Zero* regions							
Metropolitan	1,542	1,617	1,685	1,482	1,464	1,467	0.2
Regional	446	465	500	427	459	444	-3.3
Remote	316	319	279	274	282	258	-8.5
Number of persons killed or seriously injured							
Persons KSI	2,965	3,019	3,095	2,759	2,722	2,644	-2.9
Percentage of vehicles exceeding the speed limit by speed zone[2]							
60 km/h	n/a	51.0	41.2	38.2	46.6	48.2	3.4
70 km/h	n/a	41.4	26.0	21.3	37.4	37.0	-1.1
80 km/h	n/a	37.3	29.2	23.5	39.9	34.0	-14.8
90 km/h	n/a	24.6	34.5	33.7	26.6	27.8	4.5
100 km/h	n/a	33.8	35.0	43.3	20.2	32.3	59.9
110 km/h	n/a	23.6	28.1	30.3	23.8	15.5	-34.9
Injury rates for persons killed or seriously injured[3]							
Persons KSI per 100,000 population	144.0	142.8	142.1	122.8	118.5	112.4	-5.2
Persons KSI per 10,000 registered vehicles	18.5	18.0	17.7	15.1	14.6	13.8	-5.0
Persons KSI per 100 million km travelled[3]	13.1	12.4	12.2	10.7	10.4	9.9	-4.5

1. For details on data sources and methodology, refer to Section 2.2 on page 16.
2. For details on data sources and methodology, refer to section 4.3 on page 76.
3. The 2008 and 2009 KSI rates per 100 million km travelled is based on average kilometres travelled (interpolated between 2007 and 2010 figures) and number of registered vehicles in each year.

KPI	Year 2006 n	2006 %	2007 n	2007 %	2008 n	2008 %	2009 n	2009 %	2010 n	2010 %	2011 n	2011 %	2011 Change from 2010 %
Number and percentage of persons killed or seriously injured in police-attended crashes involving illegal behaviour[4,5,6]													
Speed a factor[4]	497	19.5	494	18.7	477	17.6	412	17.1	340	14.2	334	14.3	-1.8
Alcohol a factor[4]	308	12.1	400	15.2	313	11.6	334	13.9	282	11.7	253	10.8	-10.3
Seat belt not worn[5]	196	9.9	186	9.1	157	7.7	157	9	132	7.5	119	7	-9.8
Helmet not worn (motorcyclists)	29	9	41	12.2	37	10.1	38	11.1	36	9.9	22	6	-38.9
Helmet not worn (bicyclists)	23	33.8	23	33.3	22	21.6	23	27.1	19	23.2	19	22.4	0.0
Illegal drugs (fatalities)[6]	42	20.9	61	26.0	46	24.9	38	21.6	37	21.3	28	17.4	-24.3
Number and percentage of persons killed or seriously injured by road user type													
Driver	1,493	50.4	1,570	52.0	1,532	49.5	1,282	46.5	1,328	48.8	1,271	48.1	-4.3
Passenger	763	25.7	747	24.7	736	23.8	700	25.4	607	22.3	584	22.1	-3.8
Pedestrian	202	6.8	180	6.0	200	6.5	236	8.6	204	7.5	213	8.1	4.4
Bicyclist	86	2.9	92	3.0	119	3.8	112	4.1	111	4.1	105	4.0	-5.4
Motorcyclist	373	12.6	376	12.5	420	13.6	386	14.0	421	15.5	424	16.0	0.7
Scooter/Moped user	4	0.1	5	0.2	6	0.2	7	0.3	-	0.0	1	0.0	N/A
Heavy vehicle occupant	44	1.5	49	1.6	82	2.6	36	1.3	51	1.9	46	1.7	-9.8
Number and percentage of persons killed or seriously injured in crashes at intersections by *Towards Zero* areas													
Metropolitan	983	83.2	1055	82.9	1108	83.0	1003	83.7	942	83.2	884	81.0	-6.2
Regional	150	12.7	167	13.1	162	12.1	142	11.8	151	13.3	161	14.8	6.6
Remote	48	4.1	51	4.0	65	4.9	54	4.5	39	3.4	46	4.2	17.9
Number and percentage of persons killed or seriously injured in head on crashes by *Towards Zero* areas													
Metropolitan	91	55.8	124	61.1	89	56.7	79	52.0	86	52.8	86	57.3	0.0
Regional	48	29.4	46	22.7	55	35.0	55	36.2	45	27.6	42	28.0	-6.7
Remote	24	14.7	33	16.3	13	8.3	18	11.8	32	19.6	22	14.7	-31.3
Number and percentage of persons killed or seriously injured run off road crashes by *Towards Zero* areas													
Metropolitan	436	40.5	451	41.7	454	41.0	398	42.7	350	36.7	388	42.9	10.9
Regional	325	30.2	301	27.8	361	32.6	287	30.8	311	32.6	281	31.0	-9.6
Remote	316	29.3	329	30.4	292	26.4	248	26.6	293	30.7	236	26.1	-19.5

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 Western Australia for fatalities only.

TABLE OF CONTENTS

LIST OF TABLES

Introduction

Road Crash and Injury Summaries

Broad Age Groups

Safe System

Other Factors

Regional Summaries

Hospital Inpatient Data

LIST OF FIGURES

Road Crash and Injury Summaries

Broad Age Groups

Safe System

Regional Summaries

Hospital Inpatient Data

LIST OF MAPS

1. INTRODUCTION

This report, published annually, is produced by the Office of Road Safety and distributed on behalf of Road Safety Council of Western Australia member agencies. The report provides road crash statistics for 2011 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, a deliberate act (such as a suicide attempt) or a police chase. Crashes that do not meet these criteria (e.g. off-road crashes) have been excluded from the report.

As a result of applying these criteria, four fatalities from four fatal crashes have been excluded from this document, so that this document provides information on a total of 175 fatalities from 163 crashes, compared to 179 fatalities from 167 crashes in other sources.

Two of the four excluded crashes did not meet the definition of being on a road that was open to the public because they involved a bicyclist struck by a car on private property and a motorcyclist killed in a crash on a bush track. In the third excluded crash, the fatally injured driver was observed to have collapsed at the wheel prior to the crash; therefore, this crash was classified as being due to a medical condition. In the fourth crash, the fatality was a motor vehicle passenger killed as a result of equipment failure during an attempt to free a stuck vehicle. This crash was excluded because there was no significant contribution from vehicle movement.

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 152.

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 2 May 2013 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). The estimated kilometres travelled for 2011 was obtained directly from the ABS publication. 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 2011. Casualties involved in non-traffic crashes were excluded. The data was extracted on 18 April 2013 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 137. 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

- Paul Stevens;
- Matthew Cooper; and
- Ellen Ceklic.

Department of Transport

- Karl Shoebridge.

We would also like to thank Matthew Legge and Kirsty Kirkman from the Office of Road Safety for their contributions 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 152, which provides definitions of terms used in the report. Particular note should be made of changes to some of the terminology used in this report compared to that of earlier reports in the same series. These changes 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 2011, 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; or
- 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 2011 is provided in Appendix C on page 143.

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; and
- 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://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%.

1.4 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 2011, 77.3% of Western Australia's population were located in 'Highly Accessible' areas and 8.1% in 'Accessible' areas while only 2.3% were located in 'Very Remote' areas.

Table 2 2011 Western Australian Population by ARIA Category

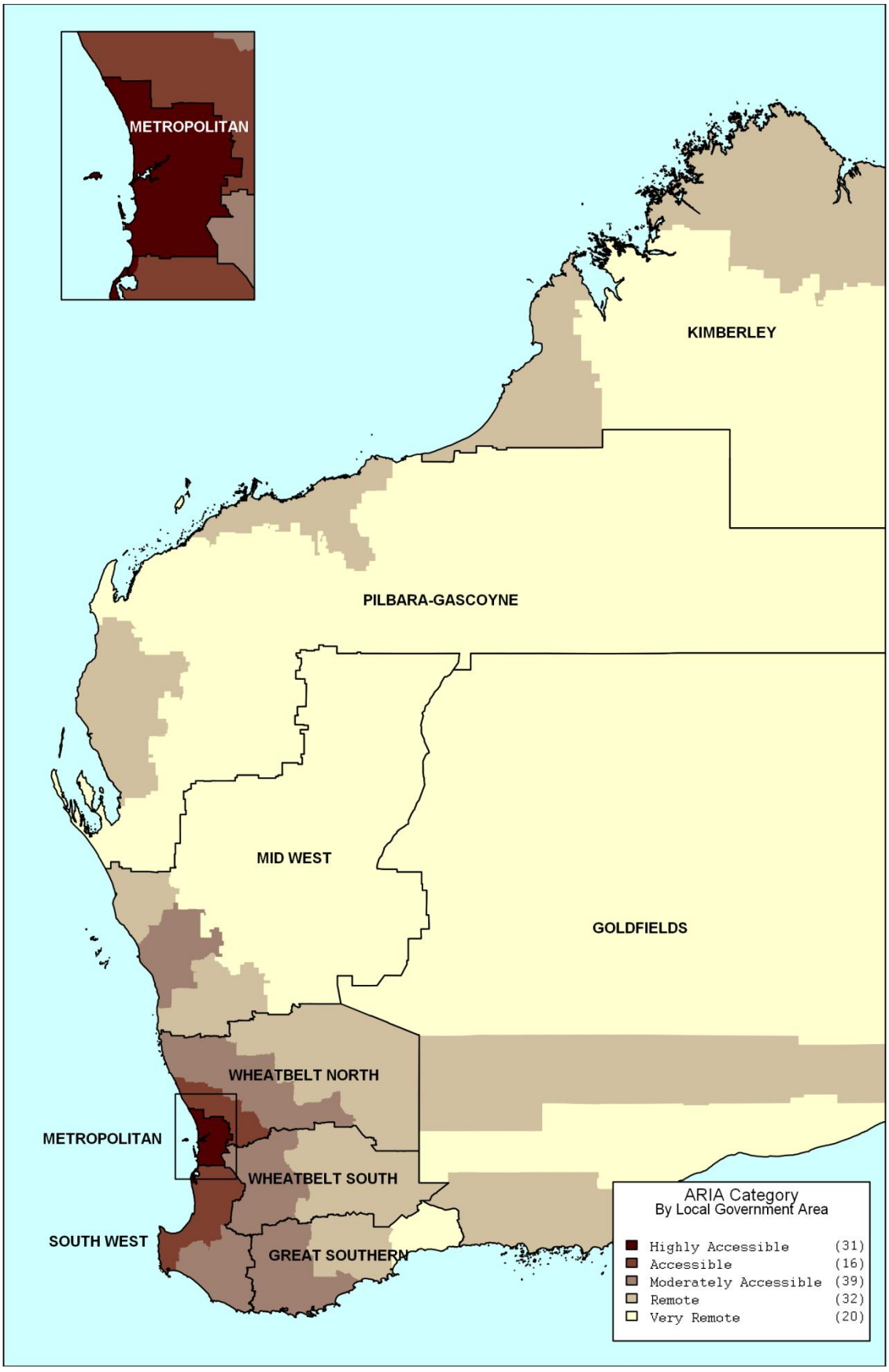
	2011 Population	
ARIA Category	**n**	**%**
Highly Accessible	1,818,134	77.3%
Accessible	190,539	8.1%
Moderately Accessible	182,815	7.8%
Remote	107,200	4.6%
Very Remote	53,527	2.3%
Total	**2,352,215**	**100.0%**

Source: Australian Bureau of Statistics, Customised report, 2013 for 2011 figures.

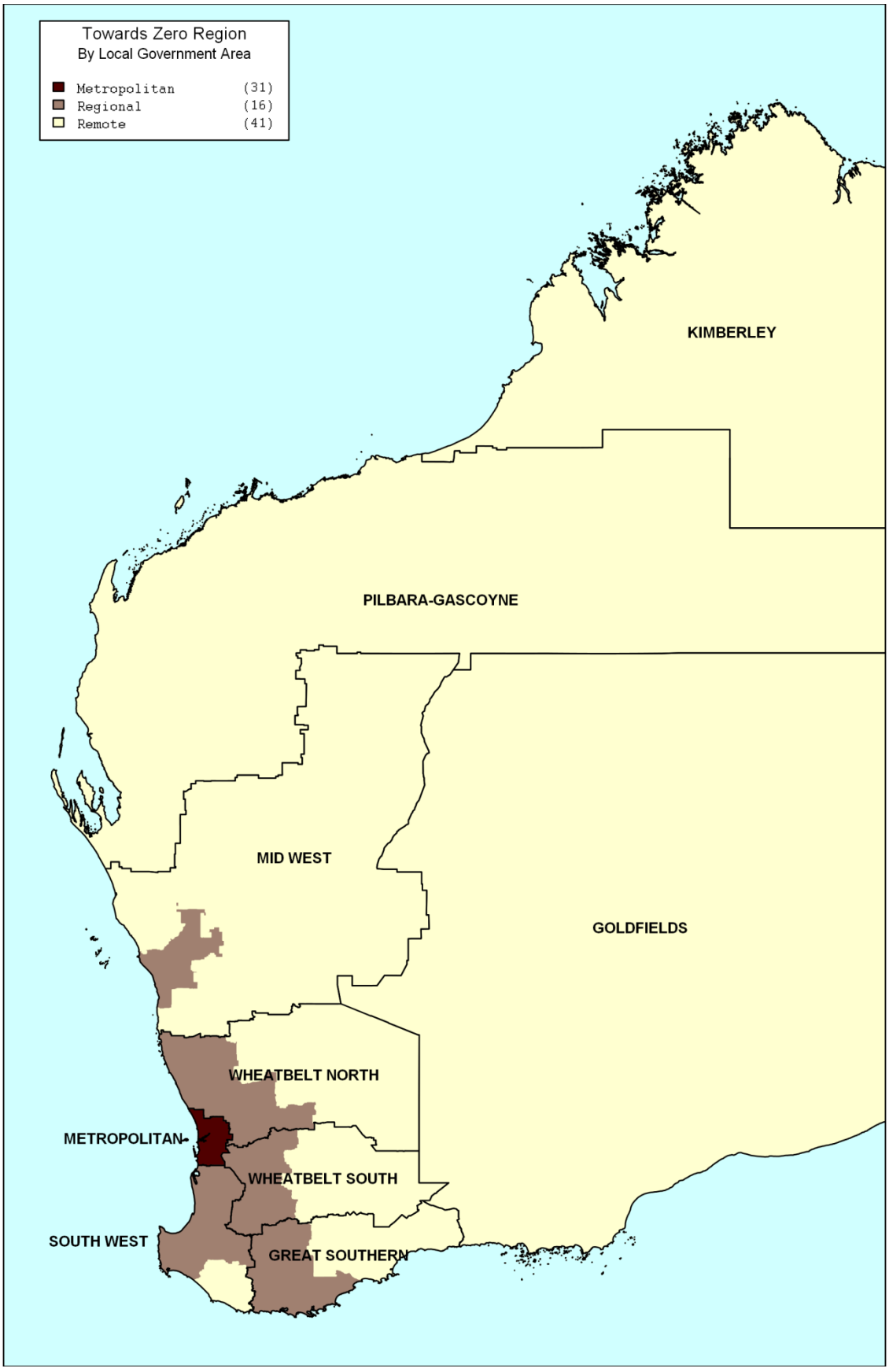
[1] 'Run Off Road' crashes are defined as crashes in which a vehicle involved exits the carriageway, through a loss of control, swerving to avoid a collision or for other reasons. After the vehicle has left the carriageway it may also collide with a person, object, or vehicle, or it may roll over, and/or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

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 where as 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 2006 to 2011. This information may provide additional context to the road crash statistics.

Table 3 Statistical Indicators of the Western Australian Economy by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Statistical Indicator	n	n	n	n	n	n	%
Gross State Product (June)[1]	119,009	138,542	154,840	176,143	181,566	221,574	22.0
Consumer Price Index (June)[2]							
Index Numbers	85.4	88	92	93.3	96.5	99.4	3.0
Annual Percentage Change	4.8	3	4.5	1.4	3.4	3	-11.8
Labour Force (November)[3]							
Persons Employed	1,082,700	1,124,500	1,173,100	1,185,800	1,223,800	1,240,000	1.3
Persons Unemployed	36,100	37,500	39,600	64,200	56,400	55,500	-1.6
Total Labour Force	1,118,800	1,162,000	1,212,700	1,250,000	1,280,200	1,295,500	1.2
Average Weekly Earnings (May)[4]							
Male	$1,039.40	$1,125.80	$1,230.10	$1,306.00	$1,352.70	$1,501.10	11.0
Female	$571.50	$632.00	$660.20	$706.40	$740.40	$780.40	5.4
Persons	$817.70	893.00	$959.30	$1,008.70	$1,060.50	$1,146.00	8.1
New Motor Vehicle Sales[5]							
Passenger Vehicles	63,581	67,771	62,358	52,323	62,303	54,489	-12.5
Sports Utility Vehicle	22,131	24,831	24,556	22,494	28,499	28,290	-0.7
Other Vehicles	25,284	28,745	29,820	25,513	27,005	27,014	0.0
Total Vehicle Sales	110,993	121,346	116,736	100,331	117,807	109,793	-6.8

1. Source: Australian Bureau of Statistics, Catalogue No. 5220.0, in $million (2011/2012 release). 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 (September 2012 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 (2008 – 2012 releases). The Labour Force figures are recorded for December.
4. Source: Australian Bureau of Statistics, Catalogue No. 6302.0 Seasonally adjusted total earnings (May 2012 release).
5. Source: Australian Bureau of Statistics, Catalogue No. 9314.0 (January 2013 release). The New Motor Vehicle Sales figures are seasonally adjusted.

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

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Male							
0 - 16	242,085	245,139	249,530	254,776	257,784	261,305	1.4
17 - 24	122,923	127,148	132,201	137,418	138,839	139,707	0.6
25 - 59	514,096	525,783	542,222	559,292	572,285	587,384	2.6
60 and over	159,941	167,519	174,317	181,014	187,589	194,940	3.9
Total Males	**1,039,045**	**1,065,589**	**1,098,270**	**1,132,500**	**1,156,497**	**1,183,336**	**2.3**
Female							
0 - 16	226,672	231,032	236,379	242,239	245,992	250,629	1.9
17 - 24	153,249	157,754	163,026	167,428	169,297	171,835	1.5
25 - 59	502,060	513,417	528,136	544,391	556,752	570,831	2.5
60 and over	177,224	185,283	192,366	200,066	207,921	216,279	4
Total Females	**1,059,205**	**1,087,486**	**1,119,907**	**1,154,124**	**1,179,962**	**1,209,574**	**2.5**
Persons							
0 - 16	468,757	476,171	485,909	497,015	503,776	511,934	1.6
17 - 24	237,303	245,668	255,627	264,881	267,806	270,847	1.1
25 - 59	1,016,156	1,039,200	1,070,358	1,103,683	1,129,037	1,158,215	2.6
60 and over	337,165	352,802	366,683	381,080	395,510	411,219	4
Total Population[1]	**2,059,381**	**2,113,841**	**2,178,577**	**2,246,659**	**2,296,129**	**2,352,215**	**2.4**

1. Source: Australian Bureau of Statistics, Catalogue No. 3101.0 (September 2012 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 2011 by geographical areas.

Figure 1 Fatalities by Year, 1961 to 2011

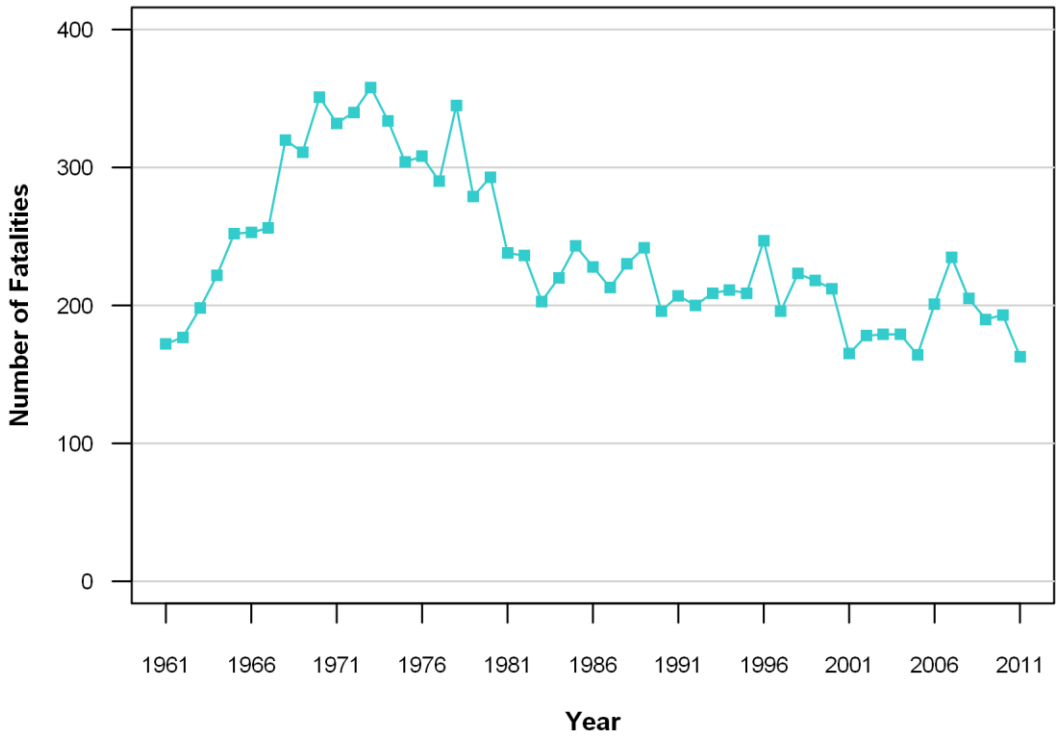


Figure 2 Fatality Rates by Year, 1961 to 2011

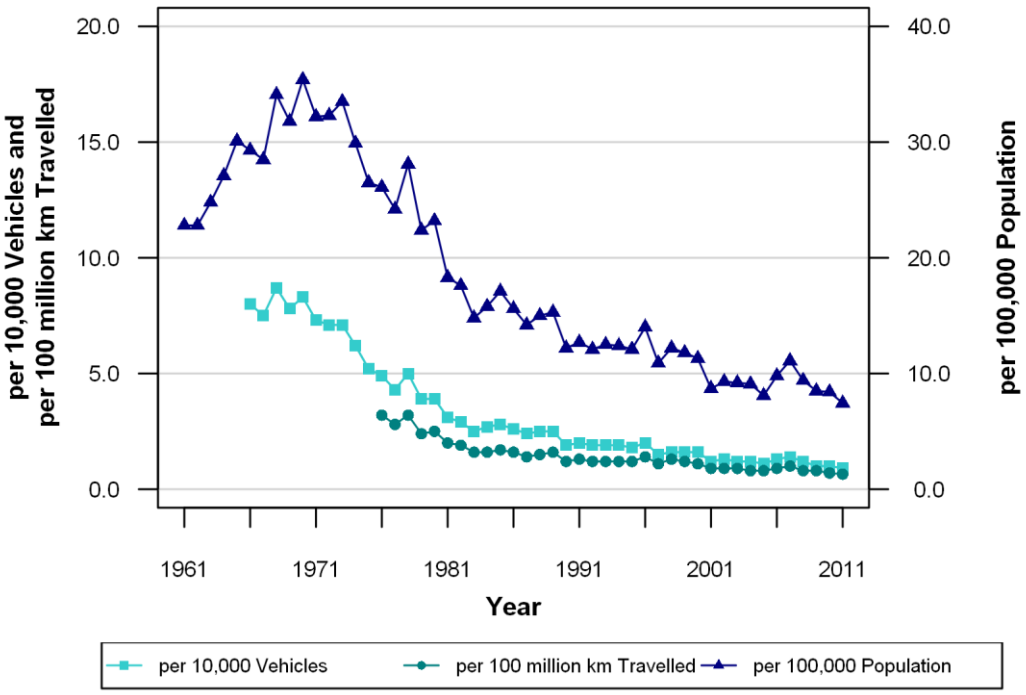


Figure 3 Persons Seriously Injured by Year, 1980 to 2011

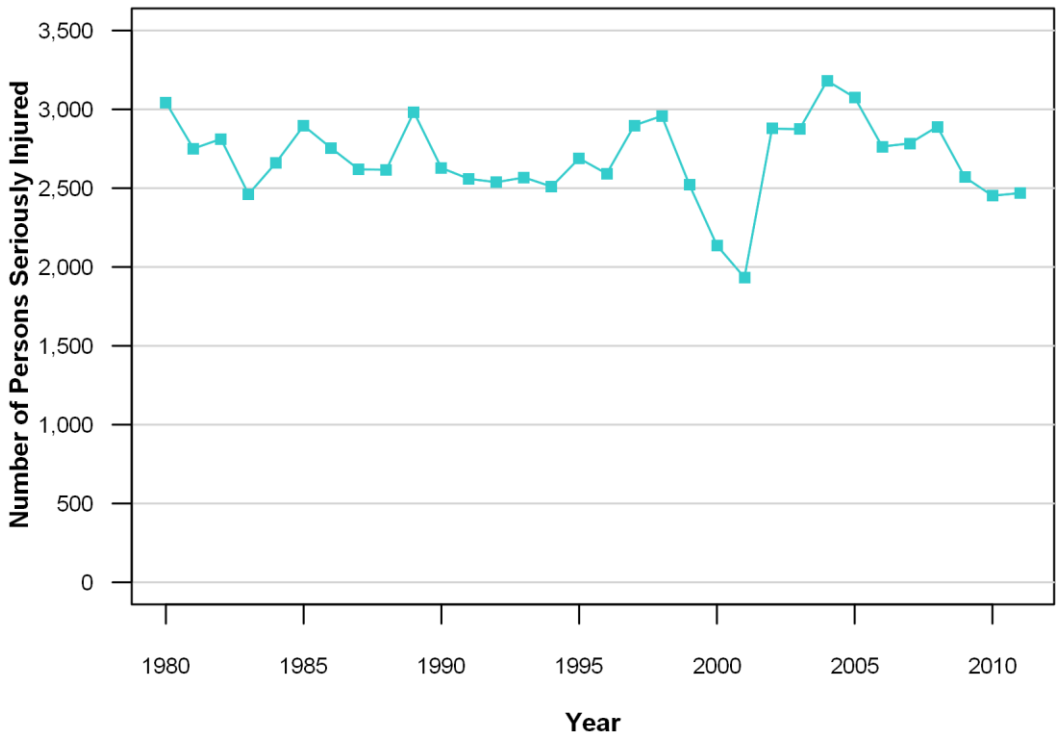


Figure 4 Serious Injury Rates by Year, 1980 to 2011

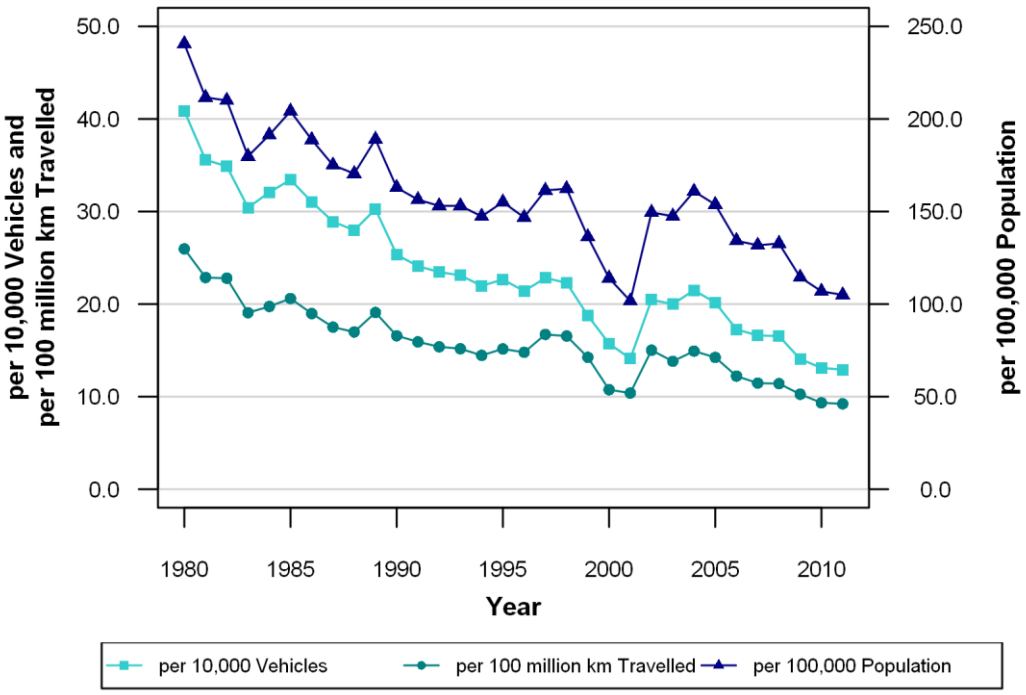
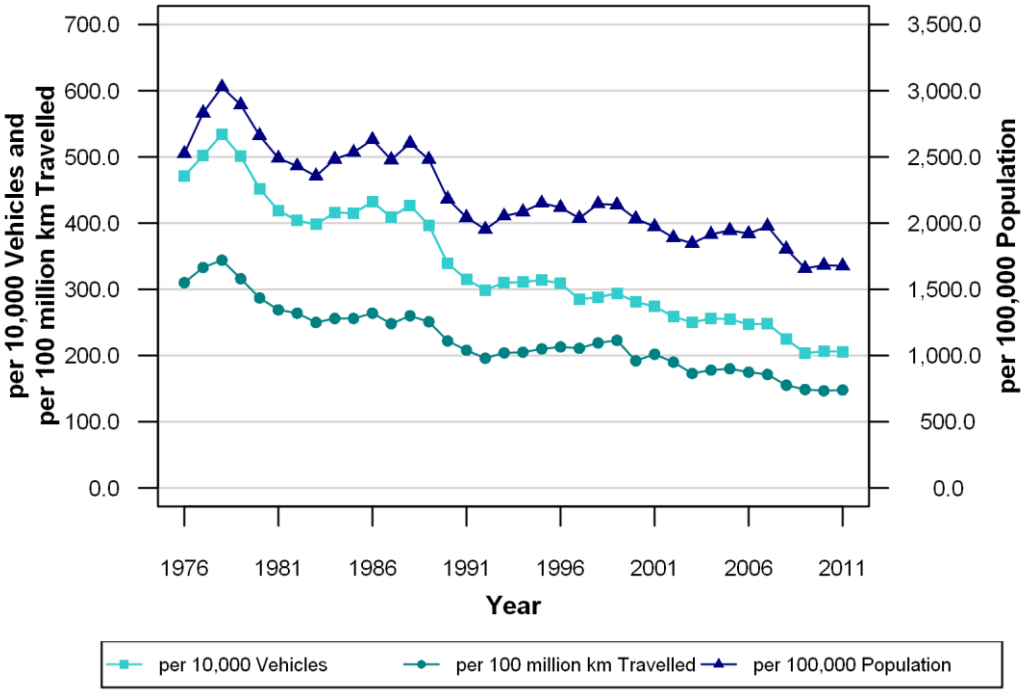


Figure 5 Reported Crash Rates by Year, 1976 to 2011



This document provides information on a total of 175 fatalities from 163 fatal crashes in 2011. This is four fewer fatalities and four fewer fatal crashes reported by other sources as four fatal crashes did not meet the inclusion criteria specified in the Introduction of this report (page 1).

Two of the four excluded crashes did not meet the definition of being on a road that was open to the public because they involved a bicyclist struck by a car on private property and a motorcyclist killed in a crash on a bush track. In the third excluded crash, the fatally injured driver was observed to have collapsed at the wheel prior to the crash; therefore, this crash was classified as being due to a medical condition. In the fourth crash, the fatality was a motor vehicle passenger killed as a result of equipment failure during an attempt to free a stuck vehicle. This crash was excluded because there was no significant contribution from vehicle movement.

Table 5 Crash Severity by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Crash Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	182	213	185	176	174	163	-6.3
Hospitalisation	2,122	2,188	2,279	2,007	2,031	2,006	-1.2
Total Serious	**2,304**	**2,401**	**2,464**	**2,183**	**2,205**	**2,169**	**-1.6**
Other	37,230	39,229	36,833	35,043	37,410	37,288	-0.3
Total Crashes	**39,534**	**41,630**	**39,297**	**37,226**	**39,615**	**39,457**	**-0.4**

Table 6 Injury Severity by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	201	235	205	191	191	175	-8.4
Serious	2,764	2,784	2,890	2,568	2,531	2,469	-2.4
Total Persons KSI	**2,965**	**3,019**	**3,095**	**2,759**	**2,722**	**2,644**	**-2.9**
Minor	12,847	13,088	12,485	11,589	10,080	9,841	-2.4
None/unknown	94,882	99,804	93,242	87,972	97,491	92,978	-4.6
Total Persons	**110,694**	**115,911**	**108,822**	**102,320**	**110,293**	**105,463**	**-4.4**

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

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	9.8	11.1	9.4	8.5	8.3	7.4	-10.6
Serious	134.2	131.7	132.7	114.3	110.2	105.0	-4.8
Total Persons KSI	**144.0**	**142.8**	**142.1**	**122.8**	**118.5**	**112.4**	**-5.2**
Minor	623.8	619.2	573.1	515.8	439.0	418.4	-4.7
None/unknown	4,607.3	4,721.5	4,279.9	3,915.7	4,245.9	3,952.8	-6.9
Total	**5,375.1**	**5,483.4**	**4,995.1**	**4,554.3**	**4,803.4**	**4,483.6**	**-6.7**
Estimated Population[1]	**2,059,381**	**2,113,841**	**2,178,577**	**2,246,659**	**2,296,129**	**2,352,215**	**-**

1. Source: Australian Bureau of Statistics, Catalogue No. 3101.0 (September 2012 release).

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

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	1.3	1.4	1.2	1.0	1.0	0.9	-10.4
Serious	17.3	16.6	16.5	14.0	13.5	12.9	-4.6
Total Persons KSI	**18.5**	**18.0**	**17.7**	**15.1**	**14.6**	**13.8**	**-5.0**
Minor	80.3	78.1	71.5	63.4	53.9	51.4	-4.5
None/unknown	592.8	595.3	533.9	481.2	521.3	486.1	-6.8
Total	**691.6**	**691.4**	**623.1**	**559.6**	**589.8**	**551.4**	**-6.5**
Registered Vehicles[1]	**1,600,566**	**1,676,495**	**1,746,579**	**1,828,346**	**1,870,068**	**1,912,739**	**-**

1. Source: Australian Bureau of Statistics Motor Vehicle Census Catalogue No 9309.0 (2009 – 2012 releases).

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

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal	0.9	1.0	0.8	0.7	0.7	0.7	-9.9
Serious	12.2	11.5	11.4	9.9	9.6	9.2	-4.1
Total Persons KSI	**13.1**	**12.4**	**12.2**	**10.7**	**10.4**	**9.9**	**-4.8**
Minor	56.8	53.9	49.3	44.7	38.3	36.8	-4.0
None/unknown	419.5	410.9	368.2	339.6	370.9	347.7	-6.3
Total	**489.4**	**477.2**	**429.7**	**395.0**	**419.6**	**394.4**	**-6.0**
Vehicle Kilometres Travelled (millions)[1]	**22,616**	**24,289**	**25,325**	**25,902**	**26,285**	**26,740**	-

1. Source: Australian Bureau of Statistics Survey of Motor Vehicle Use, Catalogue No 9208.0 (June 2012 release for 2004-2007 figures). Due to direct estimates being unavailable for 2008 and 2009, figures for those years were obtained by interpolating between the published average kilometres travelled per vehicle values for 2007 and 2010 and then multiplying by the number of registered vehicles in the respective years.

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	68	41.7	1,399	69.7	**1,467**	**67.6**	31,862	85.4	**33,329**	**84.5**
Regional	57	35.0	387	19.3	**444**	**20.5**	3,854	10.3	**4,298**	**10.9**
Remote	38	23.3	220	11.0	**258**	**11.9**	1,572	4.2	**1,830**	**4.6**
Total Crashes	**163**	**100.0**	**2,006**	**100.0**	**2,169**	**100.0**	**37,288**	**100.0**	**39,457**	**100.0**

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	72	41.1	1,652	66.9	1,724	65.2	8,257	83.9	80,062	86.1	90,043	85.4
Regional	60	34.3	505	20.5	565	21.4	1,058	10.8	9,268	10.0	10,891	10.3
Remote	43	24.6	312	12.6	355	13.4	526	5.3	3,648	3.9	4,529	4.3
Total Persons	**175**	**100.0**	**2,469**	**100.0**	**2,644**	**100.0**	**9,841**	**100.0**	**92,978**	**100.0**	**105,463**	**100.0**

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	70	42.9	1,455	72.5	**1,525**	**70.3**	32,594	87.4	**34,119**	**86.5**
Accessible	33	20.2	204	10.2	**237**	**10.9**	2,077	5.6	**2,314**	**5.9**
Moderately Accessible	28	17.2	166	8.3	**194**	**8.9**	1,491	4.0	**1,685**	**4.3**
Remote	21	12.9	115	5.7	**136**	**6.3**	773	2.1	**909**	**2.3**
Very Remote	11	6.7	66	3.3	**77**	**3.6**	353	0.9	**430**	**1.1**
Total Crashes	**163**	**100.0**	**2,006**	**100.0**	**2,169**	**100.0**	**37,288**	**100.0**	**39,457**	**100.0**

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	74	42.3	1,726	69.9	**1,800**	**68.1**	8,453	85.9	81,930	88.1	**92,183**	**87.4**
Accessible	35	20.0	268	10.9	**303**	**11.5**	613	6.2	4,967	5.3	**5,883**	**5.6**
Moderately Accessible	29	16.6	209	8.5	**238**	**9.0**	371	3.8	3,506	3.8	**4,115**	**3.9**
Remote	23	13.1	166	6.7	**189**	**7.1**	259	2.6	1,807	1.9	**2,255**	**2.1**
Very Remote	14	8.0	100	4.1	**114**	**4.3**	145	1.5	768	0.8	**1,027**	**1.0**
Total Persons	**175**	**100.0**	**2,469**	**100.0**	**2,644**	**100.0**	**9,841**	**100.0**	**92,978**	**100.0**	**105,463**	**100.0**

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 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 2011 yields an estimate of $2.1 billion, 21% of which was due to fatal crashes and 57% from hospitalisation crashes. In contrast, the willingness-to-pay approach gives an estimate of $2.7 billion, of which 45% was due to fatal crashes and 25% from hospitalisation crashes.

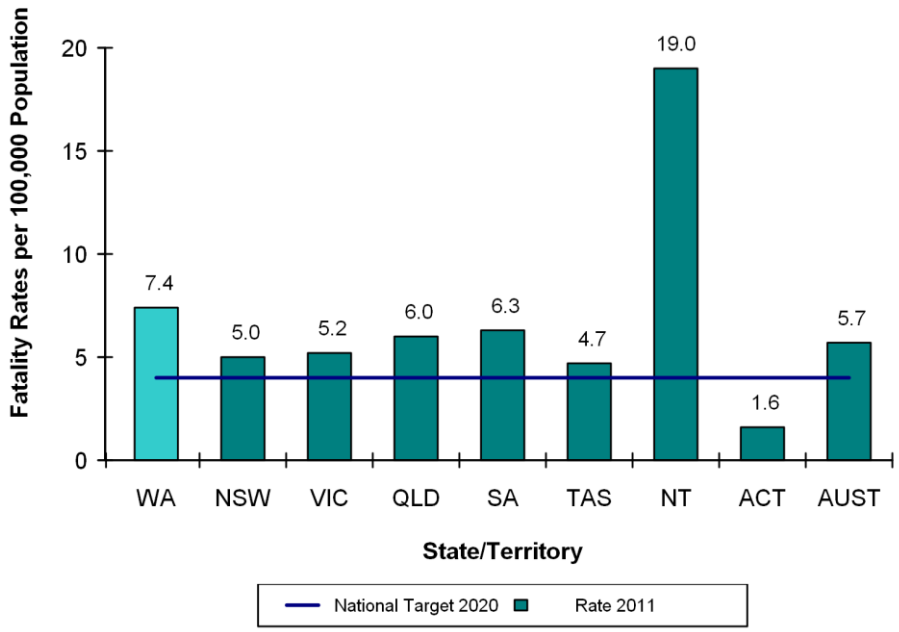
Table 14 Estimated Cost of Crashes to the Western Australian Community

		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	68	2,528,931	172M	6,903,789	469.5M
Hospitalisation	1,399	581,891	814.1M	293,000	409.9M
Medical Attention	4,847	33,505	162.4M	75,610	366.5M
Other[3]	27,015	8,620	232.9M	11,206	302.7M
Total Metropolitan Crashes	**33,329**	-	**1,381.3M**	**-**	**1,548.6M**
Non-Metropolitan					
Fatal	95	2,722,650	258.7M	7,894,303	750M
Hospitalisation	607	622,595	377.9M	463,621	281.4M
Medical Attention	771	35,012	27M	103,482	79.8M
Other[3]	4,655	8,620	40.1M	11,206	52.2M
Total Non-Metro Crashes	**6,128**	**-**	**703.7M**	**-**	**1,163.3M**
Total Western Australian Crashes	**39,457**	**-**	**2,085M**	**-**	**2,711.9M**

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 (May 2012 release).
   - The Consumer Price Index, Australia Bureau of Statistics Catalogue No. 6401.0 (September 2012 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.
3. Other refers to crashes that resulted in property damage only.

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											
	2006		2007		2008		2009		2010		2011	
State/Territory	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
WA	**201**	**9.8**	**235**	**11.1**	**205**	**9.4**	**191**	**8.5**	**191**	**8.3**	**175**	**7.4**
NSW	496	7.3	435	6.3	374	5.4	453	6.4	405	5.7	364	5
VIC	337	6.6	332	6.4	303	5.7	290	5.4	288	5.3	287	5.2
QLD	335	8.2	360	8.6	328	7.7	331	7.6	249	5.6	269	6
SA	117	7.5	124	7.8	99	6.2	119	7.4	118	7.2	103	6.3
TAS	55	11.2	45	9.1	39	7.8	63	12.5	31	6.1	24	4.7
NT	45	21.4	58	27	75	33.9	30	13.2	49	21.3	44	19
ACT	13	3.9	14	4.1	14	4	12	3.4	19	5.3	6	1.6
AUST	**1,599**	**7.7**	**1,603**	**7.6**	**1,437**	**6.7**	**1,489**	**6.8**	**1,350**	**6.1**	**1,272**	**5.7**

Source: Number of fatalities for Western Australia from IRIS, number of fatalities for all other states and territories extracted (18/06/2013) from the Australian Transport Safety Bureau "Fatal Road Crash Database".

Rates calculated using population data from Australian Bureau of Statistics Catalogue No. 3101.0 (September 2012 release).

2.4 Gender and Age

Table 16 Fatalities by Gender and Age Group by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010[1]
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Male							
0 - 11	3	4	8	5	5	6	N/R
12 - 16	1	7	4	5	2	3	N/R
17 - 24	55	34	41	27	32	31	-3.1
25 - 39	38	64	42	47	43	33	-23.3
40 - 59	28	48	34	39	35	32	-8.6
60 and over	27	19	20	18	14	24	71.4
Total Male	**152**	**176**	**149**	**141**	**131**	**129**	**-1.5**
Female							
0 - 11	0	2	1	3	2	1	N/R
12 - 16	6	3	4	2	2	1	N/R
17 - 24	11	13	11	9	12	13	8.3
25 - 39	7	18	16	13	12	9	-25.0
40 - 59	17	11	13	9	15	7	-53.3
60 and over	8	11	7	11	15	15	0.0
Total Female	**49**	**58**	**52**	**47**	**58**	**46**	**-20.7**
Total Unknown Gender	**0**	**1**	**4**	**3**	**2**	**0**	N/R
All Persons							
0 – 11	3	6	9	9	9	7	N/R
12 - 16	7	10	8	7	4	4	N/R
17 - 24	66	48	53	36	44	44	0.0
25 - 39	45	82	59	60	55	42	-23.6
40 - 59	45	59	47	50	50	39	-22.0
60 and over	35	30	28	29	29	39	34.5
Unknown age	0	0	1	0	0	0	N/R
Total Fatalities	**201**	**235**	**205**	**191**	**191**	**175**	**-8.4**

1. 2011 change from 2010 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

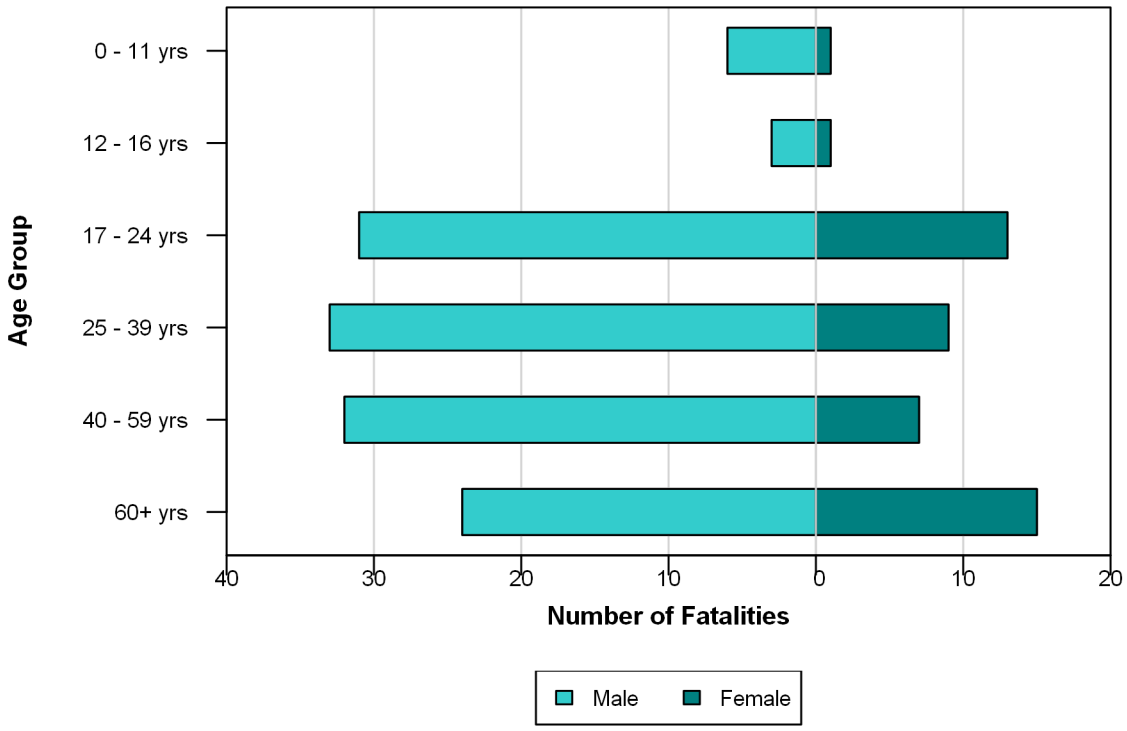


Table 17 Fatalities by Age Group and Gender

	Gender			Percentage of Fatalities	Percentage of Population	Age-Specific Fatality Rate[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 5	2	0	**2**	1.1	7.9	1.1
6 - 11	4	1	**5**	2.9	7.4	2.9
12 - 16	3	1	**4**	2.3	6.4	2.7
17 - 20	18	4	**22**	12.6	5.4	17.3
21 - 24	13	9	**22**	12.6	6.1	15.3
25 - 29	12	3	**15**	8.6	7.9	8.1
30 - 34	12	4	**16**	9.1	7.1	9.6
35 - 39	9	2	**11**	6.3	7.2	6.5
40 - 44	12	2	**14**	8.0	7.4	8.1
45 - 49	6	3	**9**	5.1	7.1	5.4
50 - 54	6	1	**7**	4.0	6.7	4.4
55 - 59	8	1	**9**	5.1	6.0	6.4
60 - 64	6	2	**8**	4.6	5.4	6.3
65 - 69	3	1	**4**	2.3	3.9	4.4
70 - 74	4	6	**10**	5.7	2.9	14.6
75 - 79	2	1	**3**	1.7	2.2	5.8
80 - 84	7	2	**9**	5.1	1.7	22.9
85 and over	2	3	**5**	2.9	1.5	14.5
Total Fatalities	**129**	**46**	**175**	**100.0**	**100.0**	**7.4**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

1. Includes unknown gender.
2. 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[2]
	Male	Female	Total[1]			
Age Group	**n**	**n**	**n**	**%**	**%**	**Rate**
0 - 11	6	1	**7**	4.0	15.3	1.9
12 - 16	3	1	**4**	2.3	6.4	2.7
17 - 24	31	13	**44**	25.1	11.5	16.2
25 - 39	33	9	**42**	24.0	22.1	8.1
40 - 59	32	7	**39**	22.3	27.1	6.1
60 and over	24	15	**39**	22.3	17.5	9.5
Total Fatalities	**129**	**46**	**175**	**100.0**	**100.0**	**7.4**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

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

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

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010[1]
Gender/Age Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Male							
0 – 11	53	21	19	21	24	25	4.2
12 – 16	70	44	47	45	42	54	28.6
17 – 24	401	404	349	278	290	305	5.2
25 – 39	470	403	421	373	371	393	5.9
40 – 59	351	321	358	316	338	375	10.9
60 and over	145	158	143	127	148	152	2.7
Unknown age	84	44	35	36	24	41	N/R
Total Male	**1,574**	**1,395**	**1,372**	**1,196**	**1,237**	**1,345**	**8.7**
Female							
0 – 11	38	20	11	14	10	26	160.0
12 – 16	43	26	19	15	22	34	54.5
17 – 24	305	233	220	198	180	196	8.9
25 – 39	249	248	230	186	207	212	2.4
40 – 59	232	206	217	203	220	214	-2.7
60 and over	130	110	101	113	118	118	0.0
Unknown age	81	34	21	21	25	47	N/R
Total Female	1,078	877	819	750	782	847	8.3
Total Unknown Gender	**112**	**512**	**699**	**622**	**512**	**277**	**N/R**
All Persons							
0 – 11	106	83	97	95	84	84	0.0
12 – 16	120	126	131	111	105	107	1.9
17 – 24	723	757	741	648	583	588	0.9
25 – 39	734	737	752	663	677	659	-2.7
40 – 59	594	589	674	603	638	618	-3.1
60 and over	282	319	336	308	317	286	-9.8
Unknown age	205	173	159	140	127	127	N/R
Total Persons Seriously Injured	**2,764**	**2,784**	**2,890**	**2,568**	**2,531**	**2,469**	**-2.4**

1. 2011 change from 2010 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	9	15	**36**	1.5	7.9	19.3
6 - 11	16	11	**48**	1.9	7.4	27.6
12 - 16	54	34	**107**	4.3	6.4	70.9
17 - 20	152	110	**310**	12.6	5.4	243.4
21 - 24	153	86	**278**	11.3	6.1	193.7
25 - 29	158	93	**284**	11.5	7.9	153.7
30 - 34	136	60	**208**	8.4	7.1	125.2
35 - 39	99	59	**167**	6.8	7.2	98.9
40 - 44	95	63	**165**	6.7	7.4	95.4
45 - 49	123	62	**192**	7.8	7.1	114.7
50 - 54	92	44	**148**	6.0	6.7	93.7
55 - 59	65	45	**113**	4.6	6.0	80.7
60 - 64	52	35	**91**	3.7	5.4	72.2
65 - 69	37	20	**59**	2.4	3.9	64.6
70 - 74	20	20	**43**	1.7	2.9	62.9
75 - 79	10	17	**30**	1.2	2.2	58.1
80 - 84	21	16	**40**	1.6	1.7	101.7
85 and over	12	10	**23**	0.9	1.5	66.5
Unknown age	41	47	**127**	5.1	N/A	N/A
Total Persons Seriously Injured	**1,345**	**847**	**2,469**	**100.0**	**100.0**	**105.0**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.
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	25	26	**84**	3.4	15.3	23.3
12 – 16	54	34	**107**	4.3	6.4	70.9
17 – 24	305	196	**588**	23.8	11.5	217.1
25 – 39	393	212	**659**	26.7	22.1	126.8
40 – 59	375	214	**618**	25.0	27.1	96.8
60 and over	152	118	**286**	11.6	17.5	69.5
Unknown age	41	47	**127**	5.1	N/A	N/A
Total Persons Seriously Injured	**1,345**	**847**	**2,469**	**100.0**	**100.0**	**105.0**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.
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

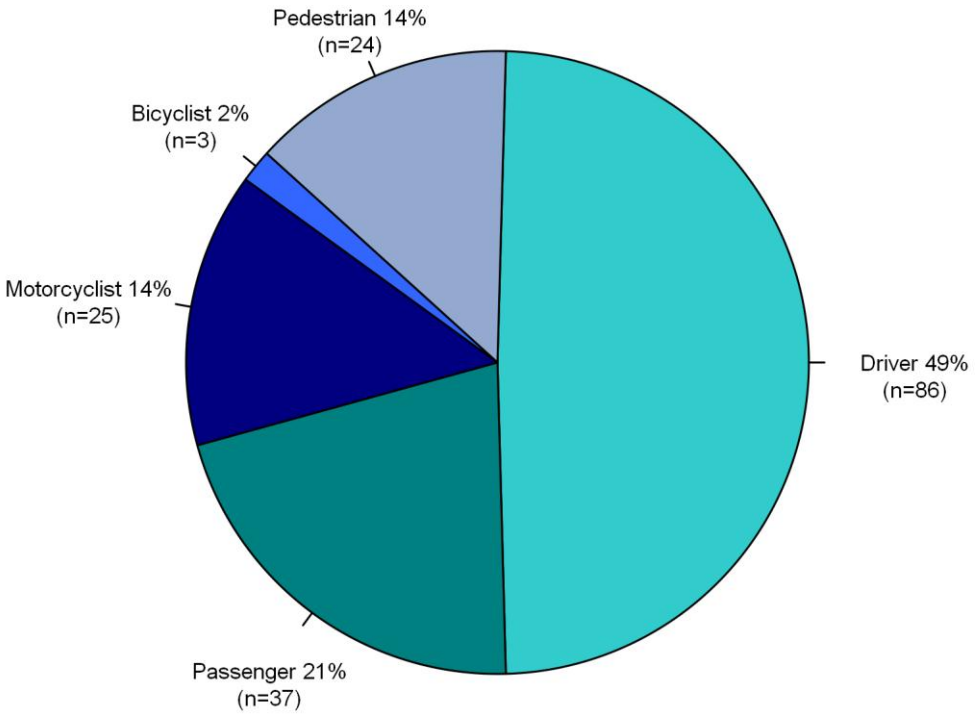


Figure 9 Persons Seriously Injured by Road User Type

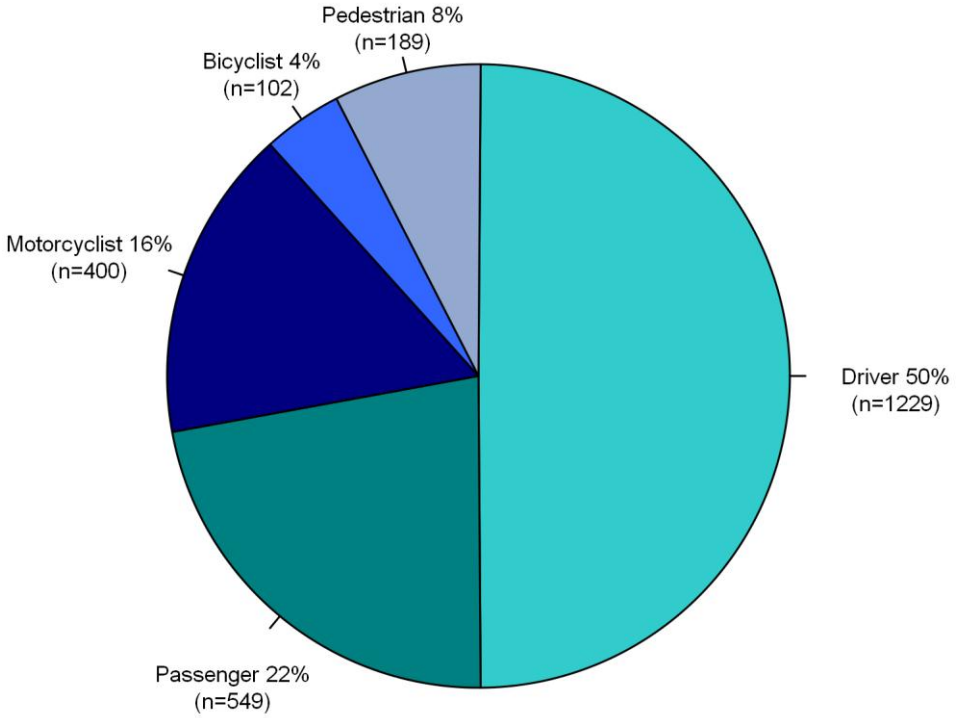


Table 22 Fatalities by Road User Type by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Road User	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Driver	95	113	100	90	96	86	-10.4
Passenger	50	64	45	43	40	37	-7.5
Motorcyclist	31	34	37	33	35	25	-28.6
Bicyclist	3	4	3	0	4	3	N/R
Pedestrian	22	20	20	25	16	24	50.0
Other/ Unknown	0	0	0	0	0	0	N/A
Total Fatalities	**201**	**235**	**205**	**191**	**191**	**175**	**-8.4**

1. 2011 change from 2010 not reported for road user types with fewer than ten fatalities.

Table 23 Persons Seriously Injured by Road User Type by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Road User	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Driver	1,436	1,498	1,500	1,224	1,273	1,229	-3.5
Passenger	719	691	705	661	577	549	-4.9
Motorcyclist	346	347	389	360	386	400	3.6
Bicyclist	83	88	116	112	107	102	-4.7
Pedestrian	180	160	180	211	188	189	0.5
Other/ Unknown	0	0	0	0	0	0	N/A
Total Persons Seriously Injured	**2,764**	**2,784**	**2,890**	**2,568**	**2,531**	**2,469**	**-2.4**

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

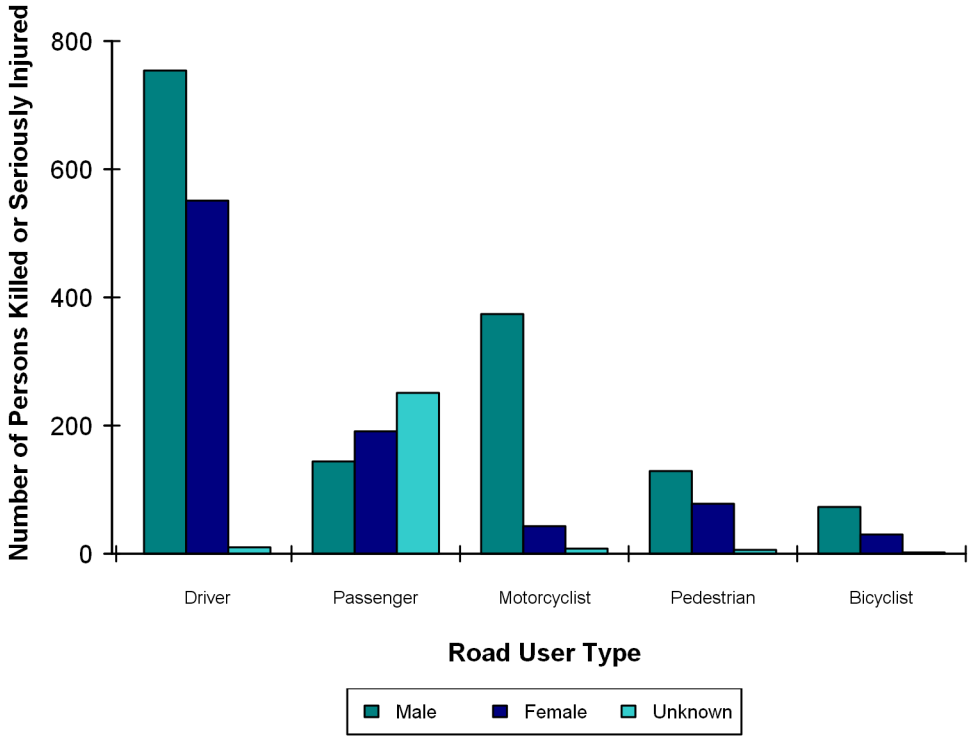


Table 24 Persons Killed or Seriously Injured by Road User Type by ARIA Category

	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	887	49.3	158	52.1	124	52.1	92	48.7	54	47.4	**1,315**	**49.7**
Passenger	341	18.9	71	23.4	58	24.4	64	33.9	52	45.6	**586**	**22.2**
Motorcyclist	307	17.1	52	17.2	37	15.5	24	12.7	5	4.4	**425**	**16.1**
Bicyclist	97	5.4	3	1.0	3	1.3	2	1.1	0	0.0	**105**	**4.0**
Pedestrian	168	9.3	19	6.3	16	6.7	7	3.7	3	2.6	**213**	**8.1**
Other/ Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	**0**	**0.0**
Total Persons KSI	**1,800**	**100.0**	**303**	**100.0**	**238**	**100.0**	**189**	**100.0**	**114**	**100.0**	**2,644**	**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	
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	2	18.2	3	27.3	**11**	**100.0**
6 – 11	0	0.0	10	50.0	0	0.0	1	5.0	9	45.0	**20**	**100.0**
12 - 16	3	5.3	16	28.1	15	26.3	4	7.0	19	33.3	**57**	**100.0**
17 - 20	100	58.8	18	10.6	33	19.4	5	2.9	14	8.2	**170**	**100.0**
21 - 24	89	53.6	24	14.5	37	22.3	3	1.8	13	7.8	**166**	**100.0**
25 - 29	95	55.9	17	10.0	39	22.9	6	3.5	13	7.6	**170**	**100.0**
30 - 39	136	53.1	13	5.1	78	30.5	15	5.9	14	5.5	**256**	**100.0**
40 - 49	106	44.9	15	6.4	82	34.7	17	7.2	16	6.8	**236**	**100.0**
50 - 59	92	53.8	6	3.5	55	32.2	11	6.4	7	4.1	**171**	**100.0**
60 - 69	65	66.3	3	3.1	19	19.4	3	3.1	8	8.2	**98**	**100.0**
70 and over	56	71.8	3	3.8	9	11.5	4	5.1	6	7.7	**78**	**100.0**
Unknown age	12	29.3	13	31.7	7	17.1	2	4.9	7	17.1	**41**	**100.0**
Total Male	**754**	**51.2**	**144**	**9.8**	**374**	**25.4**	**73**	**5.0**	**129**	**8.8**	**1,474**	**100.0**
Female												
0 – 5	0	0.0	11	73.3	0	0.0	0	0.0	4	26.7	**15**	**100.0**
6 – 11	0	0.0	8	66.7	0	0.0	0	0.0	4	33.3	**12**	**100.0**
12 - 16	1	2.9	15	42.9	3	8.6	0	0.0	16	45.7	**35**	**100.0**
17 - 20	77	67.5	28	24.6	4	3.5	2	1.8	3	2.6	**114**	**100.0**
21 - 24	72	75.8	14	14.7	1	1.1	3	3.2	5	5.3	**95**	**100.0**
25 - 29	58	60.4	10	10.4	5	5.2	10	10.4	13	13.5	**96**	**100.0**
30 - 39	83	66.4	20	16.0	13	10.4	1	0.8	8	6.4	**125**	**100.0**
40 - 49	89	68.5	19	14.6	8	6.2	4	3.1	10	7.7	**130**	**100.0**
50 - 59	64	70.3	12	13.2	8	8.8	7	7.7	0	0.0	**91**	**100.0**
60 - 69	43	74.1	9	15.5	1	1.7	2	3.4	3	5.2	**58**	**100.0**
70 and over	48	64.0	15	20.0	0	0.0	0	0.0	12	16.0	**75**	**100.0**
Unknown age	16	34.0	30	63.8	0	0.0	1	2.1	0	0.0	**47**	**100.0**
Total Female	551	61.7	191	21.4	43	4.8	30	3.4	78	8.7	**893**	**100.0**
Unknown Gender	10	3.6	251	90.6	8	2.9	2	0.7	6	2.2	**277**	**100.0**
Total Persons KSI	**1,315**	**49.7**	**586**	**22.2**	**425**	**16.1**	**105**	**4.0**	**213**	**8.1**	**2,644**	**100.0**

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

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	1	16.7	0	0.0	2	33.3	3	50.0	**6**	**100.0**
6-11	0	0.0	3	37.5	0	0.0	1	12.5	4	50.0	**8**	**100.0**
12-16	2	5.0	9	22.5	11	27.5	3	7.5	15	37.5	**40**	**100.0**
17-20	57	58.8	7	7.2	21	21.6	4	4.1	8	8.2	**97**	**100.0**
21-24	58	51.3	12	10.6	29	25.7	2	1.8	12	10.6	**113**	**100.0**
25-29	57	54.8	5	4.8	28	26.9	6	5.8	8	7.7	**104**	**100.0**
30-39	75	45.7	4	2.4	61	37.2	13	7.9	11	6.7	**164**	**100.0**
40-49	60	42.0	3	2.1	55	38.5	16	11.2	9	6.3	**143**	**100.0**
50-59	55	51.4	2	1.9	38	35.5	11	10.3	1	0.9	**107**	**100.0**
60-69	44	72.1	0	0.0	10	16.4	2	3.3	5	8.2	**61**	**100.0**
70 and over	38	70.4	3	5.6	5	9.3	3	5.6	5	9.3	**54**	**100.0**
Unknown age	9	29.0	9	29.0	6	19.4	2	6.5	5	16.1	**31**	**100.0**
Total Male	**455**	**49.0**	**58**	**6.3**	**264**	**28.4**	**65**	**7.0**	**86**	**9.3**	**928**	**100.0**
Female												
0-5	0	0.0	4	57.1	0	0.0	0	0.0	3	42.9	**7**	**100.0**
6-11	0	0.0	4	66.7	0	0.0	0	0.0	2	33.3	**6**	**100.0**
12-16	0	0.0	10	37.0	2	7.4	0	0.0	15	55.6	**27**	**100.0**
17-20	52	71.2	13	17.8	3	4.1	2	2.7	3	4.1	**73**	**100.0**
21-24	46	80.7	3	5.3	1	1.8	3	5.3	4	7.0	**57**	**100.0**
25-29	45	58.4	5	6.5	5	6.5	10	13.0	12	15.6	**77**	**100.0**
30-39	61	70.9	10	11.6	8	9.3	1	1.2	6	7.0	**86**	**100.0**
40-49	65	68.4	13	13.7	4	4.2	4	4.2	9	9.5	**95**	**100.0**
50-59	45	71.4	7	11.1	4	6.3	7	11.1	0	0.0	**63**	**100.0**
60-69	32	72.7	7	15.9	1	2.3	1	2.3	3	6.8	**44**	**100.0**
70 and over	34	66.7	8	15.7	0	0.0	0	0.0	9	17.6	**51**	**100.0**
Unknown age	13	34.2	24	63.2	0	0.0	1	2.6	0	0.0	**38**	**100.0**
Total Female	**393**	**63.0**	**108**	**17.3**	**28**	**4.5**	**29**	**4.6**	**66**	**10.6**	**624**	**100.0**
Unknown Gender	**8**	**4.7**	**150**	**87.2**	**6**	**3.5**	**2**	**1.2**	**6**	**3.5**	**172**	**100.0**
Total Persons KSI	**856**	**49.7**	**316**	**18.3**	**298**	**17.3**	**96**	**5.6**	**158**	**9.2**	**1,724**	**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	
Gender/Age Group	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %	n	Row %
Male												
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	2	33.3	0	0.0	0	0.0	4	66.7	**6**	**100.0**
12-16	1	10.0	1	10.0	3	30.0	1	10.0	4	40.0	**10**	**100.0**
17-20	29	58.0	6	12.0	9	18.0	1	2.0	5	10.0	**50**	**100.0**
21-24	18	52.9	10	29.4	4	11.8	1	2.9	1	2.9	**34**	**100.0**
25-29	20	55.6	4	11.1	9	25.0	0	0.0	3	8.3	**36**	**100.0**
30-39	39	67.2	5	8.6	11	19.0	1	1.7	2	3.4	**58**	**100.0**
40-49	23	42.6	4	7.4	20	37.0	0	0.0	7	13.0	**54**	**100.0**
50-59	16	47.1	3	8.8	12	35.3	0	0.0	3	8.8	**34**	**100.0**
60-69	10	45.5	3	13.6	6	27.3	1	4.5	2	9.1	**22**	**100.0**
70 and over	15	75.0	0	0.0	4	20.0	1	5.0	0	0.0	**20**	**100.0**
Unknown age	3	42.9	2	28.6	0	0.0	0	0.0	2	28.6	**7**	**100.0**
Total Male	**174**	**52.4**	**41**	**12.3**	**78**	**23.5**	**6**	**1.8**	**33**	**9.9**	**332**	**100.0**
Female												
0-5	0	0.0	3	75.0	0	0.0	0	0.0	1	25.0	**4**	**100.0**
6-11	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	**1**	**100.0**
12-16	1	14.3	4	57.1	1	14.3	0	0.0	1	14.3	**7**	**100.0**
17-20	14	56.0	11	44.0	0	0.0	0	0.0	0	0.0	**25**	**100.0**
21-24	16	80.0	3	15.0	0	0.0	0	0.0	1	5.0	**20**	**100.0**
25-29	5	71.4	1	14.3	0	0.0	0	0.0	1	14.3	**7**	**100.0**
30-39	18	62.1	6	20.7	4	13.8	0	0.0	1	3.4	**29**	**100.0**
40-49	15	71.4	3	14.3	3	14.3	0	0.0	0	0.0	**21**	**100.0**
50-59	17	70.8	3	12.5	4	16.7	0	0.0	0	0.0	**24**	**100.0**
60-69	7	87.5	0	0.0	0	0.0	1	12.5	0	0.0	**8**	**100.0**
70 and over	13	61.9	5	23.8	0	0.0	0	0.0	3	14.3	**21**	**100.0**
Unknown age	2	33.3	4	66.7	0	0.0	0	0.0	0	0.0	**6**	**100.0**
Total Female	**108**	**62.4**	**43**	**24.9**	**12**	**6.9**	**1**	**0.6**	**9**	**5.2**	**173**	**100.0**
Unknown Gender	**1**	**1.7**	**58**	**96.7**	**1**	**1.7**	**0**	**0.0**	**0**	**0.0**	**60**	**100.0**
Total Persons KSI	**283**	**50.1**	**142**	**25.1**	**91**	**16.1**	**7**	**1.2**	**42**	**7.4**	**565**	**100.0**

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

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	4	100.0	0	0.0	0	0.0	0	0.0	**4**	**100.0**
6-11	0	0.0	5	83.3	0	0.0	0	0.0	1	16.7	**6**	**100.0**
12-16	0	0.0	6	85.7	1	14.3	0	0.0	0	0.0	**7**	**100.0**
17-20	14	60.9	5	21.7	3	13.0	0	0.0	1	4.3	**23**	**100.0**
21-24	13	68.4	2	10.5	4	21.1	0	0.0	0	0.0	**19**	**100.0**
25-29	18	60.0	8	26.7	2	6.7	0	0.0	2	6.7	**30**	**100.0**
30-39	22	64.7	4	11.8	6	17.6	1	2.9	1	2.9	**34**	**100.0**
40-49	23	59.0	8	20.5	7	17.9	1	2.6	0	0.0	**39**	**100.0**
50-59	21	70.0	1	3.3	5	16.7	0	0.0	3	10.0	**30**	**100.0**
60-69	11	73.3	0	0.0	3	20.0	0	0.0	1	6.7	**15**	**100.0**
70 and over	3	75.0	0	0.0	0	0.0	0	0.0	1	25.0	**4**	**100.0**
Unknown age	0	0.0	2	66.7	1	33.3	0	0.0	0	0.0	**3**	**100.0**
Total Male	**125**	**58.4**	**45**	**21.0**	**32**	**15.0**	**2**	**0.9**	**10**	**4.7**	**214**	**100.0**
Female												
0-5	0	0.0	4	100.0	0	0.0	0	0.0	0	0.0	**4**	**100.0**
6-11	0	0.0	4	80.0	0	0.0	0	0.0	1	20.0	**5**	**100.0**
12-16	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	**1**	**100.0**
17-20	11	68.8	4	25.0	1	6.3	0	0.0	0	0.0	**16**	**100.0**
21-24	10	55.6	8	44.4	0	0.0	0	0.0	0	0.0	**18**	**100.0**
25-29	8	66.7	4	33.3	0	0.0	0	0.0	0	0.0	**12**	**100.0**
30-39	4	40.0	4	40.0	1	10.0	0	0.0	1	10.0	**10**	**100.0**
40-49	9	64.3	3	21.4	1	7.1	0	0.0	1	7.1	**14**	**100.0**
50-59	2	50.0	2	50.0	0	0.0	0	0.0	0	0.0	**4**	**100.0**
60-69	4	66.7	2	33.3	0	0.0	0	0.0	0	0.0	**6**	**100.0**
70 and over	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0	**3**	**100.0**
Unknown age	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0	**3**	**100.0**
Total Female	**50**	**52.1**	**40**	**41.7**	**3**	**3.1**	**0**	**0.0**	**3**	**3.1**	**96**	**100.0**
Unknown Gender	**1**	**2.2**	**43**	**95.6**	**1**	**2.2**	**0**	**0.0**	**0**	**0.0**	**45**	**100.0**
Total Persons KSI	**176**	**49.6**	**128**	**36.1**	**36**	**10.1**	**2**	**0.6**	**13**	**3.7**	**355**	**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

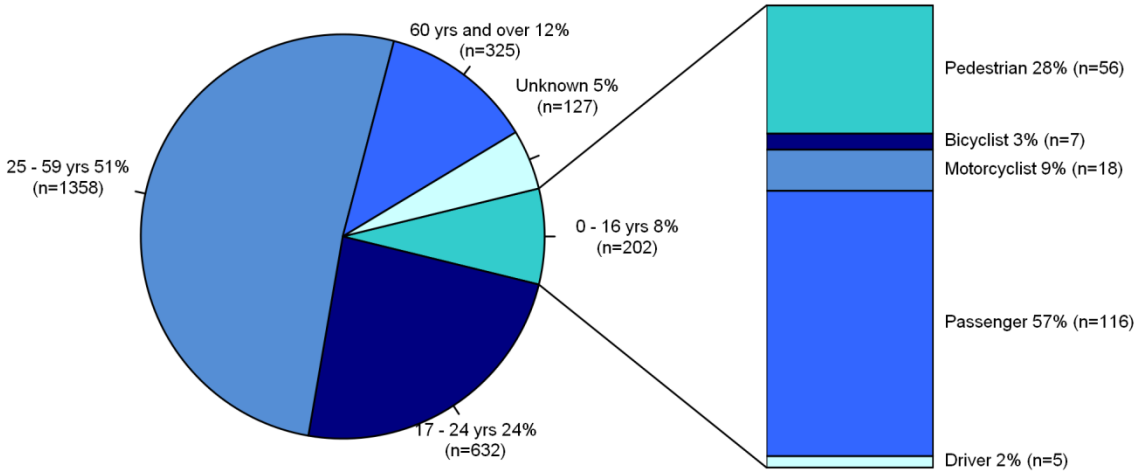


Table 29 Children Killed or Seriously Injured by Road User Type and Age Group

	Road User Type					
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Total
Age Group	n	n	n	n	n	n
0 - 5	0	29	0	2	7	**38**
6 - 11	0	39	0	1	13	**53**
12 - 16	5	48	18	4	36	**111**
Total Children KSI	**5**	**116**	**18**	**7**	**56**	**202**

Table 30 Children 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 %
0 - 5	4	11.8	14	41.2	16	47.1	**34**	**100.0**
6 - 11	8	16.0	17	34.0	25	50.0	**50**	**100.0**
12 - 16	23	23.5	23	23.5	52	53.1	**98**	**100.0**
Total Children KSI	**35**	**19.2**	**54**	**29.7**	**93**	**51.1**	**182**	**100.0**
All Persons KSI[1]	**334**	**14.3**	**791**	**33.8**	**1,217**	**52.0**	**2,342**	**100.0**

1. Includes persons with unknown age

Table 31 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	80.0	4	16.0	1	4.0	**25**	**100.0**
6 - 11	24	66.7	5	13.9	7	19.4	**36**	**100.0**
12 - 16	30	65.2	10	21.7	6	13.0	**46**	**100.0**
Total Child Motor Vehicle Occupants KSI	**74**	**69.2**	**19**	**17.8**	**14**	**13.1**	**107**	**100.0**
All Motor Vehicle Occupants KSI[1]	**1,383**	**81.8**	**119**	**7.0**	**189**	**11.2**	**1,691**	**100.0**

Note: Motor vehicle occupants exclude occupants of tractors and trailer type vehicles.
1. Includes persons with unknown age.

Table 32 Child Bicylists Killed or Seriously Injured by Helmet Usage and Gender

	Helmet Usage			
	Worn	Not Worn	Unknown	Total
Gender	**n**	**n**	**n**	**n**
Male	2	5	0	**7**
Female	0	0	0	**0**
Total Child Bicyclists KSI	**2**	**5**	**0**	**7**

Table 33 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	1	2.6	0	0.0	4	10.5	2	5.3	8	21.1	14	36.8	7	18.4	0	0.0	2	5.3	**38**	**100.0**
6 - 11	1	1.9	0	0.0	9	17.0	3	5.7	9	17.0	19	35.8	7	13.2	4	7.5	1	1.9	**53**	**100.0**
12 - 16	5	4.5	9	8.1	10	9.0	13	11.7	7	6.3	35	31.5	15	13.5	17	15.3	0	0.0	**111**	**100.0**
Total Children KSI	**7**	**3.5**	**9**	**4.5**	**23**	**11.4**	**18**	**8.9**	**24**	**11.9**	**68**	**33.7**	**29**	**14.4**	**21**	**10.4**	**3**	**1.5**	**202**	**100.0**
All Persons KSI[1]	**148**	**5.6**	**110**	**4.2**	**339**	**12.8**	**358**	**13.5**	**432**	**16.3**	**572**	**21.6**	**385**	**14.6**	**262**	**9.9**	**38**	**1.4**	**2,644**	**100.0**

1. Includes persons with unknown age.

Table 34 Children 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 %**
0 - 5	5	13.2	6	15.8	8	21.1	7	18.4	4	10.5	3	7.9	5	13.2	**38**	**100.0**
6 - 11	2	3.8	8	15.1	9	17.0	7	13.2	9	17.0	7	13.2	11	20.8	**53**	**100.0**
12 - 16	15	13.5	12	10.8	8	7.2	20	18.0	14	12.6	34	30.6	8	7.2	**111**	**100.0**
Total Children KSI	**22**	**10.9**	**26**	**12.9**	**25**	**12.4**	**34**	**16.8**	**27**	**13.4**	**44**	**21.8**	**24**	**11.9**	**202**	**100.0**
All Persons KSI[1]	**292**	**11.0**	**365**	**13.8**	**356**	**13.5**	**369**	**14.0**	**445**	**16.8**	**445**	**16.8**	**372**	**14.1**	**2,644**	**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

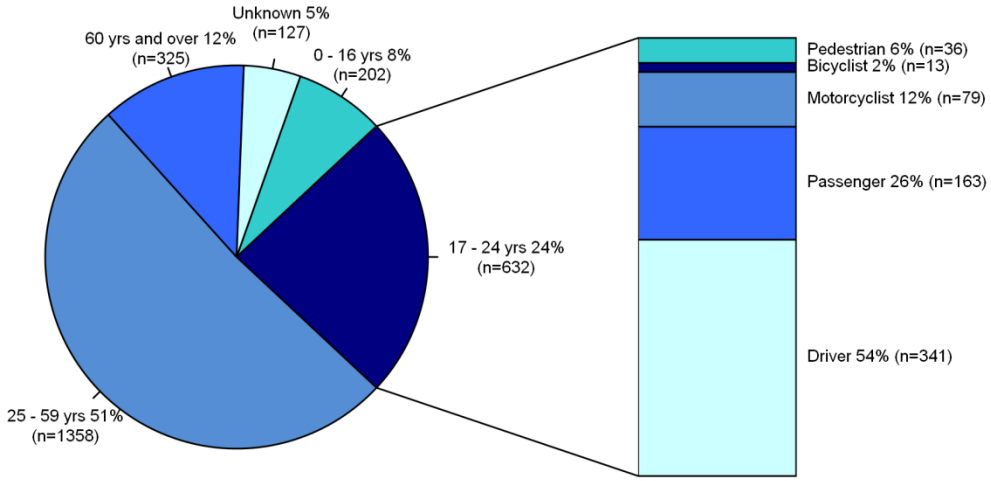


Table 35 Young Adults Killed or Seriously Injured by Road User Type and Age Group

	Road User Type					
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Total
Age Group	**n**	**n**	**n**	**n**	**n**	**n**
17 - 20	178	91	39	7	17	**332**
21 - 24	163	72	40	6	19	**300**
Total Young Adults KSI	**341**	**163**	**79**	**13**	**36**	**632**

Table 36 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	54	17.8	104	34.2	146	48.0	**304**	**100.0**
21 - 24	53	19.5	94	34.6	125	46.0	**272**	**100.0**
Total Young Adults KSI	**107**	**18.6**	**198**	**34.4**	**271**	**47.0**	**576**	**100.0**
All Persons KSI[1]	**334**	**14.3**	**791**	**33.8**	**1,217**	**52.0**	**2,342**	**100.0**

1. Includes persons with unknown age.

Table 37 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	190	62.7	12	4.0	11	3.6	18	5.9	7	2.3	**36**	**11.9**	65	21.5	**303**	**100.0**
21 - 24	154	56.8	10	3.7	4	1.5	23	8.5	13	4.8	**40**	**14.8**	67	24.7	**271**	**100.0**
Total Young Adults KSI[1]	**344**	**59.9**	**22**	**3.8**	**15**	**2.6**	**41**	**7.1**	**20**	**3.5**	**76**	**13.2**	**132**	**23.0**	**574**	**100.0**
All Persons KSI[2, 3]	**1,016**	**67.1**	**42**	**2.8**	**30**	**2.0**	**72**	**4.8**	**49**	**3.2**	**151**	**10.0**	**306**	**20.2**	**1,515**	**100.0**

1. Excludes young adults killed or seriously injured in police-attended crashes that did not involve any drivers/riders (n=2).
2. Excludes persons killed or seriously injured in police-attended crashes that did not involve any drivers/riders (n=6).
3. Includes persons with unknown age.

Table 38 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	120	61.9	7	3.6	5	2.6	6	3.1	4	2.1	**15**	**7.7**	52	26.8	**194**	**100.0**
21 – 24	95	53.1	8	4.5	2	1.1	12	6.7	9	5.0	**23**	**12.8**	53	29.6	**179**	**100.0**
Total Drivers/Riders KSI	**215**	**57.6**	**15**	**4.0**	**7**	**1.9**	**18**	**4.8**	**13**	**3.5**	**38**	**10.2**	**105**	**28.2**	**373**	**100.0**
Other Young Adult Drivers/Riders[1]																
17 - 20	108	65.9	3	1.8	3	1.8	7	4.3	0	0.0	**10**	**6.1**	43	26.2	**164**	**100.0**
21 - 24	117	67.2	3	1.7	3	1.7	6	3.4	2	1.1	**11**	**6.3**	43	24.7	**174**	**100.0**
Total Other Drivers/Riders	**225**	**66.6**	**6**	**1.8**	**6**	**1.8**	**13**	**3.8**	**2**	**0.6**	**21**	**6.2**	**86**	**25.4**	**338**	**100.0**
Total Young Adult Drivers/Riders																
17 - 20	228	63.7	10	2.8	8	2.2	13	3.6	4	1.1	**25**	**7.0**	95	26.5	358	**100.0**
21 - 24	212	60.1	11	3.1	5	1.4	18	5.1	11	3.1	**34**	**9.6**	96	27.2	353	**100.0**
Total Young Adult Drivers/Riders in Serious Crashes	**440**	**61.9**	**21**	**3.0**	**13**	**1.8**	**31**	**4.4**	**15**	**2.1**	**59**	**8.3**	**191**	**26.9**	**711**	**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 39 Young 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 %**
17 - 20	203	82.2	23	9.3	21	8.5	**247**	**100.0**
21 - 24	171	80.7	16	7.5	25	11.8	**212**	**100.0**
Total Young Adult Motor Vehicle Occupants KSI	**374**	**81.5**	**39**	**8.5**	**46**	**10.0**	**459**	**100.0**
All Motor Vehicle Occupants KSI[1]	**1,383**	**81.8**	**119**	**7.0**	**189**	**11.2**	**1,691**	**100.0**

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

1. Includes persons with unknown age.

Table 40 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	17	4.3	80	20.5	135	34.5	**232**	**59.3**	25	6.4	0	0.0	99	25.3	29	7.4	6	1.5	**159**	**40.7**	**391**	**100.0**
21 - 24	20	5.1	80	20.2	152	38.4	**252**	**63.6**	21	5.3	2	0.5	88	22.2	32	8.1	1	0.3	**144**	**36.4**	**396**	**100.0**
Total Young Adult Drivers/Riders in Serious Crashes	**37**	**4.7**	**160**	**20.3**	**287**	**36.5**	**484**	**61.5**	**46**	**5.8**	**2**	**0.3**	**187**	**23.8**	**61**	**7.8**	**7**	**0.9**	**303**	**38.5**	**787**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**207**	**6.0**	**734**	**21.4**	**1,497**	**43.6**	**2,438**	**71.1**	**194**	**5.7**	**12**	**0.3**	**534**	**15.6**	**220**	**6.4**	**33**	**1.0**	**993**	**28.9**	**3,431**	**100.0**

1. Includes persons with unknown age.

Table 41 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	171	43.7	122	31.2	17	4.3	97	24.8	391	**100.0**
21 - 24	199	50.3	114	28.8	20	5.1	78	19.7	396	**100.0**
Total Young Adult Drivers/Riders in Serious Crashes	**370**	**47.0**	**236**	**30.0**	**37**	**4.7**	**175**	**22.2**	**787**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**1,642**	**47.9**	**769**	**22.4**	**207**	**6.0**	**919**	**26.8**	**3,431**	**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 42 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	43	13.0	17	5.1	33	9.9	39	11.7	40	12.0	64	19.3	42	12.7	47	14.2	7	2.1	**332**	**100.0**
21 - 24	23	7.7	12	4.0	41	13.7	26	8.7	54	18.0	64	21.3	40	13.3	37	12.3	3	1.0	**300**	**100.0**
Total Young Adults KSI	**66**	**10.4**	**29**	**4.6**	**74**	**11.7**	**65**	**10.3**	**94**	**14.9**	**128**	**20.3**	**82**	**13.0**	**84**	**13.3**	**10**	**1.6**	**632**	**100.0**
All Persons KSI[1]	**148**	**5.6**	**110**	**4.2**	**339**	**12.8**	**358**	**13.5**	**432**	**16.3**	**572**	**21.6**	**385**	**14.6**	**262**	**9.9**	**38**	**1.4**	**2,644**	**100.0**

1. Includes persons with unknown age.

Table 43 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	43	13.0	43	13.0	37	11.1	39	11.7	57	17.2	65	19.6	48	14.5	**332**	**100.0**
21 - 24	26	8.7	46	15.3	42	14.0	43	14.3	44	14.7	46	15.3	53	17.7	**300**	**100.0**
Total Young Adults KSI	**69**	**10.9**	**89**	**14.1**	**79**	**12.5**	**82**	**13.0**	**101**	**16.0**	**111**	**17.6**	**101**	**16.0**	**632**	**100.0**
All Persons KSI[1]	**292**	**11.0**	**365**	**13.8**	**356**	**13.5**	**369**	**14.0**	**445**	**16.8**	**445**	**16.8**	**372**	**14.1**	**2,644**	**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

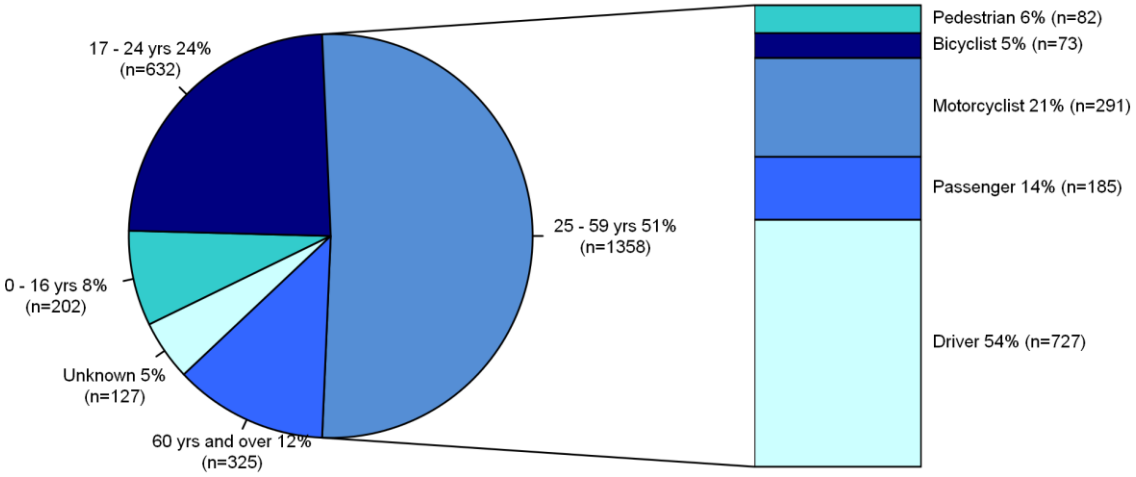


Table 44 Mature Adults Killed or Seriously Injured by Road User Type and Age Group

	Road User Type					
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Total
Age Group	n	n	n	n	n	n
25 - 29	154	56	46	17	26	**299**
30 - 34	113	33	54	11	13	**224**
35 - 39	106	20	37	5	10	**178**
40 - 44	94	28	34	8	15	**179**
45 - 49	102	18	57	13	11	**201**
50 - 54	82	18	38	15	2	**155**
55 - 59	76	12	25	4	5	**122**
Total Mature Adults KSI	**727**	**185**	**291**	**73**	**82**	**1,358**

Table 45 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	155	57.6	11	4.1	8	3.0	20	7.4	13	4.8	**41**	**15.2**	62	23.0	**269**	**100.0**
30 - 34	109	55.9	5	2.6	7	3.6	20	10.3	12	6.2	**39**	**20.0**	42	21.5	**195**	**100.0**
35 - 39	107	70.4	1	0.7	3	2.0	8	5.3	10	6.6	**21**	**13.8**	23	15.1	**152**	**100.0**
40 - 44	103	65.6	6	3.8	3	1.9	8	5.1	2	1.3	**13**	**8.3**	35	22.3	**157**	**100.0**
45 - 49	114	67.1	4	2.4	1	0.6	9	5.3	4	2.4	**14**	**8.2**	38	22.4	**170**	**100.0**
50 - 54	101	75.9	1	0.8	1	0.8	5	3.8	5	3.8	**11**	**8.3**	20	15.0	**133**	**100.0**
55 - 59	86	77.5	2	1.8	0	0.0	2	1.8	2	1.8	**4**	**3.6**	19	17.1	**111**	**100.0**
Total Mature Adults KSI[1]	**775**	**65.3**	**30**	**2.5**	**23**	**1.9**	**72**	**6.1**	**48**	**4.0**	**143**	**12.0**	**239**	**20.1**	**1,187**	**100.0**
All Persons KSI[2,3]	**1,016**	**67.1**	**42**	**2.8**	**30**	**2.0**	**72**	**4.8**	**49**	**3.2**	**151**	**10.0**	**306**	**20.2**	**1,515**	**100.0**

1. Excludes mature 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=6).
3. Includes persons with unknown age.

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	29	7.5	76	19.7	158	41.0	**263**	**68.3**	31	8.1	1	0.3	57	14.8	29	7.5	4	1.0	**122**	**31.7**	**385**	**100.0**
30 - 34	14	4.3	62	19.3	142	44.1	**218**	**67.7**	10	3.1	0	0.0	63	19.6	24	7.5	7	2.2	**104**	**32.3**	**322**	**100.0**
35 - 39	17	6.3	57	21.0	135	49.6	**209**	**76.8**	11	4.0	0	0.0	40	14.7	8	2.9	4	1.5	**63**	**23.2**	**272**	**100.0**
40 - 44	25	8.5	51	17.3	130	44.1	**206**	**69.8**	16	5.4	4	1.4	45	15.3	22	7.5	2	0.7	**89**	**30.2**	**295**	**100.0**
45 - 49	19	6.3	62	20.5	147	48.5	**228**	**75.2**	12	4.0	2	0.7	33	10.9	24	7.9	4	1.3	**75**	**24.8**	**303**	**100.0**
50 - 54	13	5.8	63	27.9	101	44.7	**177**	**78.3**	8	3.5	1	0.4	29	12.8	10	4.4	1	0.4	**49**	**21.7**	**226**	**100.0**
55 - 59	18	9.4	39	20.3	86	44.8	**143**	**74.5**	16	8.3	1	0.5	18	9.4	14	7.3	0	0.0	**49**	**25.5**	**192**	**100.0**
Total Mature Adult Drivers/Riders in Serious Crashes	**135**	**6.8**	**410**	**20.6**	**899**	**45.1**	**1,444**	**72.4**	**104**	**5.2**	**9**	**0.5**	**285**	**14.3**	**131**	**6.6**	**22**	**1.1**	**551**	**27.6**	**1,995**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**207**	**6.0**	**734**	**21.4**	**1,497**	**43.6**	**2,438**	**71.1**	**194**	**5.7**	**12**	**0.3**	**534**	**15.6**	**220**	**6.4**	**33**	**1.0**	**993**	**28.9**	**3,431**	**100.0**

1. Includes persons with unknown age.

Table 47 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	93	53.1	5	2.9	4	2.3	9	5.1	8	4.6	**21**	**12.0**	56	32.0	**175**	**100.0**
30 – 34	71	49.7	2	1.4	7	4.9	12	8.4	9	6.3	**28**	**19.6**	42	29.4	**143**	**100.0**
35 – 39	76	63.9	0	0.0	3	2.5	6	5.0	5	4.2	**14**	**11.8**	29	24.4	**119**	**100.0**
40 – 44	70	62.5	3	2.7	2	1.8	3	2.7	1	0.9	**6**	**5.4**	33	29.5	**112**	**100.0**
45 – 49	87	65.4	3	2.3	0	0.0	3	2.3	3	2.3	**6**	**4.5**	37	27.8	**133**	**100.0**
50 – 54	69	68.3	1	1.0	1	1.0	4	4.0	4	4.0	**9**	**8.9**	22	21.8	**101**	**100.0**
55 – 59	68	72.3	1	1.1	0	0.0	1	1.1	2	2.1	**3**	**3.2**	22	23.4	**94**	**100.0**
Total Drivers/Riders KSI	**534**	**60.9**	**15**	**1.7**	**17**	**1.9**	**38**	**4.3**	**32**	**3.6**	**87**	**9.9**	**241**	**27.5**	**877**	**100.0**
Other Mature Adult Drivers/Riders[1]																
25 - 29	107	64.8	3	1.8	7	4.2	7	4.2	3	1.8	**17**	**10.3**	38	23.0	**165**	**100.0**
30 - 34	83	61.5	2	1.5	0	0.0	2	1.5	3	2.2	**5**	**3.7**	45	33.3	**135**	**100.0**
35 - 39	74	67.9	0	0.0	0	0.0	1	0.9	0	0.0	**1**	**0.9**	34	31.2	**109**	**100.0**
40 - 44	99	64.7	1	0.7	0	0.0	6	3.9	1	0.7	**7**	**4.6**	46	30.1	**153**	**100.0**
45 - 49	91	72.2	0	0.0	1	0.8	0	0.0	1	0.8	**2**	**1.6**	33	26.2	**126**	**100.0**
50 - 54	55	59.8	1	1.1	0	0.0	1	1.1	1	1.1	**2**	**2.2**	34	37.0	**92**	**100.0**
55 - 59	57	72.2	2	2.5	0	0.0	0	0.0	0	0.0	**0**	**0.0**	20	25.3	**79**	**100.0**
Total Other Drivers/Riders	**566**	**65.9**	**9**	**1.0**	**8**	**0.9**	**17**	**2.0**	**9**	**1.0**	**34**	**4.0**	**250**	**29.1**	**859**	**100.0**
Total Mature Adult Drivers/Riders																
25 - 29	200	58.8	8	2.4	11	3.2	16	4.7	11	3.2	**38**	**11.2**	94	27.6	340	**100.0**
30 - 34	154	55.4	4	1.4	7	2.5	14	5.0	12	4.3	**33**	**11.9**	87	31.3	278	**100.0**
35 - 39	150	65.8	0	0.0	3	1.3	7	3.1	5	2.2	**15**	**6.6**	63	27.6	228	**100.0**
40 - 44	169	63.8	4	1.5	2	0.8	9	3.4	2	0.8	**13**	**4.9**	79	29.8	265	**100.0**
45 - 49	178	68.7	3	1.2	1	0.4	3	1.2	4	1.5	**8**	**3.1**	70	27.0	259	**100.0**
50 - 54	124	64.2	2	1.0	1	0.5	5	2.6	5	2.6	**11**	**5.7**	56	29.0	193	**100.0**
55 - 59	125	72.3	3	1.7	0	0.0	1	0.6	2	1.2	**3**	**1.7**	42	24.3	173	**100.0**
Total Mature Adult Drivers/Riders in Serious Crashes	**1,100**	**63.4**	**24**	**1.4**	**25**	**1.4**	**55**	**3.2**	**41**	**2.4**	**121**	**7.0**	**491**	**28.3**	**1,736**	**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 48 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	158	41.0	92	23.9	29	7.5	116	30.1	385	**100.0**
30 - 34	140	43.5	87	27.0	14	4.3	89	27.6	322	**100.0**
35 - 39	125	46.0	54	19.9	17	6.3	84	30.9	272	**100.0**
40 - 44	121	41.0	66	22.4	25	8.5	90	30.5	295	**100.0**
45 - 49	160	52.8	62	20.5	19	6.3	69	22.8	303	**100.0**
50 - 54	123	54.4	38	16.8	13	5.8	58	25.7	226	**100.0**
55 - 59	99	51.6	33	17.2	18	9.4	49	25.5	192	**100.0**
Total Mature Adult Drivers/Riders in Serious Crashes	**926**	**46.4**	**432**	**21.7**	**135**	**6.8**	**555**	**27.8**	**1,995**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**1,642**	**47.9**	**769**	**22.4**	**207**	**6.0**	**919**	**26.8**	**3,431**	**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 49 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	147	79.0	17	9.1	22	11.8	**186**	**100.0**
30 - 34	90	70.3	13	10.2	25	19.5	**128**	**100.0**
35 - 39	94	84.7	6	5.4	11	9.9	**111**	**100.0**
40 - 44	90	81.1	5	4.5	16	14.4	**111**	**100.0**
45 - 49	84	84.0	5	5.0	11	11.0	**100**	**100.0**
50 - 54	76	86.4	5	5.7	7	8.0	**88**	**100.0**
55 - 59	69	87.3	2	2.5	8	10.1	**79**	**100.0**
Total Mature Adult Motor Vehicle Occupants KSI	**650**	**80.9**	**53**	**6.6**	**100**	**12.5**	**803**	**100.0**
All Motor Vehicle Occupants KSI[1]	**1,383**	**81.8**	**119**	**7.0**	**189**	**11.2**	**1,691**	**100.0**

Note: Motor vehicle occupants exclude occupants of tractors and trailer type vehicles.
1. Includes persons with unknown age.

3.4 Senior Adult Road Users – 60 years or older

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

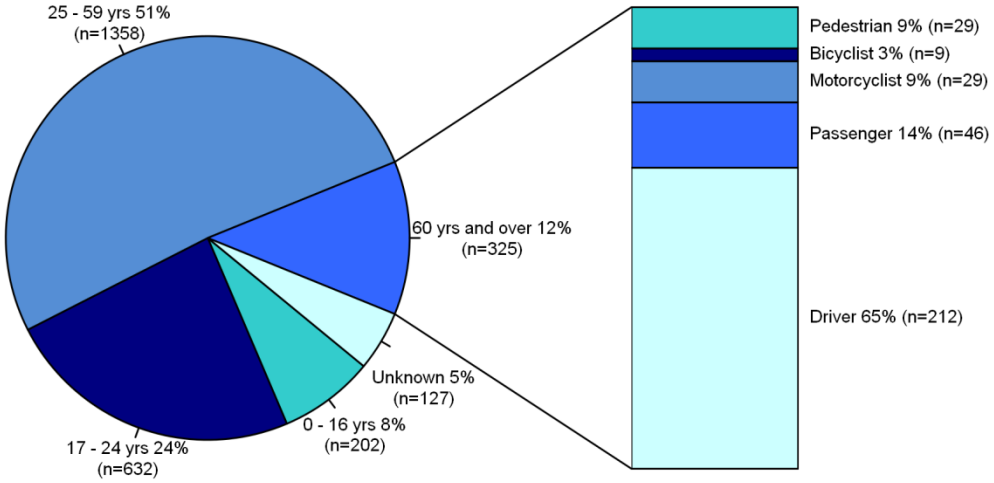


Table 50 Senior Adults Killed or Seriously Injured by Road User Type and Age Group

	Road User Type					
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Total
Age Group	**n**	**n**	**n**	**n**	**n**	**n**
60 - 64	64	9	16	2	8	**99**
65 - 69	44	9	4	3	3	**63**
70 - 74	34	7	7	0	5	**53**
75 - 79	20	8	2	0	3	**33**
80 - 84	34	9	0	4	2	**49**
85 and over	16	4	0	0	8	**28**
Total Senior Adults KSI	**212**	**46**	**29**	**9**	**29**	**325**

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	7	4.7	38	25.5	69	46.3	**114**	**76.5**	6	4.0	0	0.0	21	14.1	7	4.7	1	0.7	**35**	**23.5**	**149**	**100.0**
65 - 69	10	10.8	27	29.0	45	48.4	**82**	**88.2**	2	2.2	0	0.0	4	4.3	5	5.4	0	0.0	**11**	**11.8**	**93**	**100.0**
70 - 74	5	7.9	13	20.6	36	57.1	**54**	**85.7**	2	3.2	1	1.6	4	6.3	2	3.2	0	0.0	**9**	**14.3**	**63**	**100.0**
75 - 79	1	2.5	17	42.5	18	45.0	**36**	**90.0**	1	2.5	0	0.0	3	7.5	0	0.0	0	0.0	**4**	**10.0**	**40**	**100.0**
80 - 84	1	2.2	18	40.0	15	33.3	**34**	**75.6**	2	4.4	0	0.0	7	15.6	1	2.2	1	2.2	**11**	**24.4**	**45**	**100.0**
85 and over	1	3.8	5	19.2	10	38.5	**16**	**61.5**	4	15.4	0	0.0	6	23.1	0	0.0	0	0.0	**10**	**38.5**	**26**	**100.0**
Total Senior Adult Drivers/Riders in Serious Crashes	**25**	**6.0**	**118**	**28.4**	**193**	**46.4**	**336**	**80.8**	**17**	**4.1**	**1**	**0.2**	**45**	**10.8**	**15**	**3.6**	**2**	**0.5**	**80**	**19.2**	**416**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**207**	**6.0**	**734**	**21.4**	**1,497**	**43.6**	**2,438**	**71.1**	**194**	**5.7**	**12**	**0.3**	**534**	**15.6**	**220**	**6.4**	**33**	**1.0**	**993**	**28.9**	**3,431**	**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	86	57.7	27	18.1	7	4.7	34	22.8	**149**	**100.0**
65 - 69	56	60.2	9	9.7	10	10.8	19	20.4	**93**	**100.0**
70 - 74	36	57.1	8	12.7	5	7.9	15	23.8	**63**	**100.0**
75 - 79	24	60.0	5	12.5	1	2.5	10	25.0	**40**	**100.0**
80 - 84	27	60.0	7	15.6	1	2.2	10	22.2	**45**	**100.0**
85 and over	15	57.7	5	19.2	1	3.8	7	26.9	**26**	**100.0**
Total Senior Adult Drivers/Riders in Serious Crashes	**244**	**58.7**	**61**	**14.7**	**25**	**6.0**	**95**	**22.8**	**416**	**100.0**
All Drivers/Riders in Serious Crashes[1]	**1,642**	**47.9**	**769**	**22.4**	**207**	**6.0**	**919**	**26.8**	**3,431**	**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 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	7	7.1	13	13.1	20	20.2	15	15.2	17	17.2	15	15.2	12	12.1	**99**	**100.0**
65 - 69	4	6.3	13	20.6	9	14.3	7	11.1	15	23.8	9	14.3	6	9.5	**63**	**100.0**
70 - 74	11	20.8	9	17.0	5	9.4	8	15.1	8	15.1	5	9.4	7	13.2	**53**	**100.0**
75 - 79	1	3.0	4	12.1	13	39.4	7	21.2	4	12.1	3	9.1	1	3.0	**33**	**100.0**
80 - 84	7	14.3	9	18.4	4	8.2	6	12.2	13	26.5	6	12.2	4	8.2	**49**	**100.0**
85 and over	1	3.6	4	14.3	2	7.1	7	25.0	7	25.0	4	14.3	3	10.7	**28**	**100.0**
Total Senior Adults KSI	**31**	**9.5**	**52**	**16.0**	**53**	**16.3**	**50**	**15.4**	**64**	**19.7**	**42**	**12.9**	**33**	**10.2**	**325**	**100.0**
All Persons KSI[1]	**292**	**11.0**	**365**	**13.8**	**356**	**13.5**	**369**	**14.0**	**445**	**16.8**	**445**	**16.8**	**372**	**14.1**	**2,644**	**100.0**

1. Includes persons with unknown age.

Table 54 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	2	2.0	2	2.0	7	7.1	20	20.2	28	28.3	12	12.1	17	17.2	9	9.1	2	2.0	**99**	**100.0**
65 - 69	0	0.0	1	1.6	10	15.9	20	31.7	16	25.4	9	14.3	4	6.3	3	4.8	0	0.0	**63**	**100.0**
70 - 74	0	0.0	0	0.0	9	17.0	15	28.3	11	20.8	8	15.1	7	13.2	3	5.7	0	0.0	**53**	**100.0**
75 - 79	0	0.0	0	0.0	6	18.2	9	27.3	6	18.2	9	27.3	0	0.0	1	3.0	2	6.1	**33**	**100.0**
80 - 84	0	0.0	0	0.0	1	2.0	12	24.5	13	26.5	16	32.7	4	8.2	3	6.1	0	0.0	**49**	**100.0**
85 and over	0	0.0	1	3.6	2	7.1	12	42.9	5	17.9	4	14.3	2	7.1	1	3.6	1	3.6	**28**	**100.0**
Total Senior Adults KSI	**2**	**0.6**	**4**	**1.2**	**35**	**10.8**	**88**	**27.1**	**79**	**24.3**	**58**	**17.8**	**34**	**10.5**	**20**	**6.2**	**5**	**1.5**	**325**	**100.0**
All Persons KSI[1]	**148**	**5.6**	**110**	**4.2**	**339**	**12.8**	**358**	**13.5**	**432**	**16.3**	**572**	**21.6**	**385**	**14.6**	**262**	**9.9**	**38**	**1.4**	**2,644**	**100.0**

1. Includes persons with unknown age.

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 2 of the 163 fatal crashes and 271 of the 2,006 hospitalisation crashes that occurred in 2011.

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	44	27.3	207	11.9	**251**	**13.2**	651	8.5	**902**	**9.4**
No	43	26.7	585	33.7	**628**	**33.1**	2,366	30.8	**2,994**	**31.3**
Unknown	74	46.0	943	54.4	**1,017**	**53.6**	4,664	60.7	**5,681**	**59.3**
Total Crashes	**161**	**100.0**	**1,735**	**100.0**	**1,896**	**100.0**	**7,681**	**100.0**	**9,577**	**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	23	34.8	130	11.0	**153**	**12.2**	481	8.1	**634**	**8.9**
No	13	19.7	332	28.0	**345**	**27.6**	1,584	26.8	**1,929**	**27.0**
Unknown	30	45.5	722	61.0	**752**	**60.2**	3,841	65.0	**4,593**	**64.2**
Total Crashes	**66**	**100.0**	**1,184**	**100.0**	**1,250**	**100.0**	**5,906**	**100.0**	**7,156**	**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	11	19.3	46	12.8	**57**	**13.7**	124	10.7	**181**	**11.5**
No	18	31.6	167	46.6	**185**	**44.6**	512	44.3	**697**	**44.4**
Unknown	28	49.1	145	40.5	**173**	**41.7**	519	44.9	**692**	**44.1**
Total Crashes	**57**	**100.0**	**358**	**100.0**	**415**	**100.0**	**1,155**	**100.0**	**1,570**	**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	10	26.3	31	16.1	**41**	**17.7**	46	7.4	**87**	**10.2**
No	12	31.6	86	44.6	**98**	**42.4**	270	43.5	**368**	**43.2**
Unknown	16	42.1	76	39.4	**92**	**39.8**	304	49.0	**396**	**46.5**
Total Crashes	**38**	**100.0**	**193**	**100.0**	**231**	**100.0**	**620**	**100.0**	**851**	**100.0**

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

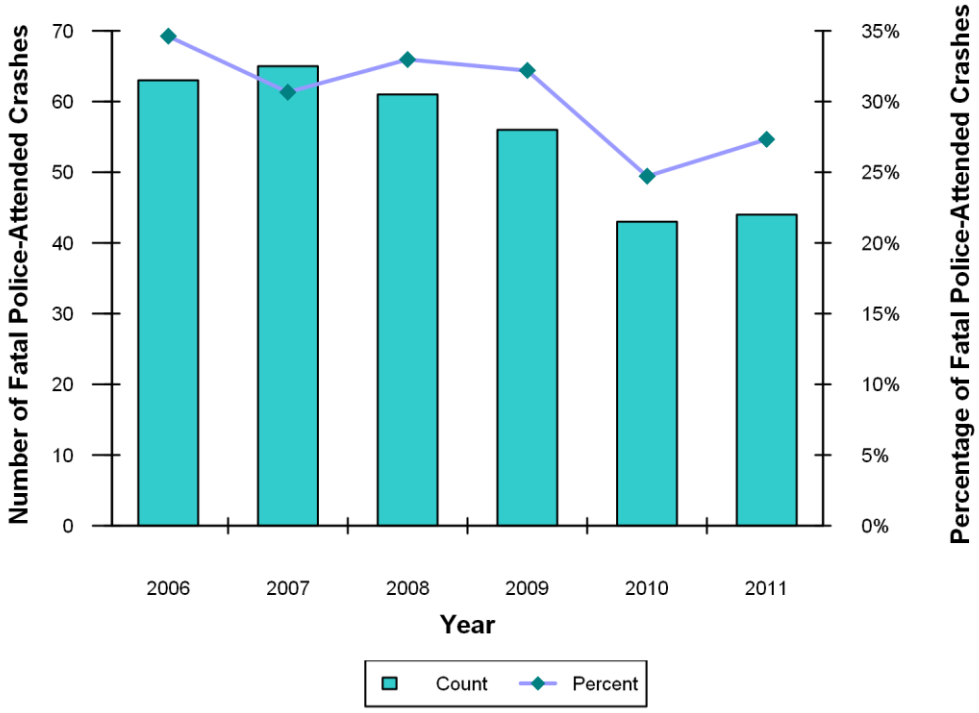


Table 59 Fatal Crashes by Speed a Factor by Year, Police-Attended Crashes

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Speed a Factor in Crash	n	n	n	n	n	n	%
Yes	63	65	61	56	43	44	2.3
No	43	56	37	37	39	43	10.3
Unknown	76	91	87	81	92	74	-19.6
Total Fatal Crashes	**182**	**212**	**185**	**174**	**174**	**161**	**-7.5**

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	159	12.2	360	27.7	781	60.1	**1,300**	**100.0**
Accessible	31	13.9	103	46.2	89	39.9	**223**	**100.0**
Moderately Accessible	25	13.5	88	47.6	72	38.9	**185**	**100.0**
Remote	22	18.0	48	39.3	52	42.6	**122**	**100.0**
Very Remote	14	21.2	29	43.9	23	34.8	**66**	**100.0**
Total Serious Crashes	**251**	**13.2**	**628**	**33.1**	**1,017**	**53.6**	**1,896**	**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	2	100.0	0	0.0	0	0.0	2	100.0
17 - 24	17	43.6	10	25.6	12	30.8	39	100.0
25 - 29	6	42.9	3	21.4	5	35.7	14	100.0
30 - 39	9	24.3	6	16.2	22	59.5	37	100.0
40 - 49	3	13.0	8	34.8	12	52.2	23	100.0
50 - 59	9	40.9	6	27.3	7	31.8	22	100.0
60 and over	4	13.8	7	24.1	18	62.1	29	100.0
Unknown age	0	0.0	0	0.0	1	100.0	1	100.0
Total Male	**50**	**29.9**	**40**	**24.0**	**77**	**46.1**	**167**	**100.0**
Female								
0 – 11	0	N/A	0	N/A	0	N/A	0	N/A
12 – 16	1	50.0	1	50.0	0	0.0	2	100.0
17 – 24	4	25.0	7	43.8	5	31.3	16	100.0
25 – 29	0	N/A	0	N/A	0	N/A	0	N/A
30 – 39	1	16.7	0	0.0	5	83.3	6	100.0
40 – 49	1	14.3	2	28.6	4	57.1	7	100.0
50 – 59	0	0.0	2	40.0	3	60.0	5	100.0
60 and over	1	10.0	3	30.0	6	60.0	10	100.0
Total Female	**8**	**17.4**	**15**	**32.6**	**23**	**50.0**	**46**	**100.0**
Unknown Gender	**0**	**0.0**	**0**	**0.0**	**6**	**100.0**	**6**	**100.0**
Total Drivers/Riders in Fatal Crashes	**58**	**26.5**	**55**	**25.1**	**106**	**48.4**	**219**	**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	5	29.4	4	23.5	8	47.1	**17**	**100.0**
17 - 24	67	16.2	135	32.6	212	51.2	**414**	**100.0**
25 - 29	36	16.5	67	30.7	115	52.8	**218**	**100.0**
30 - 39	49	15.7	89	28.4	175	55.9	**313**	**100.0**
40 - 49	26	8.1	124	38.8	170	53.1	**320**	**100.0**
50 - 59	18	7.9	80	35.2	129	56.8	**227**	**100.0**
60 and over	19	8.2	82	35.5	130	56.3	**231**	**100.0**
Unknown age	5	11.1	10	22.2	30	66.7	**45**	**100.0**
Total Male	**225**	**12.6**	**591**	**33.1**	**969**	**54.3**	**1,785**	**100.0**
Female								
0 - 11	0	N/A	0	N/A	0	N/A	**0**	**N/A**
12 - 16	1	16.7	1	16.7	4	66.7	**6**	**100.0**
17 - 24	21	8.9	90	38.0	126	53.2	**237**	**100.0**
25 - 29	11	10.4	44	41.5	51	48.1	**106**	**100.0**
30 - 39	11	7.3	58	38.7	81	54.0	**150**	**100.0**
40 - 49	10	5.9	59	34.9	100	59.2	**169**	**100.0**
50 - 59	9	8.3	39	35.8	61	56.0	**109**	**100.0**
60 and over	5	4.6	36	33.3	67	62.0	**108**	**100.0**
Unknown age	2	10.0	7	35.0	11	55.0	**20**	**100.0**
Total Female	**70**	**7.7**	**334**	**36.9**	**501**	**55.4**	**905**	**100.0**
Unknown Gender	**7**	**11.1**	**10**	**15.9**	**46**	**73.0**	**63**	**100.0**
Total Drivers/Riders in Hospitalisation Crashes	**302**	**11.0**	**935**	**34.0**	**1,516**	**55.1**	**2,753**	**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	13	24.1	10	18.5	31	57.4	**54**	**100.0**
17 - 24	66	21.3	92	29.7	152	49.0	**310**	**100.0**
25 - 29	38	24.8	46	30.1	69	45.1	**153**	**100.0**
30 - 39	50	21.9	58	25.4	120	52.6	**228**	**100.0**
40 - 49	19	9.4	77	38.1	106	52.5	**202**	**100.0**
50 - 59	16	10.6	54	35.8	81	53.6	**151**	**100.0**
60 and over	11	7.0	53	33.8	93	59.2	**157**	**100.0**
Unknown age	5	16.1	6	19.4	20	64.5	**31**	**100.0**
Total Male	**220**	**16.7**	**406**	**30.8**	**691**	**52.5**	**1,317**	**100.0**
Female								
0 - 11	1	4.3	9	39.1	13	56.5	**23**	**100.0**
12 - 16	6	20.7	8	27.6	15	51.7	**29**	**100.0**
17 - 24	21	11.5	72	39.6	89	48.9	**182**	**100.0**
25 - 29	9	10.6	33	38.8	43	50.6	**85**	**100.0**
30 - 39	6	6.1	43	43.9	49	50.0	**98**	**100.0**
40 - 49	7	6.2	41	36.3	65	57.5	**113**	**100.0**
50 - 59	4	5.1	29	36.7	46	58.2	**79**	**100.0**
60 and over	5	4.2	39	32.5	76	63.3	**120**	**100.0**
Unknown age	1	2.6	19	48.7	19	48.7	**39**	**100.0**
Total Female	**60**	**7.8**	**293**	**38.2**	**415**	**54.0**	**768**	**100.0**
Unknown Gender	**54**	**21.0**	**92**	**35.8**	**111**	**43.2**	**257**	**100.0**
Total Persons KSI	**334**	**14.3**	**791**	**33.8**	**1,217**	**52.0**	**2,342**	**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	24	28.6	21	25.0	39	46.4	**84**	**100.0**
Passenger	7	18.9	11	29.7	19	51.4	**37**	**100.0**
Motorcyclist	14	56.0	4	16.0	7	28.0	**25**	**100.0**
Bicyclist	0	0.0	2	66.7	1	33.3	**3**	**100.0**
Pedestrian	2	8.3	9	37.5	13	54.2	**24**	**100.0**
Total Fatalities	**47**	**27.2**	**47**	**27.2**	**79**	**45.7**	**173**	**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	2	0	1	**3**
Head On	4	2	5	**11**
Sideswipe Same Dir.	1	0	2	**3**
Right Angle	3	3	1	**7**
Right Turn Through	1	2	3	**6**
Other/ Unknown	2	0	2	**4**
Total Multi Vehicle	**13**	**7**	**14**	**34**
Single-Vehicle Crashes				
Hit Pedestrian	1	3	6	**10**
Hit Animal	0	0	0	**0**
Hit Object	8	1	9	**18**
Non Collision	1	2	0	**3**
Other/ Unknown	0	0	1	**1**
Total Single Vehicle	**10**	**6**	**16**	**32**
Total Fatal Crashes	**23**	**13**	**30**	**66**

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	1	**1**
Head On	0	2	4	**6**
Sideswipe Same Dir.	0	1	1	**2**
Right Angle	0	0	2	**2**
Right Turn Through	0	0	0	**0**
Other/ Unknown	0	1	3	**4**
Total Multi Vehicle	**0**	**4**	**11**	**15**
Single-Vehicle Crashes				
Hit Pedestrian	0	4	1	**5**
Hit Animal	0	0	0	**0**
Hit Object	11	8	12	**31**
Non Collision	0	1	2	**3**
Other/ Unknown	0	1	2	**3**
Total Single Vehicle	**11**	**14**	**17**	**42**
Total Fatal Crashes	**11**	**18**	**28**	**57**

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	1	1	**2**
Sideswipe Same Dir.	0	0	0	**0**
Right Angle	0	1	0	**1**
Right Turn Through	0	0	0	**0**
Other/ Unknown	1	0	1	**2**
Total Multi Vehicle	**1**	**2**	**2**	**5**
Single-Vehicle Crashes				
Hit Pedestrian	0	1	3	**4**
Hit Animal	0	1	0	**1**
Hit Object	5	0	5	**10**
Non Collision	4	8	5	**17**
Other/ Unknown	0	0	1	**1**
Total Single Vehicle	**9**	**10**	**14**	**33**
Total Fatal Crashes	**10**	**12**	**16**	**38**

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	0	0.0	1	2.3	0	0.0	**1**	**0.6**
50	7	15.9	5	11.6	7	9.5	**19**	**11.8**
60	9	20.5	2	4.7	11	14.9	**22**	**13.7**
70	6	13.6	3	7.0	7	9.5	**16**	**9.9**
80	3	6.8	3	7.0	5	6.8	**11**	**6.8**
90	1	2.3	2	4.7	1	1.4	**4**	**2.5**
100	2	4.5	4	9.3	8	10.8	**14**	**8.7**
110	16	36.4	21	48.8	34	45.9	**71**	**44.1**
Unknown	0	0.0	2	4.7	1	1.4	**3**	**1.9**
Total Fatal Crashes	**44**	**100.0**	**43**	**100.0**	**74**	**100.0**	**161**	**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	0.5	9	1.5	15	1.6	**25**	**1.4**
50	68	32.9	112	19.1	198	21.0	**378**	**21.8**
60	49	23.7	163	27.9	266	28.2	**478**	**27.6**
70	27	13.0	69	11.8	145	15.4	**241**	**13.9**
80	15	7.2	49	8.4	99	10.5	**163**	**9.4**
90	3	1.4	26	4.4	22	2.3	**51**	**2.9**
100	12	5.8	27	4.6	58	6.2	**97**	**5.6**
110	26	12.6	119	20.3	112	11.9	**257**	**14.8**
State Default	2	1.0	5	0.9	14	1.5	**21**	**1.2**
Unknown	4	1.9	6	1.0	14	1.5	**24**	**1.4**
Total Hospitalisation Crashes	**207**	**100.0**	**585**	**100.0**	**943**	**100.0**	**1,735**	**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 2011, there were 271 hospitalisation crashes and two fatal crashes that were not police attended and are, therefore, not 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 14 police-attended crashes were excluded from this section, for a total of 9,563 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	100	62.9	1,153	66.6	**1,253**	**66.3**	4,452	58.0	**5,705**	**59.7**
> 0 to < 0.05	11	6.9	35	2.0	**46**	**2.4**	139	1.8	**185**	**1.9**
0.05 to < 0.08	5	3.1	35	2.0	**40**	**2.1**	127	1.7	**167**	**1.7**
0.08 to < 0.15	11	6.9	79	4.6	**90**	**4.8**	378	4.9	**468**	**4.9**
≥ 0.15	19	11.9	37	2.1	**56**	**3.0**	201	2.6	**257**	**2.7**
Subtotal ≥ 0.05	**35**	**22.0**	**151**	**8.7**	**186**	**9.8**	**706**	**9.2**	**892**	**9.3**
Unknown	13	8.2	392	22.6	**405**	**21.4**	2,376	31.0	**2,781**	**29.1**
Total Crashes[1]	**159**	**100.0**	**1,731**	**100.0**	**1,890**	**100.0**	**7,673**	**100.0**	**9,563**	**100.0**

1. Excludes police-attended crashes that did not involve a driver/rider (n=14).

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

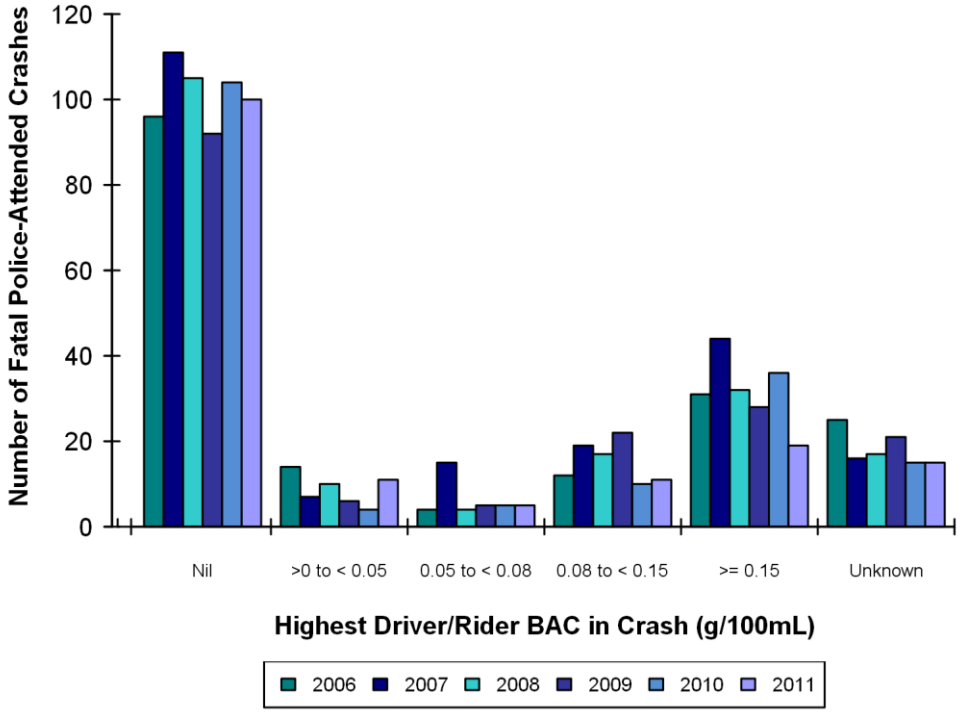


Table 71 Fatal Crashes by Highest Driver/Rider BAC in Crash by Year, Police-Attended Crashes

Highest Driver/Rider BAC in Crash (g/100mL)	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010[1]
	n	n	n	n	n	n	%
Nil	96	111	105	92	104	100	-3.8
> 0 to < 0.05	14	7	10	6	4	11	N/R
0.05 to < 0.08	4	15	4	5	5	5	N/R
0.08 to < 0.15	12	19	17	22	10	11	10.0
≥ 0.15	31	44	32	28	36	19	-47.2
Sub-total ≥ 0.05	**47**	**78**	**53**	**55**	**51**	**35**	**-31.4**
Unknown	25	16	17	21	15	15	N/R
Total Fatal Crashes	**182**	**212**	**185**	**174**	**174**	**161**	**-7.5**

1. 2011 change from 2010 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	868	67.0	151	67.7	123	66.8	76	62.8	35	53.0	**1,253**	**66.3**
> 0 to < 0.05	37	2.9	2	0.9	3	1.6	3	2.5	1	1.5	**46**	**2.4**
0.05 to < 0.08	28	2.2	1	0.4	3	1.6	6	5.0	2	3.0	**40**	**2.1**
0.08 to < 0.15	53	4.1	16	7.2	9	4.9	8	6.6	4	6.1	**90**	**4.8**
≥ 0.15	31	2.4	10	4.5	6	3.3	4	3.3	5	7.6	**56**	**3.0**
Sub-total ≥ 0.05	**112**	**8.6**	**27**	**12.1**	**18**	**9.8**	**18**	**14.9**	**11**	**16.7**	**186**	**9.8**
Unknown	279	21.5	43	19.3	40	21.7	24	19.8	19	28.8	**405**	**21.4**
Total Serious Crashes[1]	**1,296**	**100.0**	**223**	**100.0**	**184**	**100.0**	**121**	**100.0**	**66**	**100.0**	**1,890**	**100.0**

1. Excludes police-attended crashes that did not involve a driver/rider (n=6).

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	1	0	0	0	0	**0**	1	**2**
17 - 24	19	6	2	4	1	**7**	7	**39**
25 - 29	9	1	0	0	3	**3**	1	**14**
30 - 39	20	1	1	2	8	**11**	5	**37**
40 - 49	17	1	0	1	3	**4**	1	**23**
50 - 59	12	2	1	1	2	**4**	4	**22**
60 and over	23	0	1	1	0	**2**	4	**29**
Unknown Age	0	0	0	0	0	**0**	1	**1**
Total Male	**101**	**11**	**5**	**9**	**17**	**31**	**24**	**167**
Female								
0 - 11	0	0	0	0	0	**0**	0	**0**
12 - 16	1	0	0	0	0	**0**	1	**2**
17 - 24	12	0	0	1	2	**3**	1	**16**
25 - 29	0	0	0	0	0	**0**	0	**0**
30 - 39	4	0	0	1	0	**1**	1	**6**
40 - 49	6	1	0	0	0	**0**	0	**7**
50 - 59	3	0	0	0	0	**0**	2	**5**
60 and over	10	0	0	0	0	**0**	0	**10**
Total Female	**36**	**1**	**0**	**2**	**2**	**4**	**5**	**46**
Unknown Gender	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**6**
Total Drivers/Riders in Fatal Crashes	**137**	**12**	**5**	**11**	**19**	**35**	**35**	**219**

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	13	0	0	0	0	0	4	**17**
17 - 24	241	11	10	20	11	41	121	**414**
25 - 29	120	6	9	13	8	30	62	**218**
30 - 39	180	3	7	15	7	29	101	**313**
40 - 49	212	3	2	6	1	9	96	**320**
50 - 59	157	3	0	4	5	9	58	**227**
60 and over	162	3	2	1	0	3	63	**231**
Unknown age	17	0	1	2	0	3	25	**45**
Total Male	**1,102**	**29**	**31**	**61**	**32**	**124**	**530**	**1,785**
Female								
0 – 11	0	0	0	0	0	0	0	**0**
12 – 16	5	0	0	0	0	0	1	**6**
17 – 24	165	4	1	6	1	8	60	**237**
25 – 29	69	1	2	3	0	5	31	**106**
30 – 39	100	0	2	3	2	7	43	**150**
40 - 49	110	2	1	5	2	8	49	**169**
50 - 59	75	0	0	1	0	1	33	**109**
60 and over	79	0	0	0	0	0	29	**108**
Unknown age	8	0	0	0	0	0	12	**20**
Total Female	**611**	**7**	**6**	**18**	**5**	**29**	**258**	**905**
Unknown Gender	**12**	**0**	**0**	**0**	**0**	**0**	**51**	**63**
Total Drivers/Riders in Hospitalisation Crashes	**1,725**	**36**	**37**	**79**	**37**	**153**	**839**	**2,753**

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	24	0	0	1	0	**1**	6	**31**
12 - 16	40	3	0	0	0	**0**	11	**54**
17 - 24	175	15	9	20	15	**44**	75	**309**
25 - 29	78	5	4	12	12	**28**	42	**153**
30 - 39	135	4	9	20	15	**44**	45	**228**
40 - 49	133	7	2	10	3	**15**	45	**200**
50 - 59	113	2	1	4	6	**11**	25	**151**
60 and over	119	1	3	5	1	**9**	27	**156**
Unknown age	18	2	1	1	0	**2**	9	**31**
Total Male	**835**	**39**	**29**	**73**	**52**	**154**	**285**	**1,313**
Female								
0 - 11	18	1	0	0	1	**1**	3	**23**
12 - 16	19	1	1	4	0	**5**	4	**29**
17 - 24	118	4	2	10	4	**16**	43	**181**
25 - 29	59	4	0	4	0	**4**	18	**85**
30 - 39	67	1	1	7	4	**12**	18	**98**
40 - 49	77	3	1	5	2	**8**	25	**113**
50 - 59	61	1	0	2	1	**3**	14	**79**
60 and over	92	1	0	0	1	**1**	26	**120**
Unknown age	29	0	1	0	0	**1**	9	**39**
Total Female	**540**	**16**	**6**	**32**	**13**	**51**	**160**	**767**
Unknown Gender	**166**	**10**	**14**	**26**	**8**	**48**	**32**	**256**
Total Persons KSI[1]	**1,541**	**65**	**49**	**131**	**73**	**253**	**477**	**2,336**

1. Excludes persons killed or seriously injured in crashes that did not involve a driver/rider (n=6).

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	0	0	1	0	0	**1**	11	**12**
Regional	0	0	0	0	3	**3**	5	**8**
Remote	0	0	0	0	3	**3**	1	**4**
Total Pedestrian Fatalities	**0**	**0**	**1**	**0**	**6**	**7**	**17**	**24**

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. The matching process was not exact as some of the fields used in the matching process did not record similar data in the same way. For example, the location of the crash site is recorded in the crash data, however, the drug data records the place of death, which in some cases was a specific hospital, potentially hundreds of kilometres and several days after the crash event.

This process resulted in 161 of 175 fatalities from the crash data being matched to a record within the drug dataset. There were also 31 records from the drug data that were unable to be matched to records in the crash data. Of these 31 fatalities, one had cannabis detected in their system, and two had both alcohol and cannabis in their systems. The remaining 28 did not have any illegal drugs detected in their systems. It is likely that many of the 14 fatalities 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 161 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	1	1	2
Cannabis only	5	1	6
Amphetamines and Cannabis only	0	0	0
Amphetamines and Alcohol only	1	0	1
Cannabis and Alcohol only	18	0	18
Amphetamines, Cannabis and Alcohol only	1	0	1
Other (other illegal drugs & combinations)[1]	0	0	0
Total with Drugs Detected	**26**	**2**	**28**
None	91	42	133
Total Fatalities	**117**	**44**	**161**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.
1. Other includes cocaine and heroin only.

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	1	1	0	0	2
Cannabis only	0	3	3	0	6
Amphetamines and Cannabis only	0	0	0	0	0
Amphetamines and Alcohol only	0	0	1	0	1
Cannabis and Alcohol only	0	10	8	0	18
Amphetamines, Cannabis and Alcohol only	0	1	0	0	1
Other (other illegal drugs & combinations)[1]	0	0	0	0	0
Total with Drugs Detected	**1**	**15**	**12**	**0**	**28**
None	8	27	64	34	133
Total Fatalities	**9**	**42**	**76**	**34**	**161**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.
1. Other includes cocaine and heroin only.

Table 79 Fatalities by Drug Use and Road User Type

	Road User Type						
	Driver	Passenger	Motorcyclist	Bicyclist	Pedestrian	Other/ Unknown	Total Fatalities
Drugs Detected	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Amphetamines only	2	0	0	0	0	0	**2**
Cannabis only	1	2	0	1	2	0	**6**
Amphetamines and Cannabis only	0	0	0	0	0	0	**0**
Amphetamines and Alcohol only	1	0	0	0	0	0	**1**
Cannabis and Alcohol only	5	4	5	1	3	0	**18**
Amphetamines, Cannabis and Alcohol only	1	0	0	0	0	0	**1**
Other (other illegal drugs & combinations)[1]	0	0	0	0	0	0	**0**
Total with Drugs Detected	**10**	**6**	**5**	**2**	**5**	**0**	**28**
None	68	27	18	1	19	0	**133**
Total Fatalities	**78**	**33**	**23**	**3**	**24**	**0**	**161**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.
1. Other includes cocaine and heroin only.

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	0	0	1	1	0	0	0	**2**
Cannabis only	1	2	2	0	0	1	0	**6**
Amphetamines and Cannabis only	0	0	0	0	0	0	0	**0**
Amphetamines and Alcohol only	0	0	0	0	0	0	1	**1**
Cannabis and Alcohol only	1	2	1	0	6	2	6	**18**
Amphetamines, Cannabis and Alcohol only	0	0	0	0	0	1	0	**1**
Other (other illegal drugs & combinations)[1]	0	0	0	0	0	0	0	**0**
Total with Drugs Detected	**2**	**4**	**4**	**1**	**6**	**4**	**7**	**28**
None	14	19	12	22	25	24	17	**133**
Total Fatalities	**16**	**23**	**16**	**23**	**31**	**28**	**24**	**161**

Source: Forensic Science Laboratory, Chemistry Centre of Western Australia.
1. Other includes cocaine and heroin only

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 2011, all but two fatal crashes were attended by police.

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

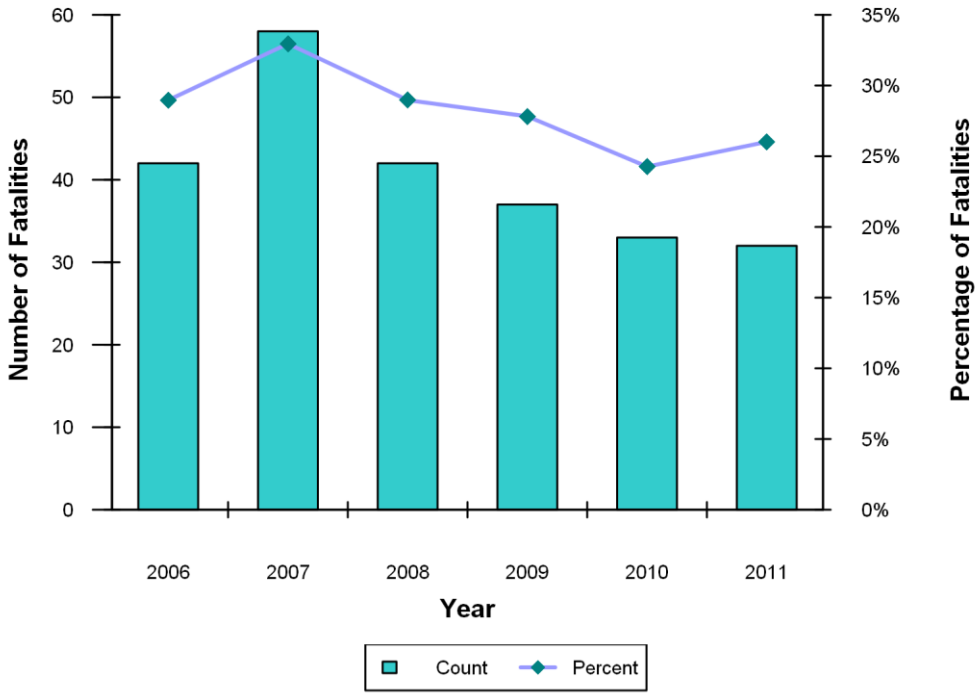


Table 81 Motor Vehicle Occupant Fatalities by Seat Belt Usage by Year

	Year						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010[1]
Seat Belt Usage	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Worn	91	86	82	75	84	72	-14.3
Not Worn	42	58	42	37	33	32	-3.0
Unknown	12	32	21	21	19	19	N/R
Total Motor Vehicle Occupant Fatalities	**145**	**176**	**145**	**133**	**136**	**123**	**-9.6**

1. 2011 change from 2010 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	911	85.9	41	3.9	109	10.2	**1,061**	**100.0**
Accessible	175	78.1	18	8.0	31	13.8	**224**	**100.0**
Moderately Accessible	130	74.7	22	12.7	22	12.7	**174**	**100.0**
Remote	107	76.4	16	11.4	17	12.1	**140**	**100.0**
Very Remote	63	65.6	22	22.9	11	11.5	**96**	**100.0**
Total Motor Vehicle Occupants KSI	**1,386**	**81.8**	**119**	**7.0**	**190**	**11.2**	**1,695**	**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	1	25.0	2	50.0	1	25.0	**4**	**100.0**
12 - 16	1	33.3	0	0.0	2	66.7	**3**	**100.0**
17 - 24	14	66.7	3	14.3	4	19.0	**21**	**100.0**
25 - 29	3	30.0	5	50.0	2	20.0	**10**	**100.0**
30 - 39	6	40.0	7	46.7	2	13.3	**15**	**100.0**
40 - 49	4	44.4	2	22.2	3	33.3	**9**	**100.0**
50 - 59	3	50.0	3	50.0	0	0.0	**6**	**100.0**
60 and over	13	72.2	4	22.2	1	5.6	**18**	**100.0**
Total Male	**45**	**52.3**	**26**	**30.2**	**15**	**17.4**	**86**	**100.0**
Female								
0 - 11	1	100.0	0	0.0	0	0.0	**1**	**100.0**
12 - 16	0	N/A	0	N/A	0	N/A	**0**	**N/A**
17 - 24	6	60.0	3	30.0	1	10.0	**10**	**100.0**
25 - 29	1	100.0	0	0.0	0	0.0	**1**	**100.0**
30 - 39	2	33.3	2	33.3	2	33.3	**6**	**100.0**
40 - 49	4	80.0	1	20.0	0	0.0	**5**	**100.0**
50 - 59	0	N/A	0	N/A	0	N/A	**0**	**N/A**
60 and over	12	100.0	0	0.0	0	0.0	**12**	**100.0**
Total Female	**26**	**74.3**	**6**	**17.1**	**3**	**8.6**	**35**	**100.0**
Total Unknown Gender	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
Total Motor Vehicle Occupant Fatalities	**71**	**58.7**	**32**	**26.4**	**18**	**14.9**	**121**	**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	9	75.0	2	16.7	1	8.3	**12**	**100.0**
12 - 16	7	43.8	6	37.5	3	18.8	**16**	**100.0**
17 - 24	150	78.5	18	9.4	23	12.0	**191**	**100.0**
25 - 29	75	83.1	5	5.6	10	11.2	**90**	**100.0**
30 - 39	95	77.2	9	7.3	19	15.4	**123**	**100.0**
40 - 49	73	76.6	5	5.3	18	18.1	**96**	**100.0**
50 - 59	74	89.0	2	2.4	7	8.5	**83**	**100.0**
60 and over	89	90.8	1	1.0	8	8.2	**98**	**100.0**
Unknown age	15	71.4	2	9.5	4	19.0	**21**	**100.0**
Total Male	**587**	**80.4**	**50**	**6.9**	**93**	**12.7**	**730**	**100.0**
Female								
0 - 11	8	57.1	4	28.6	2	14.3	**14**	**100.0**
12 - 16	8	61.5	4	30.8	1	7.7	**13**	**100.0**
17 - 24	140	88.6	8	5.1	10	6.3	**158**	**100.0**
25 - 29	51	89.5	2	3.5	4	7.0	**57**	**100.0**
30 - 39	66	88.0	0	0.0	9	12.0	**75**	**100.0**
40 - 49	84	93.3	2	2.2	4	4.4	**90**	**100.0**
50 - 59	59	89.4	1	1.5	6	9.1	**66**	**100.0**
60 and over	86	93.5	0	0.0	6	6.5	**92**	**100.0**
Unknown age	34	89.5	0	0.0	4	10.5	**38**	**100.0**
Total Female	**536**	**88.9**	**21**	**3.5**	**46**	**7.6**	**603**	**100.0**
Unknown Gender	**192**	**79.7**	**16**	**6.6**	**33**	**13.7**	**241**	**100.0**
Total Motor Vehicle Occupants Seriously Injured	**1,315**	**83.6**	**87**	**5.5**	**172**	**10.9**	**1,574**	**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	56	66.7	933	86.1	**989**	**84.7**
Not Worn	19	22.6	44	4.1	**63**	**5.4**
Unknown	9	10.7	106	9.8	**115**	**9.9**
Total Drivers	**84**	**100.0**	**1,083**	**100.0**	**1,167**	**100.0**
Passenger						
Worn	15	40.5	382	77.8	**397**	**75.2**
Not Worn	13	35.1	43	8.8	**56**	**10.6**
Unknown	9	24.3	66	13.4	**75**	**14.2**
Total Passengers	**37**	**100.0**	**491**	**100.0**	**528**	**100.0**
Total Motor Vehicle Occupants	**121**	**-**	**1,574**	**-**	**1,695**	**-**

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	22	73.3	626	88.3	**648**	**87.8**
Not Worn	5	16.7	19	2.7	**24**	**3.3**
Unknown	3	10.0	64	9.0	**67**	**9.0**
Total Drivers	**30**	**100.0**	**709**	**100.0**	**739**	**100.0**
Passenger						
Worn	6	60.0	218	82.3	**224**	**81.5**
Not Worn	1	10.0	14	5.3	**15**	**5.5**
Unknown	3	30.0	33	12.5	**36**	**13.1**
Total Passengers	**10**	**100.0**	**265**	**100.0**	**275**	**100.0**
Total Motor Vehicle Occupants	**40**	**-**	**974**	**-**	**1,014**	**-**

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	25	65.8	193	83.1	**218**	**80.7**
Not Worn	9	23.7	13	5.6	**22**	**8.2**
Unknown	4	10.5	26	11.3	**30**	**11.2**
Total Drivers	**38**	**100.0**	**231**	**100.0**	**270**	**100.0**
Passenger						
Worn	3	42.9	100	77.5	**103**	**75.7**
Not Worn	2	28.6	9	7.0	**11**	**8.1**
Unknown	2	28.6	20	15.5	**22**	**16.2**
Total Passengers	**7**	**100.0**	**129**	**100.0**	**136**	**100.0**
Total Motor Vehicle Occupants	**45**	**-**	**361**	**-**	**406**	**-**

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	9	56.3	114	80.3	**123**	**77.8**
Not Worn	5	31.3	12	8.5	**17**	**10.8**
Unknown	2	12.5	16	11.3	**18**	**11.4**
Total Drivers	**16**	**100.0**	**142**	**100.0**	**158**	**100.0**
Passenger						
Worn	6	30.0	64	66.0	**70**	**59.8**
Not Worn	10	50.0	20	20.6	**30**	**25.6**
Unknown	4	20.0	13	13.4	**17**	**14.5**
Total Passengers	**20**	**100.0**	**97**	**100.0**	**117**	**100.0**
Total Motor Vehicle Occupants	**36**	**-**	**239**	**-**	**275**	**-**

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	24	1	0	**25**
Serious	298	21	21	**340**
Total Motorcyclists	**322**	**22**	**21**	**365**
Bicyclists				
Fatal	1	2	0	**3**
Serious	55	17	10	**82**
Total Bicyclists	**56**	**19**	**10**	**85**
Total Motorcyclists and Bicyclists	**378**	**41**	**31**	**450**

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	14	1	0	**15**
Serious	209	14	18	**241**
Total Motorcyclists	**223**	**15**	**18**	**256**
Bicyclists				
Fatal	1	2	0	**3**
Serious	50	15	9	**74**
Total Bicyclists	**51**	**17**	**9**	**77**
Total Motorcyclists and Bicyclists	**274**	**32**	**27**	**333**

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	7	0	0	**7**
Serious	66	5	1	**72**
Total Motorcyclists	**73**	**5**	**1**	**79**
Bicyclists				
Fatal	0	0	0	**0**
Serious	4	2	0	**6**
Total Bicyclists	**4**	**2**	**0**	**6**
Total Motorcyclists and Bicyclists	**77**	**7**	**1**	**85**

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	3	0	0	**3**
Serious	23	2	2	**27**
Total Motorcyclists	**26**	**2**	**2**	**30**
Bicyclists				
Fatal	0	0	0	**0**
Serious	1	0	1	**2**
Total Bicyclists	**1**	**0**	**1**	**2**
Total Motorcyclists and Bicyclists	**27**	**2**	**3**	**32**

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

	Helmet Usage		
	Worn	Not Worn	Total
Age	**n**	**n**	**n**
0 - 11	0	0	**0**
12 - 16	1	0	**1**
17 - 24	7	0	**7**
25 - 39	5	1	**6**
40 - 59	9	0	**9**
60 and over	2	0	**2**
Total Motorcyclists	**24**	**1**	**25**

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	69	42.3	689	34.3	**758**	**34.9**	13,575	36.4	**14,333**	**36.3**
Main Road	17	10.4	103	5.1	**120**	**5.5**	640	1.7	**760**	**1.9**
Other	77	47.2	1,214	60.5	**1,291**	**59.5**	23,073	61.9	**24,364**	**61.7**
Road Surface										
Sealed	145	89.0	1,932	96.3	**2,077**	**95.8**	36,378	97.6	**38,455**	**97.5**
Unsealed	18	11.0	60	3.0	**78**	**3.6**	682	1.8	**760**	**1.9**
Unknown	0	0.0	14	0.7	**14**	**0.6**	228	0.6	**242**	**0.6**
Road Alignment										
Curve	45	27.6	422	21.0	**467**	**21.5**	6,653	17.8	**7,120**	**18.0**
Straight	118	72.4	1,535	76.5	**1,653**	**76.2**	28,747	77.1	**30,400**	**77.0**
Unknown	0	0.0	49	2.4	**49**	**2.3**	1,888	5.1	**1,937**	**4.9**
Road Gradient										
Level	106	65.0	1,508	75.2	**1,614**	**74.4**	29,071	78.0	**30,685**	**77.8**
Crest of Hill	1	0.6	33	1.6	**34**	**1.6**	603	1.6	**637**	**1.6**
Slope	56	34.4	396	19.7	**452**	**20.8**	5,692	15.3	**6,144**	**15.6**
Unknown	0	0.0	69	3.4	**69**	**3.2**	1,922	5.2	**1,991**	**5.0**
Road Conditions										
Wet	12	7.4	275	13.7	**287**	**13.2**	6,225	16.7	**6,512**	**16.5**
Dry	151	92.6	1,711	85.3	**1,862**	**85.8**	30,416	81.6	**32,278**	**81.8**
Unknown	0	0.0	20	1.0	**20**	**0.9**	647	1.7	**667**	**1.7**
Light										
Daylight	91	55.8	1,293	64.5	**1,384**	**63.8**	27,164	72.8	**28,548**	**72.4**
Dawn or Dusk	3	1.8	70	3.5	**73**	**3.4**	2,023	5.4	**2,096**	**5.3**
Night										
Street Lights On	26	16.0	440	21.9	**466**	**21.5**	5,690	15.3	**6,156**	**15.6**
Street Lights Off	4	2.5	20	1.0	**24**	**1.1**	231	0.6	**255**	**0.6**
No Street Lights	37	22.7	145	7.2	**182**	**8.4**	1,042	2.8	**1,224**	**3.1**
Subtotal Night	**67**	**41.1**	**605**	**30.2**	**672**	**31.0**	**6,963**	**18.7**	**7,635**	**19.4**
Unknown	2	1.2	38	1.9	**40**	**1.8**	1,138	3.1	**1,178**	**3.0**
Total Crashes	**163**	**100.0**	**2,006**	**100.0**	**2,169**	**100.0**	**37,288**	**100.0**	**39,457**	**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

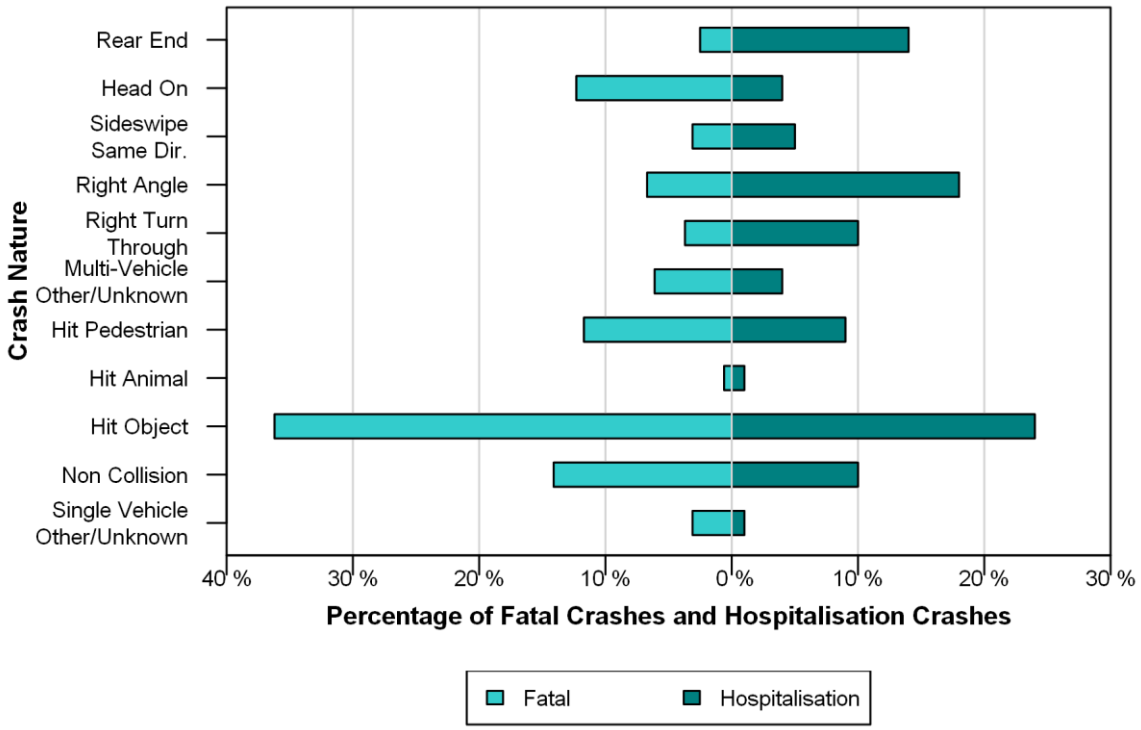


Table 95 Fatal Crashes by Crash Nature and Area of Crash

	Area of Crash							
	Metropolitan		Regional		Remote		Western Australia	
Crash Nature	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Multi-Vehicle Crashes								
Rear End	3	4.4	1	1.8	0	0.0	**4**	**2.5**
Head On	12	17.6	6	10.5	2	5.3	**20**	**12.3**
Sideswipe Same Dir.	3	4.4	2	3.5	0	0.0	**5**	**3.1**
Right Angle	8	11.8	2	3.5	1	2.6	**11**	**6.7**
Right Turn Through	6	8.8	0	0.0	0	0.0	**6**	**3.7**
Other/ Unknown	4	5.9	4	7.0	2	5.3	**10**	**6.1**
Total Multi Vehicle	**36**	**52.9**	**15**	**26.3**	**5**	**13.2**	**56**	**34.4**
Single-Vehicle Crashes								
Hit Pedestrian	10	14.7	5	8.8	4	10.5	**19**	**11.7**
Hit Animal	0	0.0	0	0.0	1	2.6	**1**	**0.6**
Hit Object	18	26.5	31	54.4	10	26.3	**59**	**36.2**
Non Collision	3	4.4	3	5.3	17	44.7	**23**	**14.1**
Other/ Unknown	1	1.5	3	5.3	1	2.6	**5**	**3.1**
Total Single Vehicle	**32**	**47.1**	**42**	**73.7**	**33**	**86.8**	**107**	**65.6**
Total Fatal Crashes	**68**	**100.0**	**57**	**100.0**	**38**	**100.0**	**163**	**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	18	26.5	6	10.5	3	7.9	**27**	**16.6**
Run Off Road	21	30.9	34	59.6	26	68.4	**81**	**49.7**
Head On	12	17.6	6	10.5	2	5.3	**20**	**12.3**
Other	21	30.9	11	19.3	7	18.4	**39**	**23.9**
Total Fatal Crashes	**68**	**100.0**	**57**	**100.0**	**38**	**100.0**	**163**	**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	248	17.7	29	7.5	9	4.1	**286**	**14.3**
Head On	48	3.4	17	4.4	11	5.0	**76**	**3.8**
Sideswipe Same Dir.	82	5.9	9	2.3	2	0.9	**93**	**4.6**
Right Angle	309	22.1	46	11.9	14	6.4	**369**	**18.4**
Right Turn Through	185	13.2	20	5.2	3	1.4	**208**	**10.4**
Other/ Unknown	54	3.9	13	3.4	13	5.9	**80**	**4.0**
Total Multi Vehicle	**926**	**66.2**	**134**	**34.6**	**52**	**23.6**	**1,112**	**55.4**
Single-Vehicle Crashes								
Hit Pedestrian	137	9.8	31	8.0	9	4.1	**177**	**8.8**
Hit Animal	1	0.1	7	1.8	3	1.4	**11**	**0.5**
Hit Object	250	17.9	152	39.3	75	34.1	**477**	**23.8**
Non Collision	72	5.1	57	14.7	72	32.7	**201**	**10.0**
Other/ Unknown	13	0.9	6	1.6	9	4.1	**28**	**1.4**
Total Single Vehicle	**473**	**33.8**	**253**	**65.4**	**168**	**76.4**	**894**	**44.6**
Total Hospitalisation Crashes	**1,399**	**100.0**	**387**	**100.0**	**220**	**100.0**	**2,006**	**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	716	51.2	116	30.0	35	15.9	**867**	**43.2**
Run Off Road	319	22.8	193	49.9	146	66.4	**658**	**32.8**
Head On	48	3.4	17	4.4	11	5.0	**76**	**3.8**
Other	384	27.4	78	20.2	38	17.3	**500**	**24.9**
Total Hospitalisation Crashes	**1,399**	**100.0**	**387**	**100.0**	**220**	**100.0**	**2,006**	**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	261	17.1	13	5.5	10	5.2	5	3.7	1	1.3	**290**	**13.4**
Head On	61	4.0	14	5.9	9	4.6	9	6.6	3	3.9	**96**	**4.4**
Sideswipe Same Dir.	87	5.7	5	2.1	4	2.1	1	0.7	1	1.3	**98**	**4.5**
Right Angle	329	21.6	24	10.1	18	9.3	9	6.6	0	0.0	**380**	**17.5**
Right Turn Through	195	12.8	15	6.3	2	1.0	2	1.5	0	0.0	**214**	**9.9**
Other/ Unknown	59	3.9	10	4.2	10	5.2	10	7.4	1	1.3	**90**	**4.1**
Total Multi Vehicle	**992**	**65.0**	**81**	**34.2**	**53**	**27.3**	**36**	**26.5**	**6**	**7.8**	**1,168**	**53.8**
Single-Vehicle Crashes												
Hit Pedestrian	156	10.2	15	6.3	15	7.7	7	5.1	3	3.9	**196**	**9.0**
Hit Animal	1	0.1	2	0.8	5	2.6	2	1.5	2	2.6	**12**	**0.6**
Hit Object	282	18.5	103	43.5	84	43.3	40	29.4	27	35.1	**536**	**24.7**
Non Collisions	79	5.2	30	12.7	33	17.0	48	35.3	34	44.2	**224**	**10.3**
Other/ Unknown	15	1.0	6	2.5	4	2.1	3	2.2	5	6.5	**33**	**1.5**
Total Single Vehicle	**533**	**35.0**	**156**	**65.8**	**141**	**72.7**	**100**	**73.5**	**71**	**92.2**	**1,001**	**46.2**
Total Serious Crashes	**1,525**	**100.0**	**237**	**100.0**	**194**	**100.0**	**136**	**100.0**	**77**	**100.0**	**2,169**	**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	765	50.2	65	27.4	39	20.1	21	15.4	4	5.2	**894**	**41.2**
Run Off Road	355	23.3	125	52.7	114	58.8	88	64.7	57	74.0	**739**	**34.1**
Head On	61	4.0	14	5.9	9	4.6	9	6.6	3	3.9	**96**	**4.4**
Other	419	27.5	42	17.7	40	20.6	25	18.4	13	16.9	**539**	**24.9**
Total Serious Crashes	**1,525**	**100.0**	**237**	**100.0**	**194**	**100.0**	**136**	**100.0**	**77**	**100.0**	**2,169**	**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	1	0.6	33	1.6	**34**	**1.6**	670	1.8	**704**	**1.8**
50	19	11.7	437	21.8	**456**	**21.0**	11,027	29.6	**11,483**	**29.1**
60	22	13.5	552	27.5	**574**	**26.5**	11,398	30.6	**11,972**	**30.3**
70	17	10.4	280	14.0	**297**	**13.7**	6,095	16.3	**6,392**	**16.2**
80	12	7.4	187	9.3	**199**	**9.2**	3,027	8.1	**3,226**	**8.2**
90	4	2.5	61	3.0	**65**	**3.0**	439	1.2	**504**	**1.3**
100	14	8.6	109	5.4	**123**	**5.7**	1,956	5.2	**2,079**	**5.3**
110	71	43.6	283	14.1	**354**	**16.3**	1,469	3.9	**1,823**	**4.6**
State Default	0	0.0	32	1.6	**32**	**1.5**	351	0.9	**383**	**1.0**
Unknown	3	1.8	32	1.6	**35**	**1.6**	856	2.3	**891**	**2.3**
Total Crashes	**163**	**100.0**	**2,006**	**100.0**	**2,169**	**100.0**	**37,288**	**100.0**	**39,457**	**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						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Speed Zone	%	%	%	%	%	%	%
60 km/h	N/A	51.0	41.2	38.2	46.6	48.2	3.4
70 km/h	N/A	41.4	26.0	21.3	37.4	37.0	-1.1
80 km/h	N/A	37.3	29.2	23.5	39.9	34.0	-14.8
90 km/h	N/A	24.6	34.5	33.7	26.6	27.8	4.5
100 km/h	N/A	33.8	35.0	43.3	20.2	32.3	59.9
110 km/h	N/A	23.6	28.1	30.3	23.8	15.5	-34.9

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 2007, 2008, 2010 and 2011, 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 2011" (2012).

4.4 Safe Vehicles

4.4.1 ANCAP Safety Ratings

The Australasian New Car Assessment Program (ANCAP) is an independent crash test program that provides consumers with advice on the level of occupant and pedestrian protection provided by new cars and light commercial vehicles.

The ANCAP safety ratings are based on the results of a series of internationally recognised crash tests that replicate the effects of the most common crash types (frontal offset, side impact, pole, pedestrian and whiplash tests) and built in safety assist technologies that help protect occupants and pedestrians, or that assist the driver in avoiding a crash.

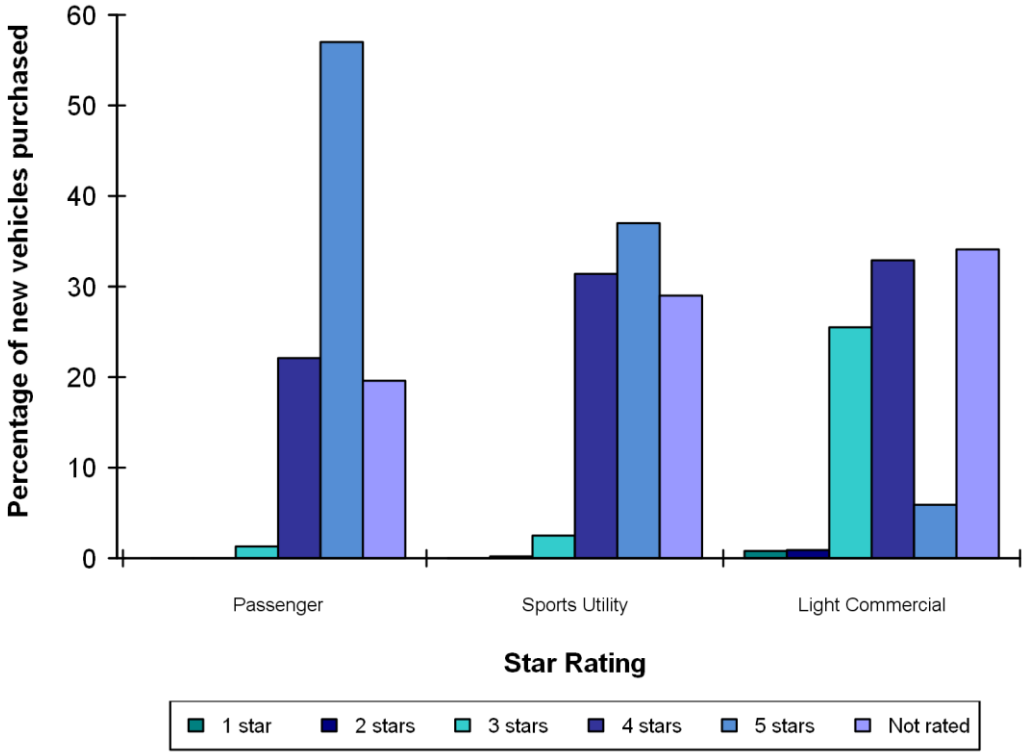
Crash test dummies are used to measure the forces that would act on occupants and pedestrians involved in the crash. This data is assessed, and the performance of the vehicle in each of the crash types is scored. Vehicles are also scored on the safety assist technologies that are fitted as standard to the vehicle. These scores are combined and converted into an ANCAP safety rating ranging from 1 to 5 stars. Vehicles with better crash results and greater number of safety features are awarded more stars.

In order to get the highest rating of 5 stars, the vehicle must achieve a specific score in each of the crash tests, have a mandatory set of safety assist technologies fitted as standard, and also have a minimum number of additional safety assist technologies fitted as standard as specified in the ANCAP Rating Road Map[2]. In 2011, the mandatory safety features were electronic stability control (ESC), three-point seat belts for all forward facing seats and head protecting technologies (e.g. side and curtain airbags) for the front seats.

The requirements for ANCAP safety ratings are not fixed, and will become more stringent in the future to encourage continual improvements to the safety of vehicle designs.

[2] See ANCAP Rating Road Map 2011-2017 available from the ANCAP website <http://www.ancap.com.au/media>

Figure 19 New Passenger, Sports Utility and Light Commercial Vehicles Purchased by ANCAP Safety Rating and Vehicle Type, WA Fleet



Source: R.L. Polk Australia Pty Ltd

Table 103 New Passenger, Sports Utility and Light Commercial Vehicles Purchased by ANCAP Safety Rating and Vehicle type, WA Fleet

	Vehicle type							
	Passenger vehicles		Sports utility vehicles		Light commercial vehicles		Total	
ANCAP star rating	n	%	n	%	n	%	n	%
1 star	0	0.0	0	0.0	177	0.8	**177**	**0.2**
2 stars	15	0.0	41	0.2	198	0.9	**254**	**0.2**
3 stars	684	1.3	690	2.5	5,877	25.5	**7,251**	**6.9**
4 stars	12,005	22.1	8,750	31.4	7,568	32.9	**28,323**	**26.9**
5 stars	30,914	57.0	10,309	37.0	1,350	5.9	**42,573**	**40.5**
Not rated	10,639	19.6	8,062	29.0	7,844	34.1	**26,545**	**25.3**
Total	**54,257**	**100.0**	**27,852**	**100.0**	**23,014**	**100.0**	**105,123**	**100.0**

Source: R.L. Polk Australia Pty Ltd

4.4.2 Vehicle Type

Table 104 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	89	38.4	1,629	48.9	**1,718**	**48.2**	42,113	58.0	**43,831**	**57.5**
Station Wagon	26	11.2	354	10.6	**380**	**10.7**	9,255	12.7	**9,635**	**12.6**
Utility	33	14.2	353	10.6	**386**	**10.8**	8,270	11.4	**8,656**	**11.4**
Panel Van, 4WD	28	12.1	258	7.7	**286**	**8.0**	4,856	6.7	**5,142**	**6.7**
Rigid Truck	3	1.3	77	2.3	**80**	**2.2**	1,771	2.4	**1,851**	**2.4**
Articulated Truck	20	8.6	54	1.6	**74**	**2.1**	511	0.7	**585**	**0.8**
Bus (≥12 seats)	1	0.4	25	0.7	**26**	**0.7**	557	0.8	**583**	**0.8**
Multi Seater Van	2	0.9	10	0.3	**12**	**0.3**	312	0.4	**324**	**0.4**
Motorcycle	27	11.6	404	12.1	**431**	**12.1**	1,112	1.5	**1,543**	**2.0**
Moped	0	0.0	1	0.0	**1**	**0.0**	8	0.0	**9**	**0.0**
Bicycle	3	1.3	105	3.1	**108**	**3.0**	594	0.8	**702**	**0.9**
Motorised Wheelchair/Gopher	0	0.0	64	1.9	**64**	**1.8**	3,257	4.5	**3,321**	**4.4**
Other/ Unknown	0	0.0	0	0.0	**0**	**0.0**	0	0.0	**0**	**0.0**
Total Vehicles	**232**	**100.0**	**3,334**	**100.0**	**3,566**	**100.0**	**72,616**	**100.0**	**76,182**	**100.0**

4.4.3 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 105 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	33	26.8	516	29.1	**549**	**28.9**	1,099	12.5	2,777	3.1	**4,425**	**4.4**
Fitted and not deployed	21	17.1	541	30.5	**562**	**29.6**	5,645	64.0	46,657	51.5	**52,864**	**52.2**
Total Airbag Fitted	**54**	**43.9**	**1,057**	**59.5**	**1,111**	**58.5**	**6,744**	**76.5**	**49,434**	**54.6**	**57,289**	**56.5**
Not Fitted/Unknown	69	56.1	719	40.5	**788**	**41.5**	2,074	23.5	41,171	45.4	**44,033**	**43.5**
Total Motor Vehicle Occupants	**123**	**100.0**	**1,776**	**100.0**	**1,899**	**100.0**	**8,818**	**100.0**	**90,605**	**100.0**	**101,322**	**100.0**

Table 106 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	379	32.4	112	26.4	58	19.1	**549**	**28.9**
Fitted and not deployed	355	30.3	109	25.6	98	32.3	**562**	**29.6**
Total Airbag Fitted	**734**	**62.7**	**221**	**52.0**	**156**	**51.5**	**1,111**	**58.5**
Not Fitted/Unknown	437	37.3	204	48.0	147	48.5	**788**	**41.5**
Total Motor Vehicle Occupants KSI	**1,171**	**100.0**	**425**	**100.0**	**303**	**100.0**	**1,899**	**100.0**

Table 107 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	439	33.4	110	18.8	**549**	**28.9**
Fitted and not deployed	405	30.8	157	26.8	**562**	**29.6**
Total Airbag Fitted	**844**	**64.3**	**267**	**45.6**	**1,111**	**58.5**
Not Fitted/Unknown	469	35.7	319	54.4	**788**	**41.5**
Total Motor Vehicle Occupants KSI	**1,313**	**100.0**	**586**	**100.0**	**1,899**	**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 108 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	10	6.1	134	6.7	**144**	**6.6**	2,577	6.9	**2,721**	**6.9**
February	18	11.0	164	8.2	**182**	**8.4**	2,930	7.9	**3,112**	**7.9**
March	11	6.7	198	9.9	**209**	**9.6**	3,548	9.5	**3,757**	**9.5**
April	17	10.4	165	8.2	**182**	**8.4**	3,059	8.2	**3,241**	**8.2**
May	12	7.4	160	8.0	**172**	**7.9**	3,255	8.7	**3,427**	**8.7**
June	16	9.8	165	8.2	**181**	**8.3**	3,256	8.7	**3,437**	**8.7**
July	5	3.1	151	7.5	**156**	**7.2**	3,289	8.8	**3,445**	**8.7**
August	14	8.6	186	9.3	**200**	**9.2**	3,368	9.0	**3,568**	**9.0**
September	16	9.8	160	8.0	**176**	**8.1**	3,041	8.2	**3,217**	**8.2**
October	16	9.8	163	8.1	**179**	**8.3**	2,937	7.9	**3,116**	**7.9**
November	16	9.8	162	8.1	**178**	**8.2**	3,173	8.5	**3,351**	**8.5**
December	12	7.4	198	9.9	**210**	**9.7**	2,855	7.7	**3,065**	**7.8**
Total Crashes	**163**	**100.0**	**2,006**	**100.0**	**2,169**	**100.0**	**37,288**	**100.0**	**39,457**	**100.0**

Table 109 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	10	5.7	168	6.8	**178**	**6.7**	701	7.1	6,249	6.7	**7,128**	**6.8**
February	20	11.4	197	8.0	**217**	**8.2**	810	8.2	7,189	7.7	**8,216**	**7.8**
March	11	6.3	236	9.6	**247**	**9.3**	1,028	10.4	8,827	9.5	**10,102**	**9.6**
April	19	10.9	202	8.2	**221**	**8.4**	779	7.9	7,809	8.4	**8,809**	**8.4**
May	13	7.4	191	7.7	**204**	**7.7**	932	9.5	8,061	8.7	**9,197**	**8.7**
June	16	9.1	203	8.2	**219**	**8.3**	890	9.0	7,802	8.4	**8,911**	**8.4**
July	5	2.9	183	7.4	**188**	**7.1**	887	9.0	8,543	9.2	**9,618**	**9.1**
August	16	9.1	223	9.0	**239**	**9.0**	894	9.1	8,211	8.8	**9,344**	**8.9**
September	17	9.7	215	8.7	**232**	**8.8**	757	7.7	7,387	7.9	**8,376**	**7.9**
October	17	9.7	202	8.2	**219**	**8.3**	665	6.8	7,307	7.9	**8,191**	**7.8**
November	16	9.1	209	8.5	**225**	**8.5**	782	7.9	8,169	8.8	**9,176**	**8.7**
December	15	8.6	240	9.7	**255**	**9.6**	716	7.3	7,424	8.0	**8,395**	**8.0**
Total Persons	**175**	**100.0**	**2,469**	**100.0**	**2,644**	**100.0**	**9,841**	**100.0**	**92,978**	**100.0**	**105,463**	**100.0**

Table 110 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	18	11.0	232	11.6	**250**	**11.5**	5,059	13.6	**5,309**	**13.5**
Tuesday	21	12.9	268	13.4	**289**	**13.3**	5,839	15.7	**6,128**	**15.5**
Wednesday	17	10.4	283	14.1	**300**	**13.8**	5,927	15.9	**6,227**	**15.8**
Thursday	21	12.9	291	14.5	**312**	**14.4**	6,144	16.5	**6,456**	**16.4**
Friday	32	19.6	346	17.2	**378**	**17.4**	6,514	17.5	**6,892**	**17.5**
Saturday	29	17.8	325	16.2	**354**	**16.3**	4,609	12.4	**4,963**	**12.6**
Sunday	25	15.3	261	13.0	**286**	**13.2**	3,196	8.6	**3,482**	**8.8**
Total Crashes	**163**	**100.0**	**2,006**	**100.0**	**2,169**	**100.0**	**37,288**	**100.0**	**39,457**	**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 but two fatal crashes in 2011 were attended by police, however, there were 271 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 2011 estimated resident population by *Towards Zero* and Main Roads regions is provided in Table 111.

Table 111 2011 Estimated Resident Population by Region

	2011 Population	
Towards Zero Regions	**n**	**%**
Metropolitan	1,744,529	74.2
Regional	393,939	16.7
Remote	213,747	9.1
Main Roads Regions		
Goldfields	58,537	2.5
Great Southern	59,077	2.5
Kimberley	37,673	1.6
Mid West	54,368	2.3
Pilbara-Gascoyne	72,357	3.1
South West	252,818	10.7
Wheatbelt North	50,118	2.1
Wheatbelt South	22,738	1.0
Total Western Australia	**2,352,215**	**100.0**

Source: Australian Bureau of Statistics, Customised report, 2013.

Table 112 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	68	0.2	1,399	4.2	**1,467**	**4.4**	31,862	95.6	**33,329**	**100.0**
Regional	57	1.3	387	9.0	**444**	**10.3**	3,854	89.7	**4,298**	**100.0**
Remote	38	2.1	220	12.0	**258**	**14.1**	1,572	85.9	**1,830**	**100.0**
Main Roads Regions										
Goldfields	7	1.3	45	8.1	**52**	**9.4**	501	90.6	**553**	**100.0**
Great Southern	6	1.2	35	6.9	**41**	**8.1**	464	91.9	**505**	**100.0**
Kimberley	9	3.6	33	13.2	**42**	**16.8**	208	83.2	**250**	**100.0**
Mid West	8	1.5	63	12.0	**71**	**13.5**	456	86.5	**527**	**100.0**
Pilbara-Gascoyne	7	1.2	65	11.6	**72**	**12.8**	489	87.2	**561**	**100.0**
South West	21	0.7	232	7.9	**253**	**8.7**	2,669	91.3	**2,922**	**100.0**
Wheatbelt North	27	4.7	94	16.2	**121**	**20.9**	459	79.1	**580**	**100.0**
Wheatbelt South	10	4.3	40	17.4	**50**	**21.7**	180	78.3	**230**	**100.0**
Total Crashes	**163**	**0.4**	**2,006**	**5.1**	**2,169**	**5.5**	**37,288**	**94.5**	**39,457**	**100.0**

Table 113 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	72	0.1	1,652	1.8	**1,724**	**1.9**	8,257	9.2	80,062	88.9	**90,043**	**100.0**
Regional	60	0.6	505	4.6	**565**	**5.2**	1,058	9.7	9,268	85.1	**10,891**	**100.0**
Remote	43	0.9	312	6.9	**355**	**7.8**	526	11.6	3,648	80.5	**4,529**	**100.0**
Main Roads Regions												
Goldfields	8	0.6	64	4.7	**72**	**5.2**	130	9.5	1,171	85.3	**1,373**	**100.0**
Great Southern	7	0.6	42	3.3	**49**	**3.9**	103	8.2	1,110	88.0	**1,262**	**100.0**
Kimberley	11	1.5	52	7.2	**63**	**8.8**	86	12.0	570	79.3	**719**	**100.0**
Mid West	8	0.6	83	6.2	**91**	**6.8**	130	9.7	1,113	83.4	**1,334**	**100.0**
Pilbara-Gascoyne	8	0.5	91	6.2	**99**	**6.8**	172	11.8	1,187	81.4	**1,458**	**100.0**
South West	22	0.3	294	3.9	**316**	**4.2**	770	10.1	6,526	85.7	**7,612**	**100.0**
Wheatbelt North	29	2.4	136	11.2	**165**	**13.6**	145	12.0	903	74.4	**1,213**	**100.0**
Wheatbelt South	10	2.2	55	12.2	**65**	**14.5**	48	10.7	336	74.8	**449**	**100.0**
Total Persons	**175**	**0.2**	**2,469**	**2.3**	**2,644**	**2.5**	**9,841**	**9.3**	**92,978**	**88.2**	**105,463**	**100.0**

Table 114 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	83	58	29	4	6	5	10	4	19	33	6	**170**
Hospitalisation	1,498	357	206	36	29	29	63	73	228	74	31	**2,061**
Total Male	**1,581**	**415**	**235**	**40**	**35**	**34**	**73**	**77**	**247**	**107**	**37**	**2,231**
Female												
Fatal	19	15	14	3	1	3	0	5	6	7	4	**48**
Hospitalisation	824	168	60	16	15	8	18	14	107	37	13	**1,052**
Total Female	**843**	**183**	**74**	**19**	**16**	**11**	**18**	**19**	**113**	**44**	**17**	**1,100**
Unknown gender												
Fatal	1	4	1	0	0	1	0	0	4	0	0	**6**
Hospitalisation	83	7	4	2	1	1	0	0	6	1	0	**94**
Total Unknown gender	**84**	**11**	**5**	**2**	**1**	**2**	**0**	**0**	**10**	**1**	**0**	**100**
Total Drivers/Riders in Serious Crashes	**2,508**	**609**	**314**	**61**	**52**	**47**	**91**	**96**	**370**	**152**	**54**	**3,431**

Table 115 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	22	7	2	1	0	0	2	1	4	1	0	**31**
17 – 24	563	146	78	15	10	16	31	21	87	27	17	**787**
25 – 59	1,444	357	194	33	29	26	53	62	224	92	32	**1,995**
60 and over	304	79	33	11	11	3	5	9	40	28	5	**416**
Unknown age	175	20	7	1	2	2	0	3	15	4	0	**202**
Total Drivers/Riders in Serious Crashes	**2,508**	**609**	**314**	**61**	**52**	**47**	**91**	**96**	**370**	**152**	**54**	**3,431**

Table 116 Serious Crashes by Speed a Factor by Region

	Towards Zero Regions			Main Roads Regions								Total Western Australia
	Metropolitan	Regional	Remote	Goldfields	Great Southern	Kimberley	Mid West	Pilbara-Gascoyne	South West	Wheatbelt North	Wheatbelt South	
Speed a Factor in Crash	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Police-Attended Serious Crashes												
Yes	153	57	41	7	4	5	12	13	33	17	7	**251**
No	345	185	98	23	18	15	35	25	108	43	16	**628**
Unknown	752	173	92	21	15	17	20	23	94	52	23	**1,017**
Total police Attended Serious Crashes	**1,250**	**415**	**231**	**51**	**37**	**37**	**67**	**61**	**235**	**112**	**46**	**1,896**
Serious Crashes												
Yes	153	57	41	7	4	5	12	13	33	17	7	**251**
No	347	186	98	23	18	15	35	25	109	43	16	**631**
Unknown	967	201	119	22	19	22	24	34	111	61	27	**1,287**
Total Serious Crashes	**1,467**	**444**	**258**	**52**	**41**	**42**	**71**	**72**	**253**	**121**	**50**	**2,169**

Table 117 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	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**
Nil	838	271	144	33	24	22	45	39	163	66	23	**1,253**
<0 to <0.05	36	6	4	0	1	1	1	0	3	1	3	**46**
≥0.05	106	48	32	2	1	8	12	11	24	18	4	**186**
Unknown	266	89	50	15	10	6	9	11	45	27	16	**405**
Total Serious Crashes[1]	**1,246**	**414**	**230**	**50**	**36**	**37**	**67**	**61**	**235**	**112**	**46**	**1,890**

1. Excludes crashes that did not involve a driver/rider (n=6).

Table 118 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
	Metropolitan	Regional	Remote	Goldfields	Great Southern	Kimberley	Mid West	Pilbara-Gascoyne	South West	Wheatbelt North	Wheatbelt South	
Seat Belt Usage	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Worn	870	320	193	41	30	22	49	54	177	100	40	**1,383**
Not Worn	39	33	47	3	3	19	10	10	18	10	7	**119**
Unknown	102	52	35	12	3	6	7	7	24	23	5	**189**
Total Motor Vehicle Occupants KSI	**1,011**	**405**	**275**	**56**	**36**	**47**	**66**	**71**	**219**	**133**	**52**	**1,691**

Table 119 Serious Crashes by Crash Type by Region

	Towards Zero Regions			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**
Crash Nature												
Head On	60	23	13	0	1	1	8	5	8	13	0	**96**
Right Angle	317	48	15	8	4	1	8	5	32	4	1	**380**
Other/ Unknown Multi-Vehicle[1]	585	78	29	4	6	6	5	10	60	13	3	**692**
Hit Pedestrian	147	36	13	3	3	4	9	4	24	2	0	**196**
Hit Animal	1	7	4	0	2	0	1	3	1	3	1	**12**
Hit Object	268	183	85	14	17	11	25	19	95	61	26	**536**
Non Collision	75	60	89	21	8	15	14	24	28	21	18	**224**
Other/ Unknown Single-Vehicle	14	9	10	2	0	4	1	2	5	4	1	**33**
High Priority Crash Type												
Intersection	734	122	38	14	7	6	13	12	83	20	5	**894**
Run Off Road	340	227	172	32	24	28	37	42	117	79	40	**739**
Head On	60	23	13	0	1	1	8	5	8	13	0	**96**
Other	405	89	45	7	10	8	15	18	55	14	7	**539**
Total Crashes	**1,467**	**444**	**258**	**52**	**41**	**42**	**71**	**72**	**253**	**121**	**50**	**2,169**

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

Table 120 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	498	134	126	21	16	24	29	41	80	39	10	**758**
Main Road	2	93	25	1	4	2	7	10	47	32	15	**120**
Other	967	217	107	30	21	16	35	21	126	50	25	**1,291**
Road Surface												
Sealed	1,454	414	209	44	35	35	64	61	241	102	41	**2,077**
Unsealed	9	27	42	6	6	6	7	8	10	17	9	**78**
Unknown	4	3	7	2	0	1	0	3	2	2	0	**14**
Road Alignment												
Curve	261	138	68	11	15	10	22	17	71	45	15	**467**
Straight	1,172	298	183	39	25	30	48	52	176	76	35	**1,653**
Unknown	34	8	7	2	1	2	1	3	6	0	0	**49**
Road Conditions												
Wet	210	57	20	5	9	4	2	4	34	14	5	**287**
Dry	1,243	382	237	46	32	38	69	68	216	105	45	**1,862**
Unknown	14	5	1	1	0	0	0	0	3	2	0	**20**
Total Serious Crashes	**1,467**	**444**	**258**	**52**	**41**	**42**	**71**	**72**	**253**	**121**	**50**	**2,169**

Table 121 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	96	31	17	3	5	3	5	6	13	11	2	**144**
February	129	38	15	2	2	3	3	4	26	10	3	**182**
March	143	52	14	1	5	3	6	2	39	9	1	**209**
April	126	39	17	4	1	2	4	3	25	13	4	**182**
May	117	31	24	6	2	3	3	8	17	9	7	**172**
June	114	37	30	4	3	7	9	16	15	11	2	**181**
July	112	24	20	4	3	4	5	3	14	8	3	**156**
August	141	31	28	4	2	3	10	12	15	9	4	**200**
September	112	37	27	8	3	3	7	7	17	14	5	**176**
October	124	37	18	6	5	1	6	2	17	11	7	**179**
November	109	42	27	6	7	4	5	5	27	10	5	**178**
December	144	45	21	4	3	6	8	4	28	6	7	**210**
Day of Week												
Monday	156	63	31	2	4	2	12	10	39	16	9	**250**
Tuesday	205	51	33	6	4	10	7	4	28	18	7	**289**
Wednesday	214	50	36	11	6	8	9	10	27	14	1	**300**
Thursday	226	49	37	7	5	6	10	9	31	12	6	**312**
Friday	267	80	31	8	6	5	12	11	41	23	5	**378**
Saturday	233	88	33	9	10	2	9	8	50	18	15	**354**
Sunday	166	63	57	9	6	9	12	20	37	20	7	**286**
Total Serious Crashes	**1,467**	**444**	**258**	**52**	**41**	**42**	**71**	**72**	**253**	**121**	**50**	**2,169**

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 241.4 and 219.9 serious crashes per 100,000 population, respectively, while the Great Southern and Metropolitan regions had the lowest rates of 69.4 and 84.1 per 100,000 population, respectively.

Map 4 shows the number of serious multi-vehicle crashes per 100,000 population by region. The Wheatbelt North region had the highest rate of 59.9 per 100,000 population, seeing the Metropolitan region falling to second highest with 55.1 per 100,000 population. The Wheatbelt South region had the lowest rate (17.6 per 100,000 population).

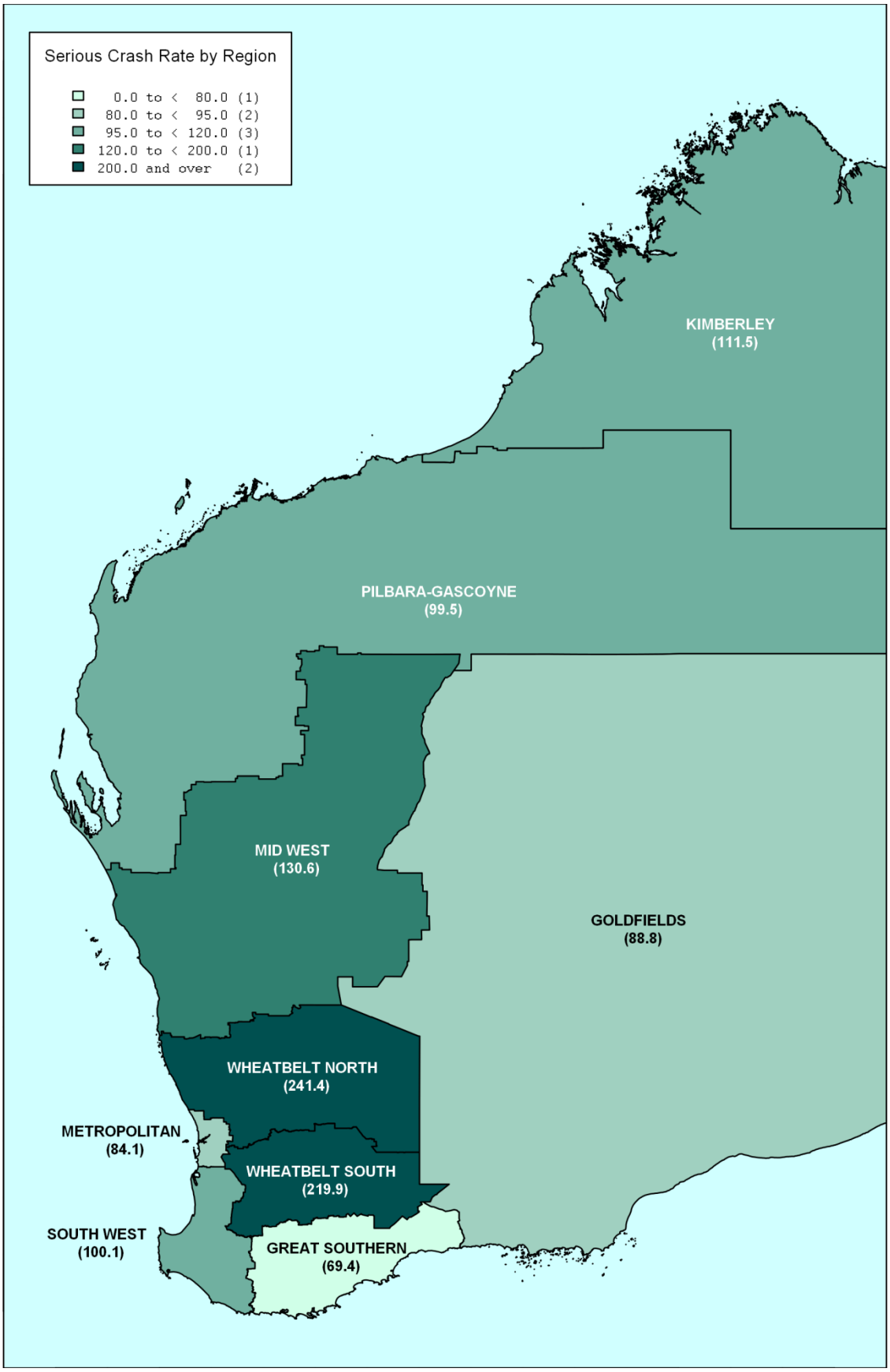
Single-vehicle crash rates by region are shown in Map 5, with the highest rates in the Wheatbelt South and Wheatbelt North (202.3 and 181.6 per 100,000 population, respectively) and the lowest in the Metropolitan region (28.9 per 100,000 population). Of the non-Metropolitan regions, the Great Southern had the lowest serious single-vehicle crash rate (50.8 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 and Wheatbelt South had the highest rates (33.9 and 30.8 per 100,000 population, respectively), while the Great Southern region had the lowest speed-related serious crash rate (6.8 per 100,000 population), with the Metropolitan region having the second lowest speed-related serious crash rate (8.8 per 100,000 population).

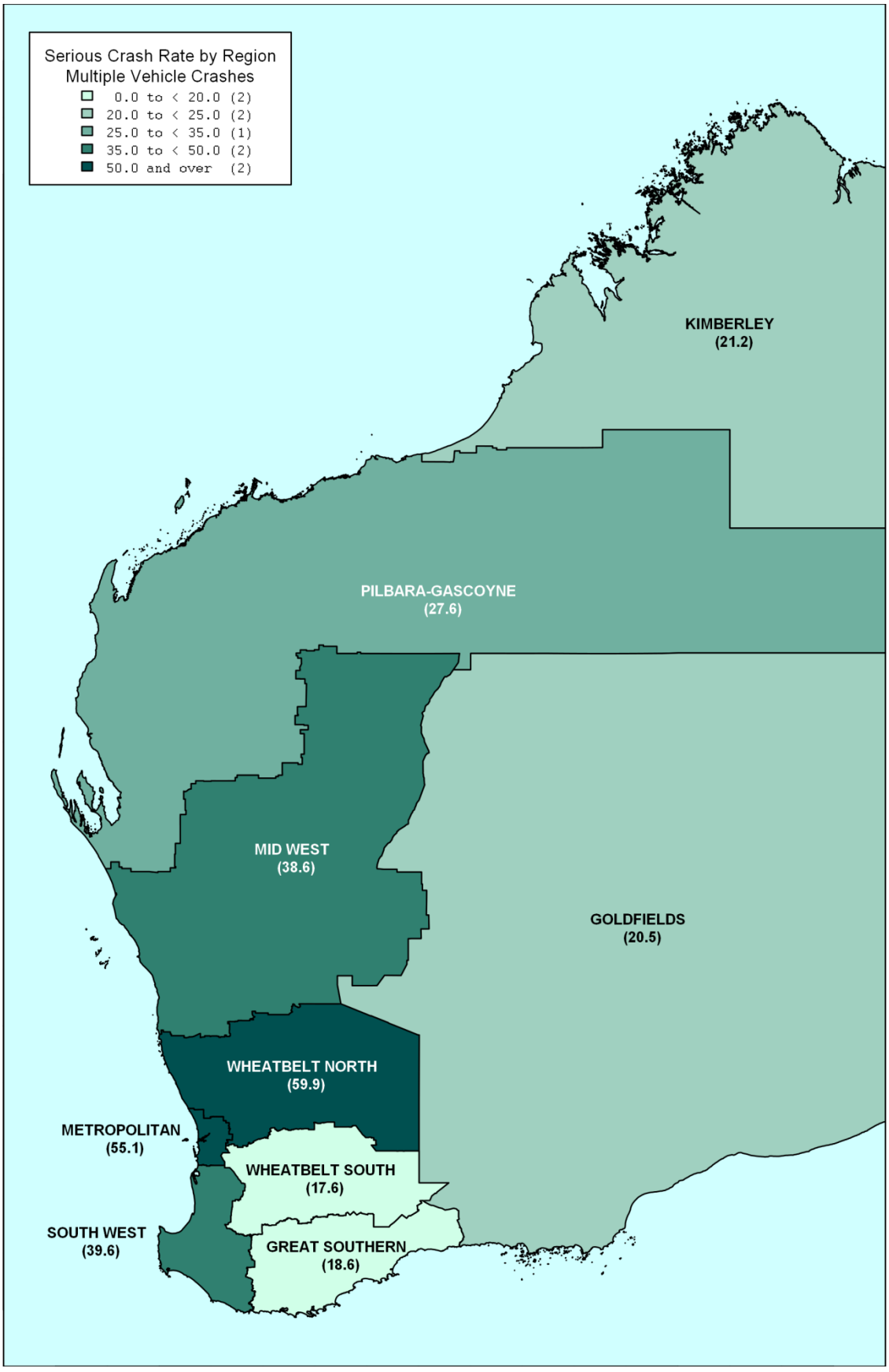
Rates for alcohol-related (i.e. involving at least one driver/rider with a BAC of 0.05 g/100mL or higher), police-attended serious crashes are provided in Map 7. The Wheatbelt North region had the highest rate of alcohol-related serious crashes (35.9 per 100,000 population). The Great Southern and Goldfields regions had the lowest alcohol-related serious crash rate (1.7 and 3.4 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 Kimberley had the highest rate (50.4 per 100,000 population), followed by the Wheatbelt South (30.8 per 100,000 population). The Metropolitan, Great Southern and Goldfields regions had the lowest rates, with 2.2, 5.1 and 5.1 per 100,000 population, respectively.

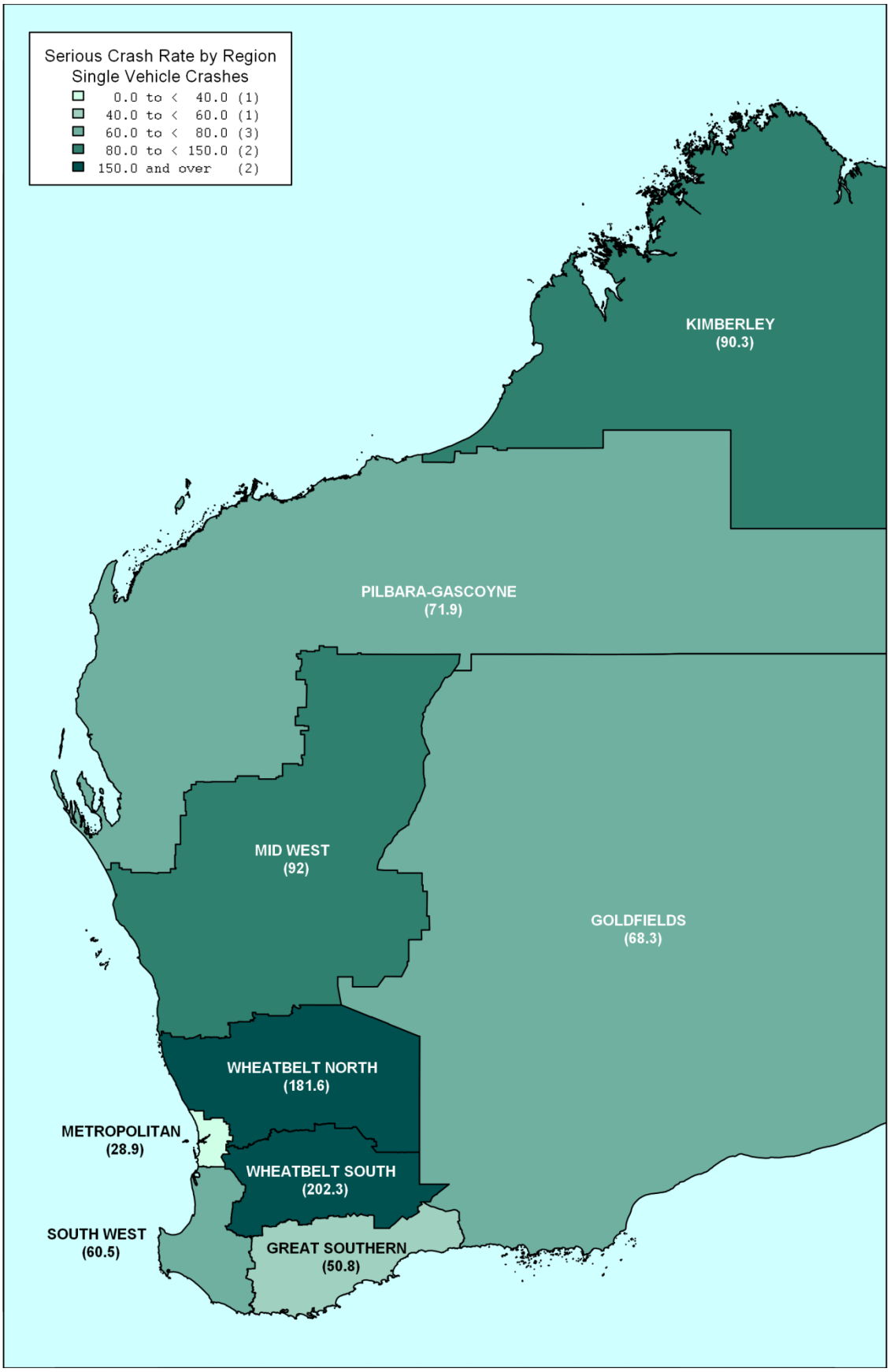
Map 3 Serious Crash Rate per 100,000 Population by Region



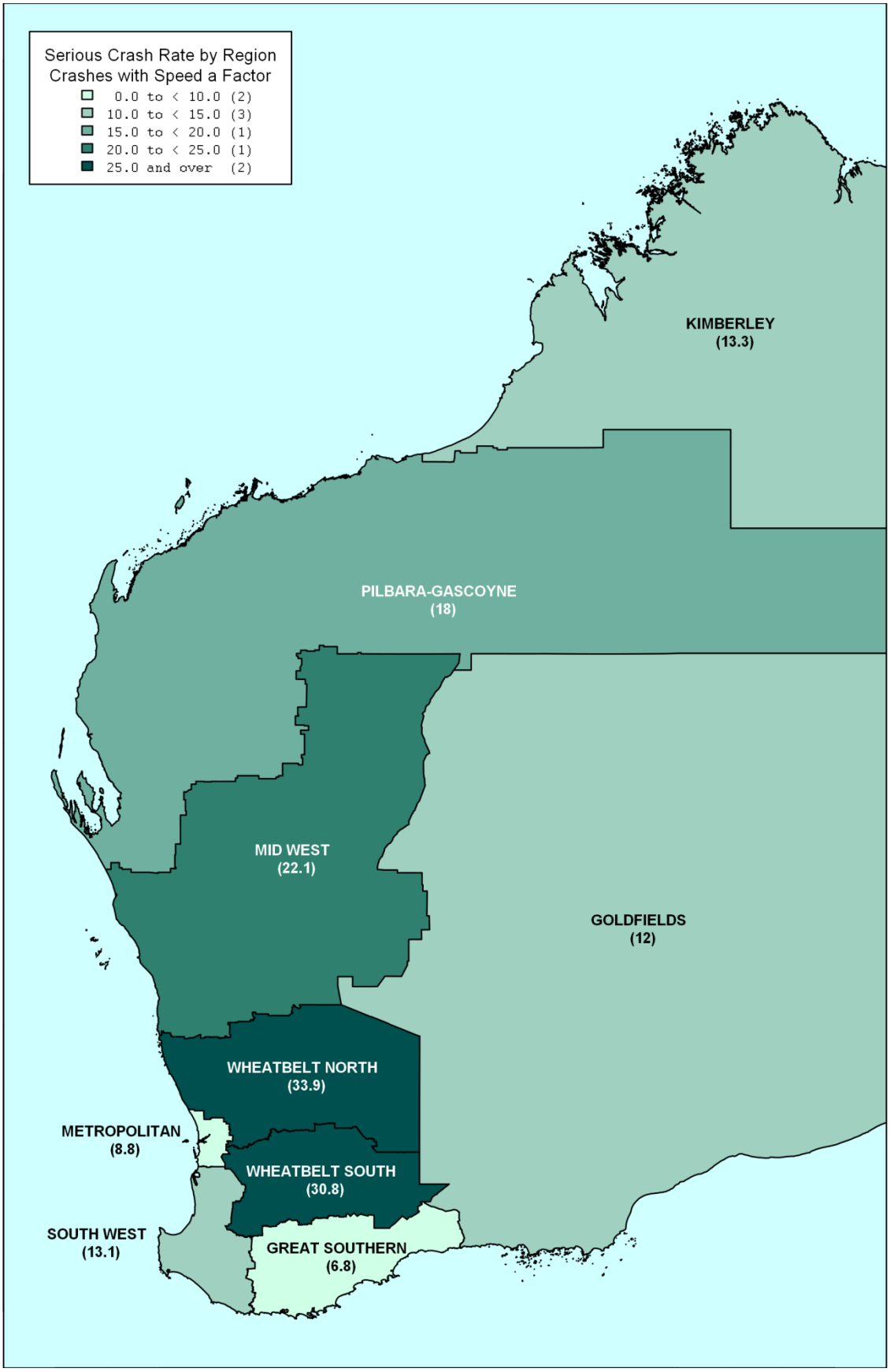
Map 4 Multi-vehicle Serious Crash Rate per 100,000 Population by Region



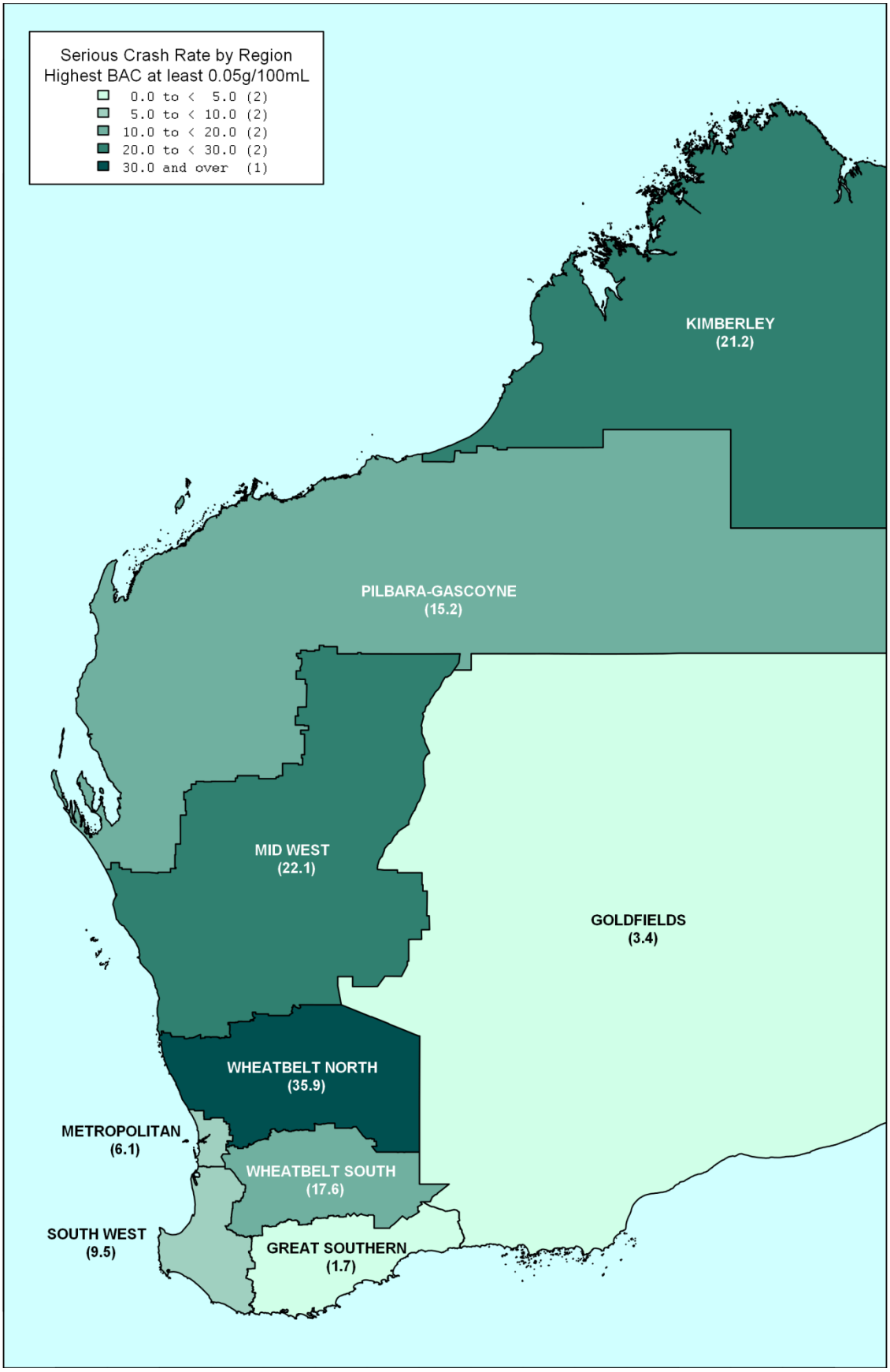
Map 5 Single-Vehicle Serious Crash Rate per 100,000 Population by Region



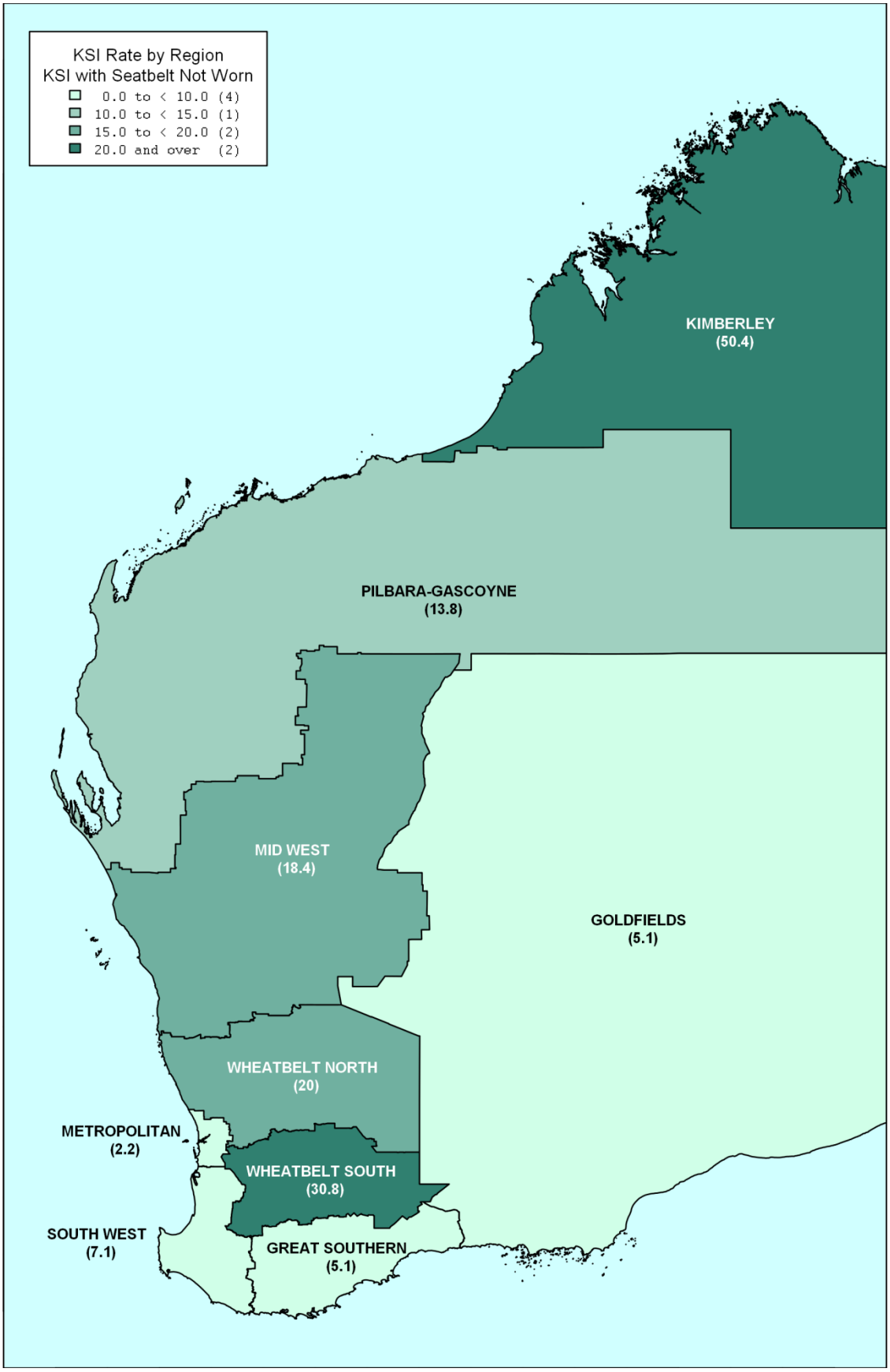
Map 6 Speed-Related Serious Crash Rate per 100,000 Population by Region, Police-Attended Crashes



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. There was a lower variation across the regions in the percentage of persons killed or seriously injured whose age and/or gender were not recorded than in previous years. The minimum percentage was in the Great Southern (10.2%) while the maximum was in the Goldfields (19.4%). For this reason, Table 122, 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.

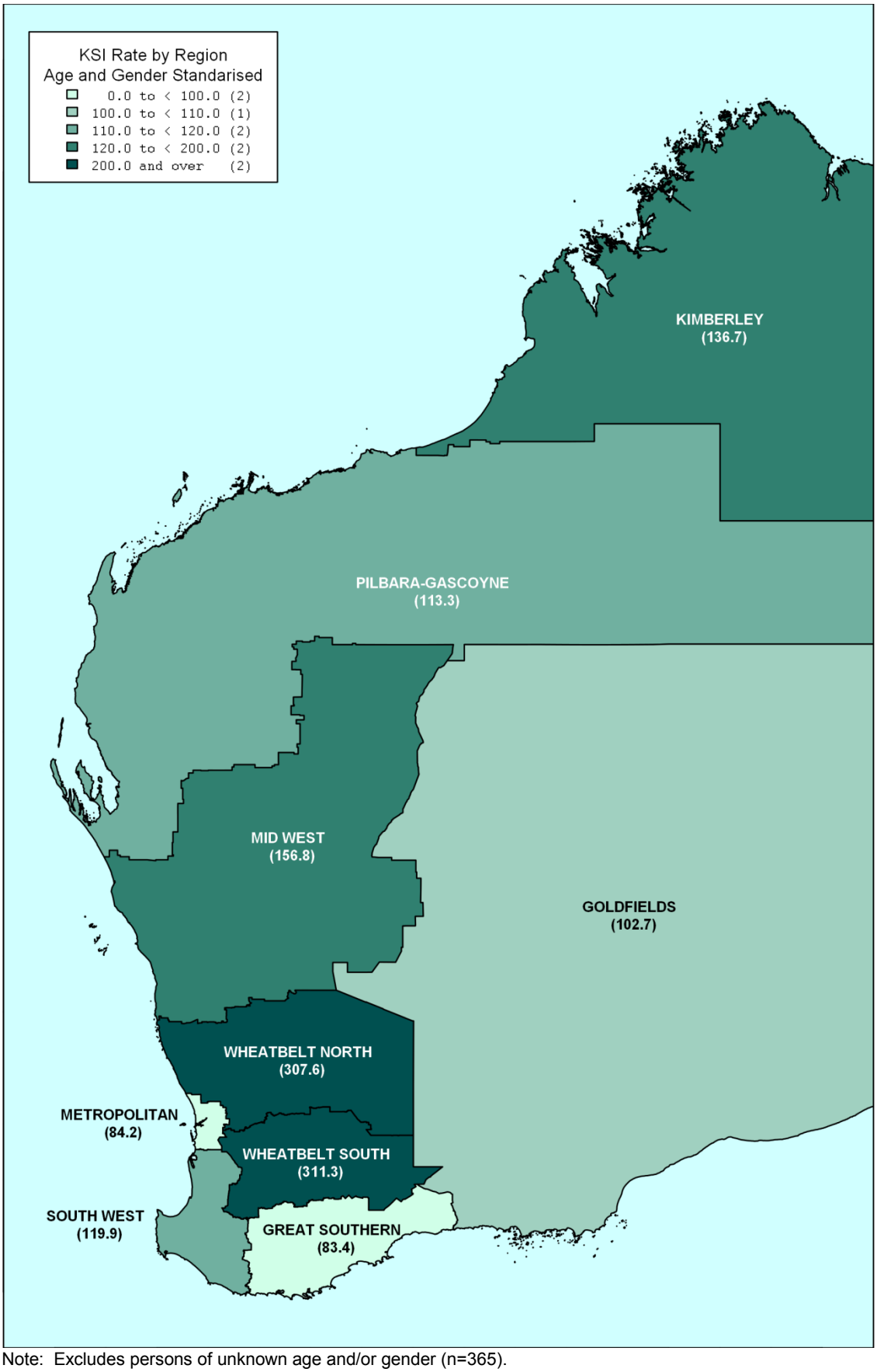
The Great Southern region had the lowest standardised KSI rate (83.4 per 100,000 population), followed by the Metropolitan region at 84.2 per 100,000 population. The Wheatbelt South and Wheatbelt North had the highest age and gender standardised KSI rates (307.6 and 311.3 per 100,000 respectively).

Table 122 Age and Gender Standarised Rates of those Killed or Seriously Injured by Region

	Persons Killed or Seriously Injured (n)			Age and Gender Standardised KSI Rate[1]
***Towards Zero* Regions**	**Age and Gender Known**	**Age and/or Gender Unknown**	**Total Persons KSI**	**(per 100,000 population)**
Metropolitan	1,483	241	1,724	84.2
Regional	492	73	565	137.6
Remote	304	51	355	138.6
Main Roads Regions				
Goldfields	58	14	72	102.7
Great Southern	44	5	49	83.4
Kimberley	53	10	63	136.7
Mid West	79	12	91	156.8
Pilbara-Gascoyne	88	11	99	113.3
South West	275	41	316	119.9
Wheatbelt North	143	22	165	307.6
Wheatbelt South	56	9	65	311.3
Total Western Australia	**2279**	**365**	**2644**	**N/A**

1. Excludes persons of unknown age and/or gender (n=365).

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



Note: Excludes persons of unknown age and/or gender (n=365).

6.3 Goldfields

There were seven fatal crashes in the Goldfields region during 2011 in which eight people died. Of persons killed or seriously injured where gender was known, 58% 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 123). Forty two per cent of persons killed or seriously injured in the Goldfields region were drivers, 39% were passengers and 14% were motorcyclists (Figure 21).

Of police-attended serious crashes in the Goldfields, 14% had speed as a factor (Table 116). The Goldfields had the second lowest percentage (4%) of serious crashes that were alcohol related (Table 117). The Goldfields had the second lowest percentage (5.4%) of motor vehicle occupants killed or seriously injured who were not wearing a seat belt (Table 118). The rate of motor vehicle occupants killed or seriously injured who were not wearing a seat belt was 5.1 per 100,000 population (Map 8).

Over two thirds (77%) of serious crashes in the Goldfields region were single-vehicle crashes. The Goldfields had the second highest percentage of 'Intersection' crashes of the non-Metropolitan regions (27%) and the highest percentage of 'Non Collision' crashes of all regions (40%) (Table 119). There were no 'Head On' serious crashes in the Goldfields in 2011.

Figure 20 Fatal Crashes and Fatalities by Year – Goldfields

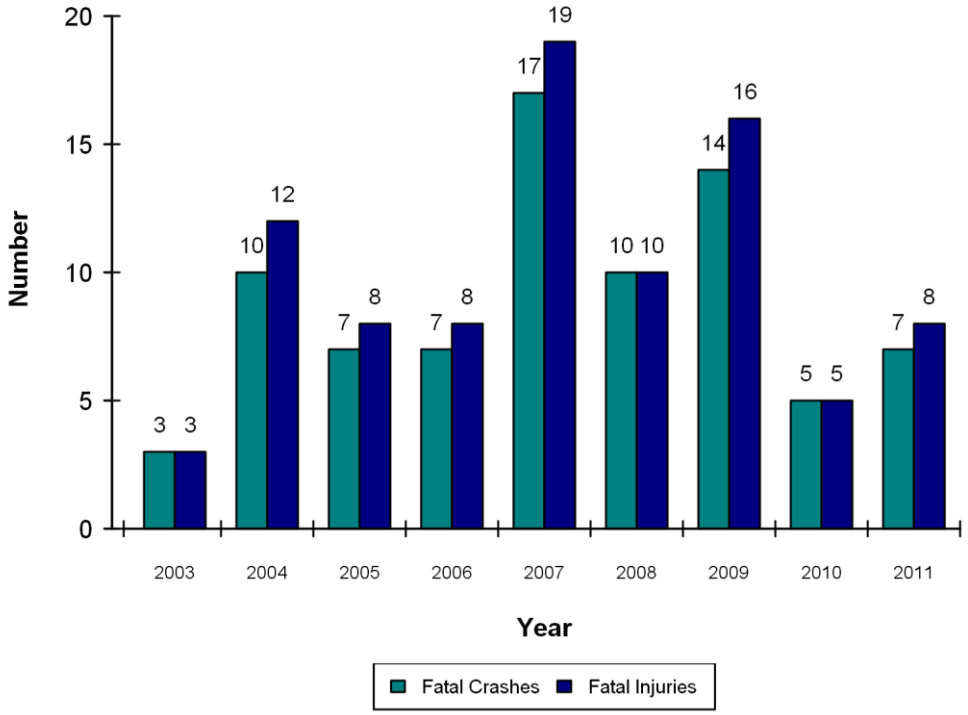


Table 123 Persons Killed or Seriously Injured by Age Group and Gender - Goldfields

	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	3	3	**9**	12.5	24.9	61.9
17 - 24	4	6	**12**	16.7	11.8	173.9
25 - 59	23	9	**37**	51.4	52.0	121.5
60 and over	5	5	**11**	15.3	11.3	165.7
Unknown Age	0	2	**3**	4.2	N/A	N/A
Total Persons KSI	**35**	**25**	**72**	**100.0**	**100.0**	**123.0**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013

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

Figure 21 Persons Killed or Seriously Injured by Road User Type – Goldfields

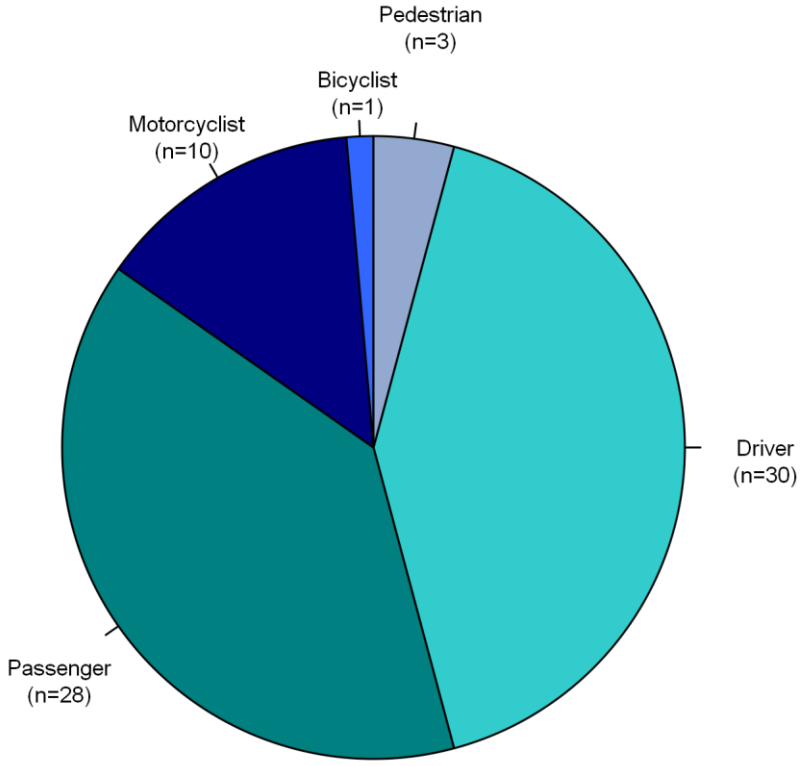


Table 124 Crash Nature by Crash Severity – Goldfields

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	1	**1**
Head On	0	0	**0**
Sideswipe Same Dir.	0	0	**0**
Right Angle	0	8	**8**
Right Turn Through	0	0	**0**
Other/Unknown Multi	0	3	**3**
Total Multi Vehicle	**0**	**12**	**12**
Single-Vehicle Crashes			
Hit Pedestrian	0	3	**3**
Hit Animal	0	0	**0**
Hit Object	2	12	**14**
Non Collision	5	16	**21**
Other/Unknown Single	0	2	**2**
Total Single Vehicle	**7**	**33**	**40**
Total Crashes	**7**	**45**	**52**

Table 125 High Priority Crash Type by Crash Severity – Goldfields

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	14	**14**
Run Off Road	7	25	**32**
Head On	0	0	**0**
Other	0	7	**7**
Total Crashes	**7**	**45**	**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.

6.4 Great Southern

There were six fatal crashes in the Great Southern region during 2011, in which seven people died. Both the number of crashes and the number of people killed were lower than in 2010. Of persons killed or seriously injured where gender was known, 64% were male. Despite persons aged 17 to 24 only making up 9% of the Great Southern population, 33% of persons killed or seriously injured fell in this age bracket, and this age group had the highest age-specific rate for persons killed or seriously injured (Table 126). Drivers constituted 57% of persons killed or seriously injured, followed by passengers (24%) and motorcyclists (10%) (Figure 23).

The Great Southern had the lowest percentage of police-attended serious crashes that were speed related (11%), and also the lowest speed-related serious crash rate (6.8 per 100,000 population) (Table 116 and Map 6). The Great Southern had the lowest percentage of serious crashes that were alcohol related (3%) (Table 117), and the lowest alcohol-related serious crash rate (1.7 per 100,000 population) (Map 7). Eight per cent of persons killed or seriously injured in the Great Southern region were not wearing a seat belt (Table 118). The region had the equal lowest seat belt not worn rate (5.1 per 100,000 population) of the non-Metropolitan regions (Map 8).

Nearly three quarters (73%) of serious crashes in the Great Southern region were single-vehicle crashes (Table 127). The Great Southern had the equal lowest percentage of 'Head On' crashes of all regions (2.4%), and 59% of the serious crashes were 'Run Off Road' crashes (Table 119 and Table 128). Five of the six fatal crashes in the Great Southern were single-vehicle crashes (Table 127).

Figure 22 Fatal Crashes and Fatalities by Year - Great Southern

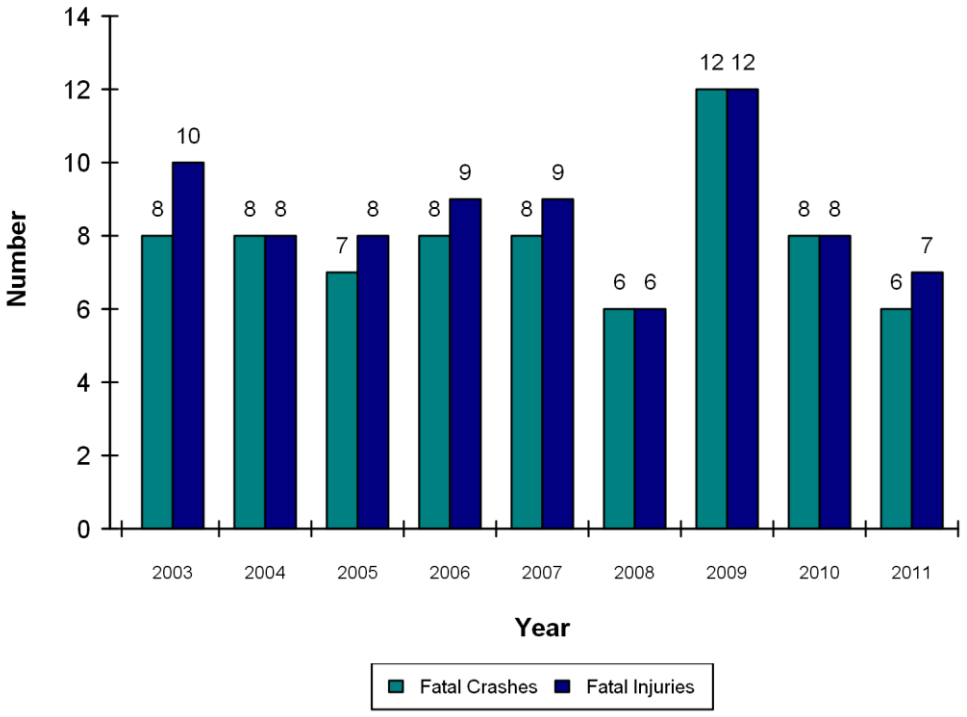


Table 126 Persons Killed or Seriously Injured by Age Group and Gender - Great Southern

	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	1	**2**	4.1	23.2	14.6
17 - 24	6	6	**16**	32.7	8.5	320.2
25 - 59	14	8	**22**	44.9	45.6	81.6
60 and over	7	1	**8**	16.3	22.7	59.6
Unknown Age	1	0	**1**	2.0	N/A	N/A
Total Persons KSI	**29**	**16**	**49**	**100.0**	**100.0**	**82.9**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013

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

Figure 23 Persons Killed or Seriously Injured by Road User Type - Great Southern

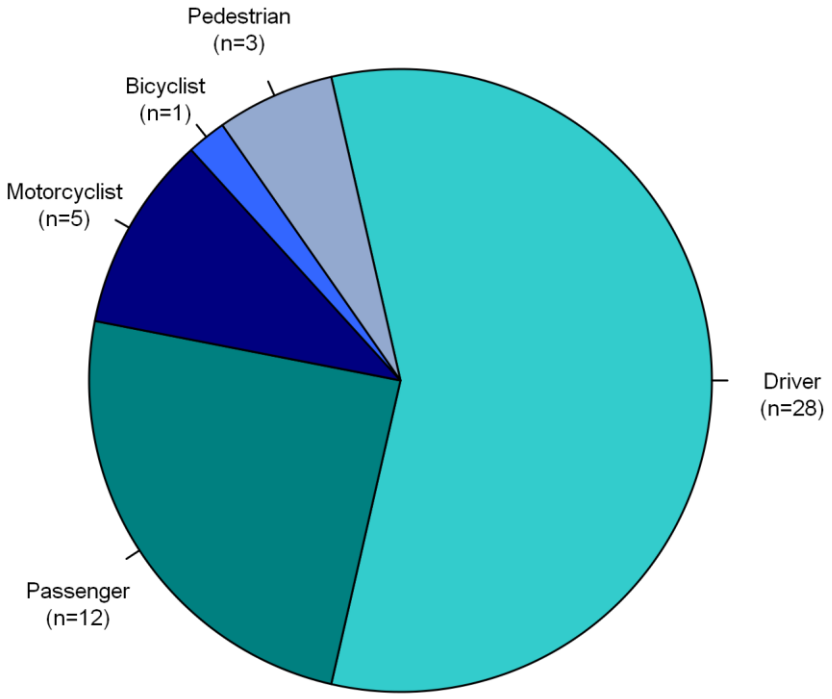


Table 127 Crash Nature by Crash Severity – Great Southern

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	2	**2**
Head On	0	1	**1**
Sideswipe Same Dir.	1	1	**2**
Right Angle	0	4	**4**
Right Turn Through	0	1	**1**
Other/Unknown Multi	0	1	**1**
Total Multi Vehicle	**1**	**10**	**11**
Single-Vehicle Crashes			
Hit Pedestrian	2	1	**3**
Hit Animal	0	2	**2**
Hit Object	2	15	**17**
Non Collision	1	7	**8**
Other Unknown Single	0	0	**0**
Total Single Vehicle	**5**	**25**	**30**
Total Crashes	**6**	**35**	**41**

Table 128 High Priority Crash Type by Crash Severity – Great Southern

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	7	**7**
Run Off Road	3	21	**24**
Head On	0	1	**1**
Other	3	7	**10**
Total Crashes	**6**	**35**	**41**

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 nine fatal crashes in the Kimberley region during 2011, in which 11 people died. These numbers were higher than the previous three years. Over two-thirds (65%) 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 years (Table 129). Passengers accounted for 49% of persons killed or seriously injured in the Kimberley region, followed by drivers (37%) and motorcyclists (8%) (Figure 25).

The Kimberley region had the second lowest percentage of serious crashes that were speed related (14%) (Table 116). The Kimberley had the highest percentage of serious crashes that were alcohol related (22%) and the third highest alcohol-related serious crash rate (21.2 per 100,000 population) (Table 117 and Map 7). Two of the nine fatal crashes involved driver/riders with very high alcohol readings of greater than 0.15 g/100mL (Table 130). The Kimberley also had the highest percentage of motor vehicle occupants killed or seriously injured who were not wearing a seat belt (40%) and the highest KSI rate for not wearing a seat belt (50.4 per 100,000 population) (Table 118 and Map 8). Seven of the nine motor vehicle occupant fatalities, were not wearing a seat belt (Table 131).

The Kimberley region had the second highest percentage of 'Hit Pedestrian' serious crashes (10%) of all the regions (Table 119). The majority of serious crashes in the Kimberley were single-vehicle crashes (81%). Of the serious crashes in the Kimberley, 36% were 'Non Collision' crashes and 26% were 'Hit Object' crashes (Table 132). Two thirds (67%) of the serious crashes in the Kimberley were 'Run Off Road' crashes (Table 133).

Figure 24 Fatal Crashes and Fatalities by Year – Kimberley

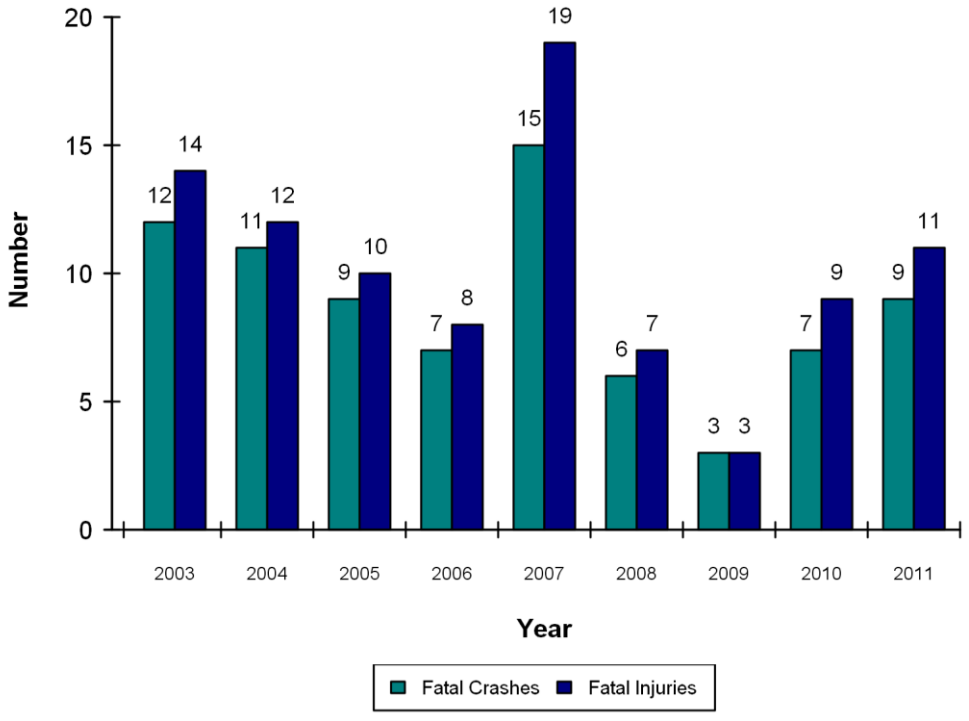


Table 129 Persons Killed or Seriously Injured By Age Group And Gender - Kimberley

	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	4	4	**9**	14.3	27.1	88.2
17 - 24	11	4	**16**	25.4	12.0	352.6
25 - 59	18	9	**33**	52.4	52.7	166.3
60 and over	2	1	**3**	4.8	8.2	97.4
Unknown Age	1	1	**2**	3.2	N/A	N/A
Total Persons KSI	**36**	**19**	**63**	**100.0**	**100.0**	**167.2**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013

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

Figure 25 Persons Killed or Seriously Injured by Road User Type – Kimberley

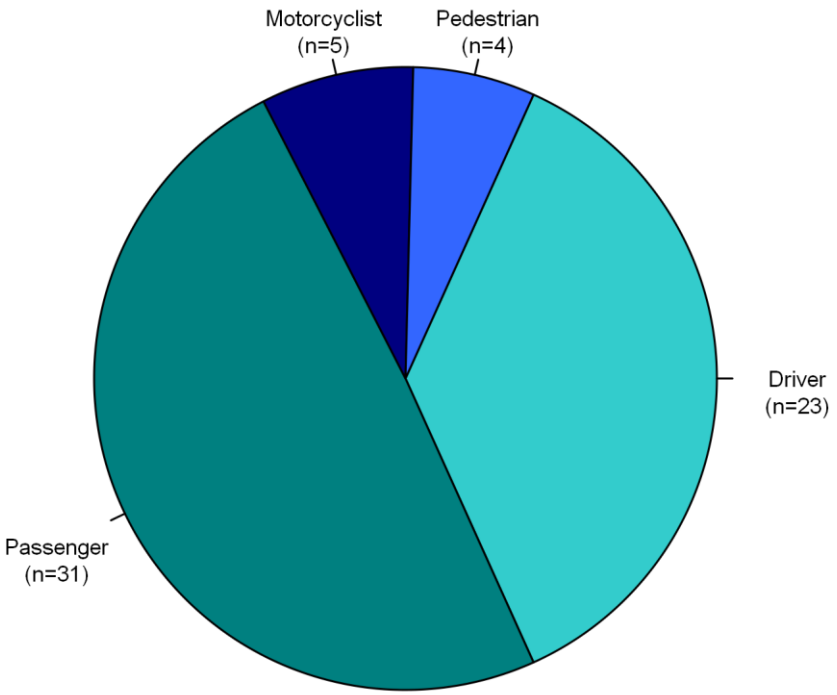


Table 130 Highest Driver/Rider BAC in Crash by Crash Severity, Police-Attended Crashes – Kimberley

	Crash Severity		
Highest Driver/Rider BAC in Crash (g/100mL)	**Fatal**	**Hospitalisation**	**Total Serious**
	n	**n**	**n**
Nil	3	19	**22**
< 0.05	0	1	**1**
0.05 to < 0.08	1	0	**1**
0.08 to < 0.15	1	3	**4**
≥ 0.15	2	1	**3**
Subtotal ≥ 0.05	**4**	**4**	**8**
Unknown	2	4	**6**
Total Crashes	**9**	**28**	**37**

Table 131 Seat Belt Usage by Injury Severity, Police-Attended Crashes - Kimberley

	Injury Severity		
	Fatal	**Serious**	**Total Persons KSI**
Seat Belt Usage	**n**	**n**	**n**
Worn	1	21	**22**
Not Worn	7	12	**19**
Unknown	1	5	**6**
Total Motor Vehicle Occupants	**9**	**38**	**47**

Table 132 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	1	**1**
Sideswipe Same Dir.	0	0	**0**
Right Angle	0	1	**1**
Right Turn Through	0	2	**2**
Other/Unknown Multi	0	3	**3**
Total Multi Vehicle	**0**	**8**	**8**
Single-Vehicle Crashes			
Hit Pedestrian	2	2	**4**
Hit Animal	0	0	**0**
Hit Object	2	9	**11**
Non Collision	4	11	**15**
Other/Unknown Single	1	3	**4**
Total Single Vehicle	**9**	**25**	**34**
Total Crashes	**9**	**33**	**42**

Table 133 High Priority Crash Type by Crash Severity – Kimberley

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	1	5	**6**
Run Off Road	6	22	**28**
Head On	0	1	**1**
Other	2	6	**8**
Total Crashes	**9**	**33**	**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 eight fatal crashes in the Mid West region during 2011, in which eight people were killed. These numbers were lower than the previous year and similar to 2008 and 2009. Of persons killed or seriously injured where gender was known, 73% were males. Persons aged 17 to 24 years had the highest age-specific rate for persons killed or seriously injured (Table 134). Drivers accounted for 47% of persons killed or seriously injured, followed by passengers (30%) and pedestrians (11%) (Figure 27).

The Mid West region had the second highest percentage of serious crashes that were speed related of all regions (18%), and the speed-related serious crash rate was 22.1 per 100,000 population (Table 116 and Map 6). The region also had the equal second highest percentage of serious crashes that were alcohol related (18%) and the second highest alcohol-related serious crash rate (22.1 per 100,000 population) (Table 117 and Map 7). Three of the eight fatal crashes in the Mid West region were alcohol-related, with two having a very high alcohol reading of greater than 0.15 g/100mL (Table 136). Fifteen per cent of persons killed or seriously injured in the Mid West region were not wearing a seat belt (Table 118), with three of the five fatalities in the Mid West region not wearing seat belts (Table 137).

Almost three quarters (70%) of serious crashes in the Mid West were single-vehicle crashes. The Mid West had the highest percentage of 'Head On' and 'Hit Pedestrian' crashes of all regions (11% and 13%, respectively (Table 119 and Table 138). Over half (52%) of serious crashes in the Mid West were 'Run Off Road' crashes (Table 139).

Figure 26 Fatal Crashes and Fatalities by Year - Mid West

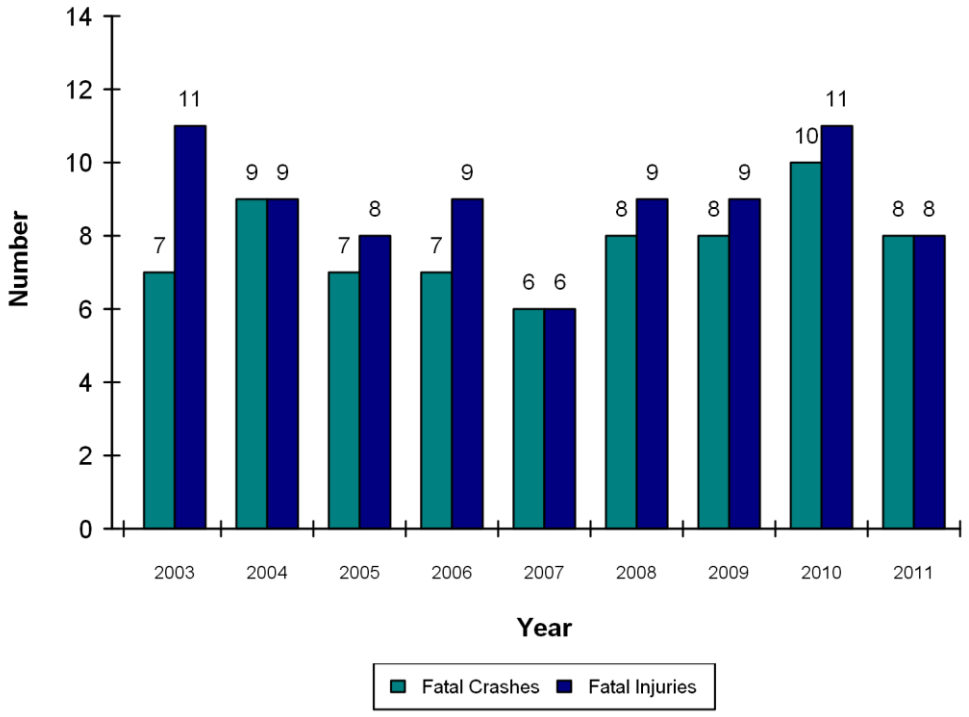


Table 134 Persons Killed or Seriously Injured by Age Group and Gender - Mid West

	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	4	5	**11**	12.1	24.3	83.4
17 - 24	17	8	**31**	34.1	9.9	578.0
25 - 59	35	8	**47**	51.6	47.3	182.6
60 and over	2	0	**2**	2.2	18.5	19.8
Unknown Age	0	0	**0**	0.0	N/A	N/A
Total Persons KSI	**58**	**21**	**91**	**100.0**	**100.0**	**167.4**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

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

Figure 27 Persons Killed or Seriously Injured by Road User Type - Mid West

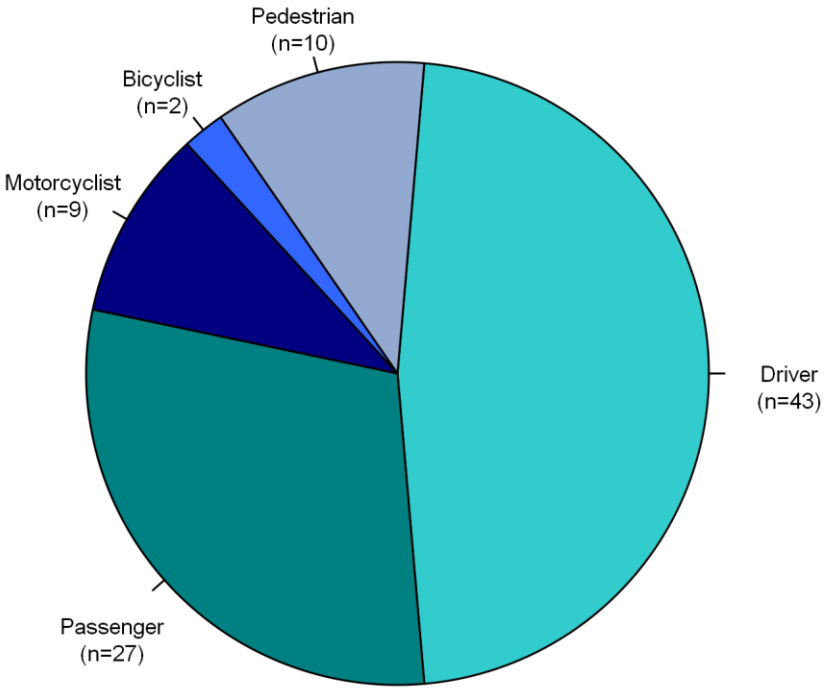


Table 135 Speed a Factor by Crash Severity, Police-Attended Crashes – Mid West

Speed a Factor in Police-Attended Crashes	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Yes	2	10	**12**
No	5	30	**35**
Unknown	1	19	**20**
Total Police-Attended Crashes	**8**	**59**	**67**

Table 136 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	5	40	**45**
< 0.05	0	1	**1**
0.05 to < 0.08	1	3	**4**
0.08 to < 0.15	0	4	**4**
≥ 0.15	2	2	**4**
Subtotal ≥ 0.05	**3**	**9**	**12**
Unknown	0	9	**9**
Total Crashes	**8**	**59**	**67**

Table 137 Seat Belt Usage by Injury Severity, Police-Attended Crashes - Mid West

Seat Belt Usage	Injury Severity		
	Fatal	Serious	Total Persons KSI
	n	n	n
Worn	1	48	**49**
Not Worn	3	7	**10**
Unknown	1	6	**7**
Total Motor Vehicle Occupants	**5**	**61**	**66**

Table 138 Crash Nature by Crash Severity – Mid West

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	0	**0**
Head On	1	7	**8**
Sideswipe Same Dir.	0	0	**0**
Right Angle	0	8	**8**
Right Turn Through	0	0	**0**
Other/Unknown Multi	2	3	**5**
Total Multi Vehicle	**3**	**18**	**21**
Single-Vehicle Crashes			
Hit Pedestrian	1	8	**9**
Hit Animal	1	0	**1**
Hit Object	2	23	**25**
Non Collision	1	13	**14**
Other/Unknown Single	0	1	**1**
Total Single Vehicle	**5**	**45**	**50**
Total Crashes	**8**	**63**	**71**

Table 139 High Priority Crash Type by Crash Severity – Mid West

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	13	**13**
Run Off Road	4	33	**37**
Head On	1	7	**8**
Other	3	12	**15**
Total Crashes	**8**	**63**	**71**

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 seven fatal crashes in the Pilbara-Gascoyne region during 2011, in which eight people were killed. These numbers are the lowest since 2003. Of persons killed or seriously injured with known gender, 72% were males. While 11% of the Pilbara-Gascoyne population were aged 17 to 24 years, this age group made up 24% of persons killed or seriously injured and had the highest age-specific rate for persons killed or seriously injured (Table 140). Drivers accounted for almost half (46%) of persons killed or seriously injured, followed by passengers (36%) and motorcyclists (12%) (Figure 29).

The Pilbara-Gascoyne had the highest percentage of police-attended serious crashes that were speed related (21%) of all the regions. This region also had the second highest percentage of serious crashes that were alcohol related (18%) (Table 117). The Pilbara-Gascoyne had the third highest percentage of motor vehicle occupants killed or seriously injured in police-attended crashes in the Pilbara-Gascoyne region who did not wear a seat belt (14%) (Table 118) and two of the six motor vehicle occupant fatalities were not wearing a seat belt (Table 143). The Pilbara-Gascoyne had the third lowest non-Metropolitan rate of those killed or seriously injured who were not wearing a seat belt (13.8 per 100,000 population) (Map 8).

The Pilbara-Gascoyne region had the fourth highest multi-vehicle serious crash rate of all the non-Metropolitan regions (27.6 per 100,000 population) (Map 4). The majority of serious crashes in the Pilbara-Gascoyne region (72%) were single-vehicle crashes and 33% were 'Non Collision' crashes (Table 144). Seventeen per cent of serious crashes in the Pilbara-Gascoyne were 'Intersection' crashes and 58% were 'Run Off Road' crashes (Table 145).

Figure 28 Fatal Crashes and Fatalities by Year - Pilbara-Gascoyne

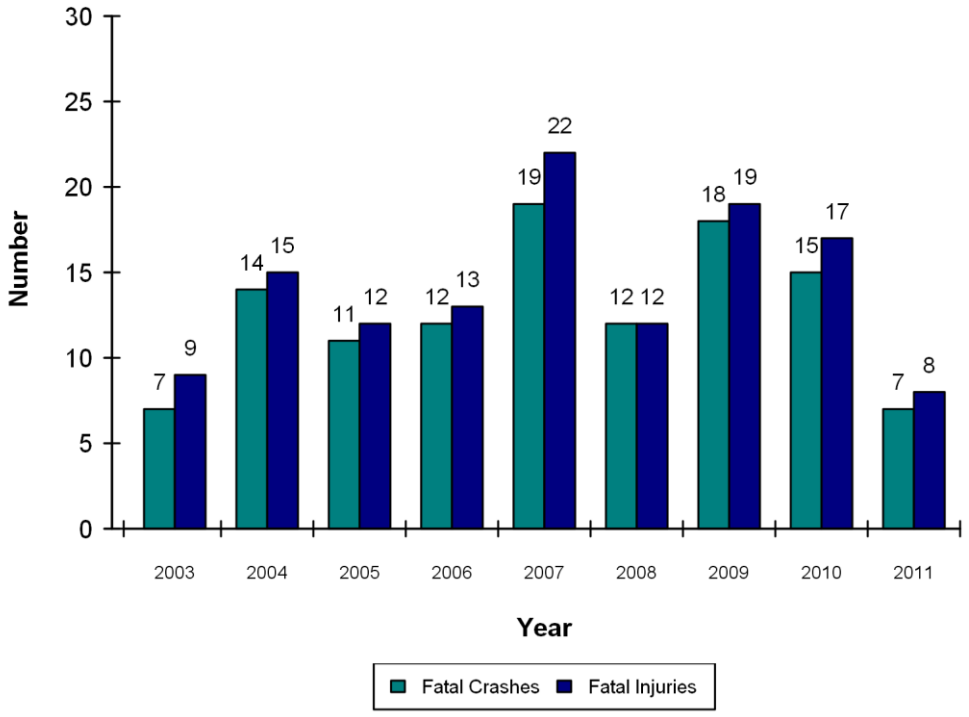


Table 140 Persons Killed or Seriously Injured by Age Group and Gender - Pilbara-Gascoyne

	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	7	3	**10**	10.1	21.0	65.9
17 - 24	6	14	**24**	24.2	11.1	298.5
25 - 59	44	8	**55**	55.6	61.2	124.1
60 and over	6	0	**6**	6.1	6.7	124.2
Unknown Age	2	0	**4**	4.0	N/A	N/A
Total Persons KSI	**65**	**25**	**99**	**100.0**	**100.0**	**136.8**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

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

Figure 29 Persons Killed or Seriously Injured by Road User Type - Pilbara-Gascoyne

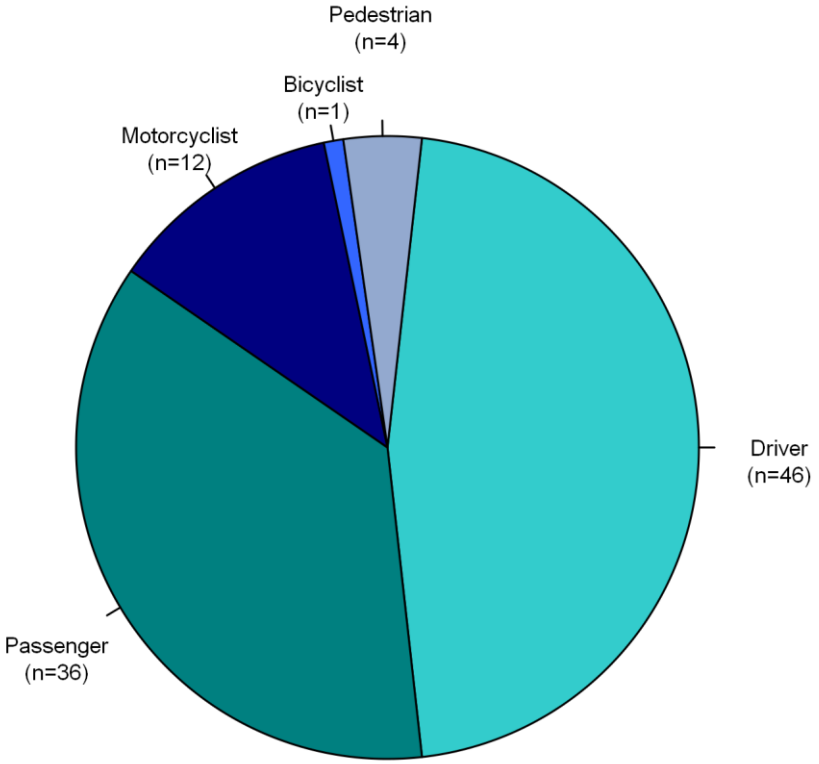


Table 141 Speed a Factor by Crash Severity, Police-Attended Crashes – Pilbara-Gascoyne

Speed a Factor in Police-Attended Crashes	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Yes	0	13	**13**
No	4	21	**25**
Unknown	3	20	**23**
Total Police-Attended Crashes	**7**	**54**	**61**

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

Highest Driver/Rider BAC in Crash (g/100mL)	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Nil	5	34	**39**
< 0.05	0	0	**0**
0.05 to < 0.08	0	2	**2**
0.08 to < 0.15	0	5	**5**
≥ 0.15	2	2	**4**
Subtotal ≥ 0.05	**2**	**9**	**11**
Unknown	0	11	**11**
Total Crashes	**7**	**54**	**61**

Table 143 Seat Belt Usage by Injury Severity, Police-Attended Crashes - Pilbara-Gascoyne

Seat Belt Usage	Injury Severity		
	Fatal	Serious	Total Persons KSI
	n	n	n
Worn	2	52	**54**
Not Worn	2	8	**10**
Unknown	2	5	**7**
Total Motor Vehicle Occupants	**6**	**65**	**71**

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	5	**5**
Head On	0	5	**5**
Sideswipe Same Dir.	0	2	**2**
Right Angle	1	4	**5**
Right Turn Through	0	0	**0**
Other/Unknown Multi	1	2	**3**
Total Multi Vehicle	**2**	**18**	**20**
Single-Vehicle Crashes			
Hit Pedestrian	2	2	**4**
Hit Animal	0	3	**3**
Hit Object	0	19	**19**
Non Collision	3	21	**24**
Other/Unknown Single	0	2	**2**
Total Single Vehicle	**5**	**47**	**52**
Total Crashes	**7**	**65**	**72**

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

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	2	10	**12**
Run Off Road	2	40	**42**
Head On	0	5	**5**
Other	3	15	**18**
Total Crashes	**7**	**65**	**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 21 fatal crashes in the South West region during 2011, in which 22 people died. These numbers were the lowest in the last six years. Of persons killed or seriously injured where gender was known, 66% were males. While less than 10% of the South West population were aged 17 to 24 years, this group made up 29% of persons killed or seriously injured and had the highest age-specific rate for persons killed or seriously injured (Table 146). Drivers accounted for 50% of persons killed or seriously injured, while 23% were passengers and 16% were motorcyclists (Figure 31).

Fourteen per cent of serious crashes in the South West region were speed related and the speed-related serious crash rate was 13.1 per 100,000 population (Table 116 and Map 6). Ten per cent of serious crashes in the South West region were alcohol related (Table 117). Of the non-Metropolitan regions, the South West had the fourth lowest percentage and second lowest rate (8% and 7.1 per 100,000 population, respectively) of those killed or seriously injured while not wearing a seat belt (Table 118 and Map 8).

Over half (60%) of the serious crashes in the South West region were single-vehicle crashes. Of the non-Metropolitan regions, the South West had the second highest percentage of 'Right Angle' crashes (13%) and the second highest percentage of 'Hit Pedestrian' crashes (9%) (Table 119 and Table 147). Approximately one third (33%) of serious crashes in the South West were 'Intersection' crashes, 46% were 'Run Off Road' crashes and 3% were 'Head On' crashes (Table 148).

Figure 30 Fatal Crashes and Fatalities by Year - South West

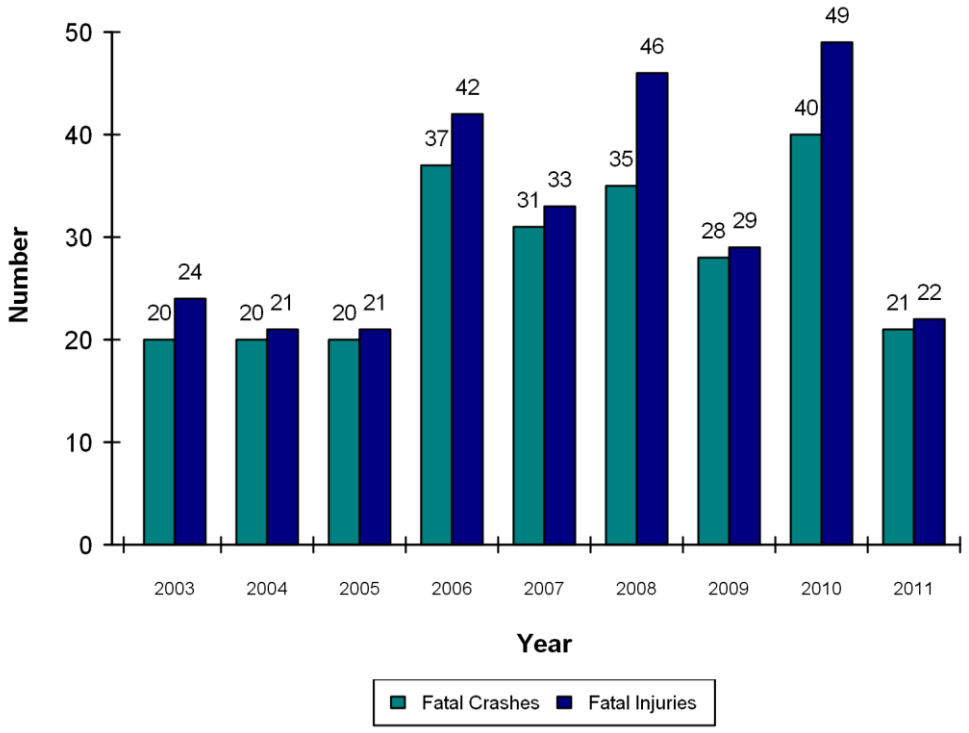


Table 146 Persons Killed or Seriously Injured by Age Group by Gender - South West

	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	14	3	**20**	6.3	22.8	34.7
17 - 24	54	23	**91**	28.8	9.2	390.3
25 - 59	101	48	**158**	50.0	45.9	136.1
60 and over	14	18	**36**	11.4	22.0	64.6
Unknown Age	5	4	**11**	**3.5**	0.0	N/A
Total Persons KSI	**188**	**96**	**316**	**100.0**	**100.0**	**125.0**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

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

Figure 31 Persons Killed or Seriously Injured by Road User Type - South West

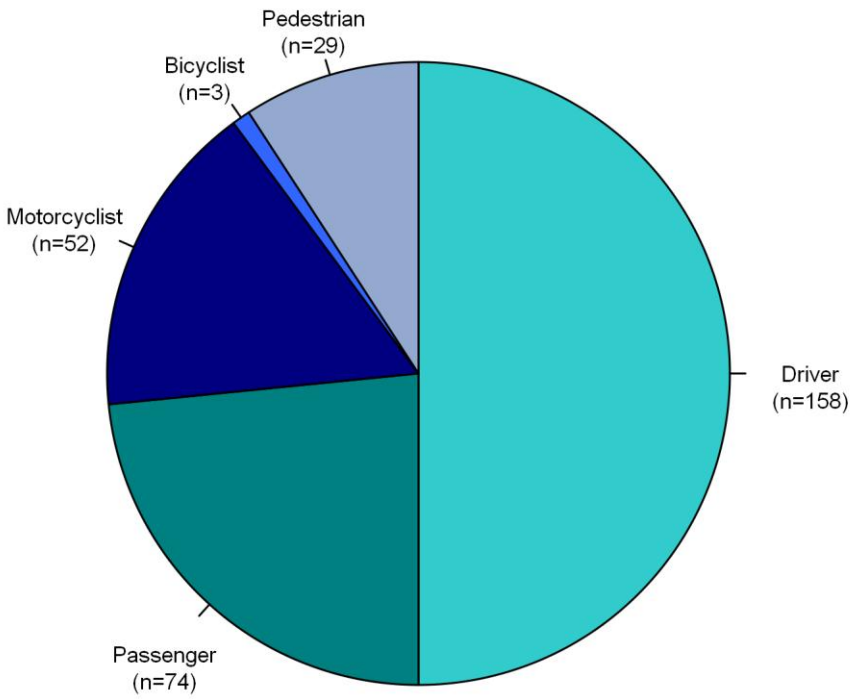


Table 147 Crash Nature by Crash Severity - South West

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	1	24	**25**
Head On	0	8	**8**
Sideswipe Same Dir.	1	5	**6**
Right Angle	2	30	**32**
Right Turn Through	0	19	**19**
Other/Unknown Multi	0	10	**10**
Total Multi Vehicle	**4**	**96**	**100**
Single-Vehicle Crashes			
Hit Pedestrian	2	22	**24**
Hit Animal	0	1	**1**
Hit Object	13	82	**95**
Non Collision	1	27	**28**
Other/Unknown Single	1	4	**5**
Total Single Vehicle	**17**	**136**	**153**
Total Crashes	**21**	**232**	**253**

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

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	4	79	**83**
Run Off Road	13	104	**117**
Head On	0	8	**8**
Other	4	51	**55**
Total Crashes	**21**	**232**	**253**

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 27 fatal crashes in the Wheatbelt North region during 2011, in which 29 people were killed. These numbers are the highest since before 2003. Of persons killed or seriously injured where gender was known, 67% were males. While only 8% of the Wheatbelt North population were aged 17 to 24 years, 22% of persons killed or seriously injured were in this age group, which also had the highest age-specific rate for persons killed or seriously injured (Table 149). Drivers accounted for 57% of persons killed or seriously injured, followed by passengers (25%) and motorcyclists (15%) (Figure 33). The Wheatbelt North had the highest overall serious crash rate (241.4 per 100,000 population) and the second highest age and gender standardised KSI rate (307.6 per 100,000 population) (Map 3 and Map 9).

Fifteen per cent of police-attended serious crahes in the Wheatbelt North were speed related, and the Wheatbelt North had the highest speed-related serious crash rate at 33.9 per 100,000 population (Table 116 and Map 6). Eight of the 27 fatal crashes were speed related (Table 150). Sixteen per cent of serious crashes in the Wheatbelt North were alcohol related and this region had the highest alcohol-related serious crash rate (35.9 per 100,000 population) (Table 117 and Map 7). Of the non-Metropolitan regions the Wheatbelt North had the second lowest percentage of motor vehicle occupants killed or seriously injured in police-attended crashes who were not wearing a seat belt (8%) (Table 118).

The Wheatbelt North region had the second highest single-vehicle serious crash rate (181.6 per 100,000 population) (Map 5). Of the serious crashes in the Wheatbelt North, 75% were single-vehicle crashes and 50% were ‘Hit Object’ crashes (Table 152). The Wheatbelt North region had the third lowest percentage of ‘Intersection’ serious crashes (17%), and the third highest percentage of ‘Run Off Road’ crashes (65%) (Table 119).

Figure 32 Fatal Crashes and Fatalities by Year - Wheatbelt North

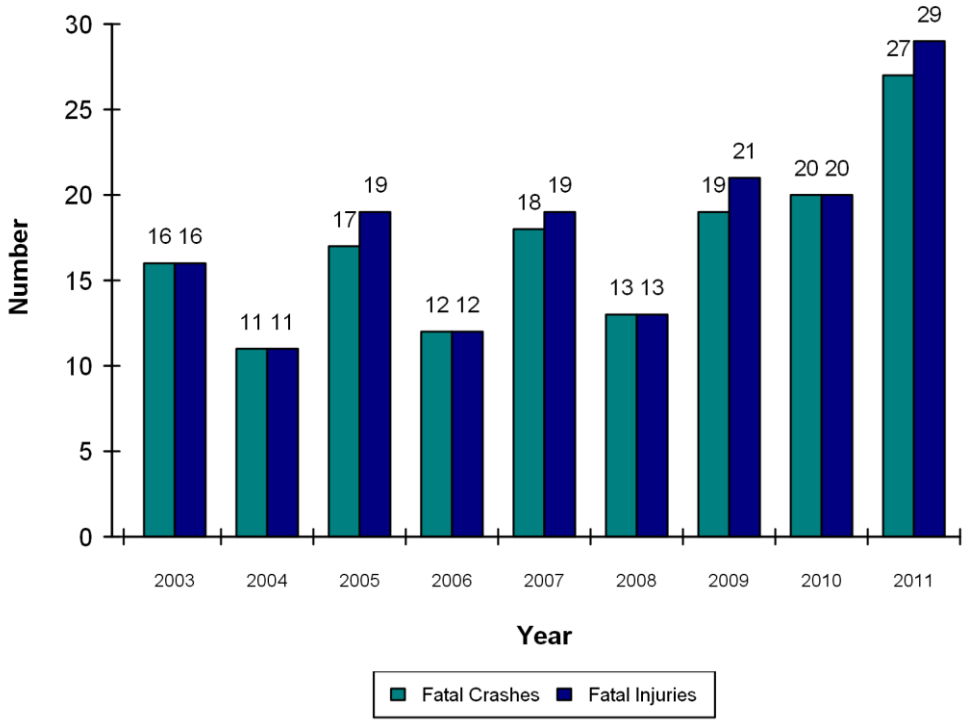


Table 149 Persons Killed or Seriously Injured by Age Group and Gender - Wheatbelt North

	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	1	2	**6**	3.6	22.8	52.4
17 - 24	16	12	**36**	21.8	8.0	901.4
25 - 59	57	25	**87**	52.7	46.6	372.7
60 and over	23	7	**31**	18.8	22.6	273.4
Unknown Age	1	2	**5**	3.0	0.0	N/A
Total Persons KSI	**98**	**48**	**165**	**100.0**	**100.0**	**329.2**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

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

Figure 33 Persons Killed or Seriously Injured by Road User Type - Wheatbelt North

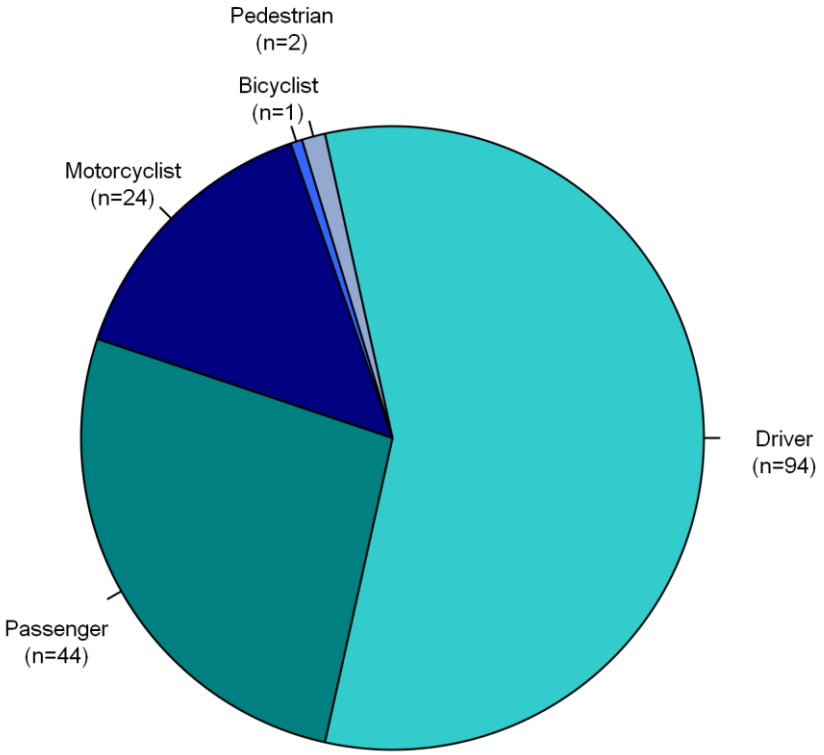


Table 150 Speed a Factor by Crash Severity, Police-Attended Crashes – Wheatbelt North

	Crash Severity		
Speed a Factor in Police-Attended Crashes	**Fatal**	**Hospitalisation**	**Total Serious**
	n	**n**	**n**
Yes	8	9	**17**
No	6	37	**43**
Unknown	13	39	**52**
Total Police-Attended Crashes	**27**	**85**	**112**

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** **n**	**Hospitalisation** **n**	**Total Serious** **n**
Nil	18	48	**66**
< 0.05	1	0	**1**
0.05 to < 0.08	0	1	**1**
0.08 to < 0.15	3	8	**11**
≥ 0.15	4	2	**6**
Subtotal ≥ 0.05	**7**	**11**	**18**
Unknown	1	26	**27**
Total Crashes	**27**	**85**	**112**

Table 152 Crash Nature by Crash Severity – Wheatbelt North

	Crash Severity		
	Fatal	**Hospitalisation**	**Total Serious**
Crash Nature	**n**	**n**	**n**
Multi-Vehicle Crashes			
Rear End	0	3	**3**
Head On	7	6	**13**
Sideswipe Same Dir.	0	2	**2**
Right Angle	0	4	**4**
Right Turn Through	0	1	**1**
Other/Unknown Multi	3	4	**7**
Total Multi Vehicle	**10**	**20**	**30**
Single-Vehicle Crashes			
Hit Pedestrian	0	2	**2**
Hit Animal	0	3	**3**
Hit Object	11	50	**61**
Non Collision	4	17	**21**
Other/Unknown Single	2	2	**4**
Total Single Vehicle	**17**	**74**	**91**
Total Crashes	**27**	**94**	**121**

Table 153 High Priority Crash Type by Crash Severity – Wheatbelt North

	Crash Severity		
	Fatal	**Hospitalisation**	**Total Serious**
Crash Type	**n**	**n**	**n**
Intersection	2	18	**20**
Run Off Road	15	64	**79**
Head On	7	6	**13**
Other	3	11	**14**
Total Crashes	**27**	**94**	**121**

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 10 fatal crashes in the Wheatbelt South region during 2010, in which 10 people died. These numbers were higher than in 2009 and 2010 (Figure 34). Of persons killed or seriously injured where gender was known, 66% were males. Persons aged between 17 and 24 years in the Wheatbelt South region exhibited the highest age-specific rate for persons killed or seriously injured in all regions (Table 154). Over half (57%) of persons killed or seriously injured were drivers, 28% were passengers and 15% were motorcyclists (Figure 35). There were no bicyclists or pedestrians killed or seriously injured in the Wheatbelt South in 2011. The Wheatbelt South had the second highest overall serious crash rate (219.9 per 100,000 population) and the highest age and gender standardised KSI rate (311.3 per 100,000 population) (Map 3 and Map 9).

Fifteen per cent of police-attended serious crashes in the Wheatbelt South were speed related and this region had the second highest speed-related serious crash rate out of all regions (30.8 per 100,000 population) (Table 116 and Map 6). In the Wheatbelt South, 9% of serious crashes were alcohol related, and this region had the fourth highest alcohol-related serious crash rate of 17.6 per 100,000 population (Table 117 and Map 7). The percentage of motor vehicle occupants killed or seriously injured who did not wear a seat belt was 13% (Table 118).

The Wheatbelt South had the highest single-vehicle serious crash rate of all regions (202.3 per 100,000 population) and 92% of serious crashes were single-vehicle crashes. 10% of serious crashes in the Wheatbelt South were 'Intersection' crashes, while 80% were 'Run Off Road' crashes, which was the highest of all regions (Table 119). There were no serious 'Head On' crashes in the Wheatbelt South region in 2011 (Table 158).

Figure 34 Fatal Crashes and Fatalities by Year - Wheatbelt South

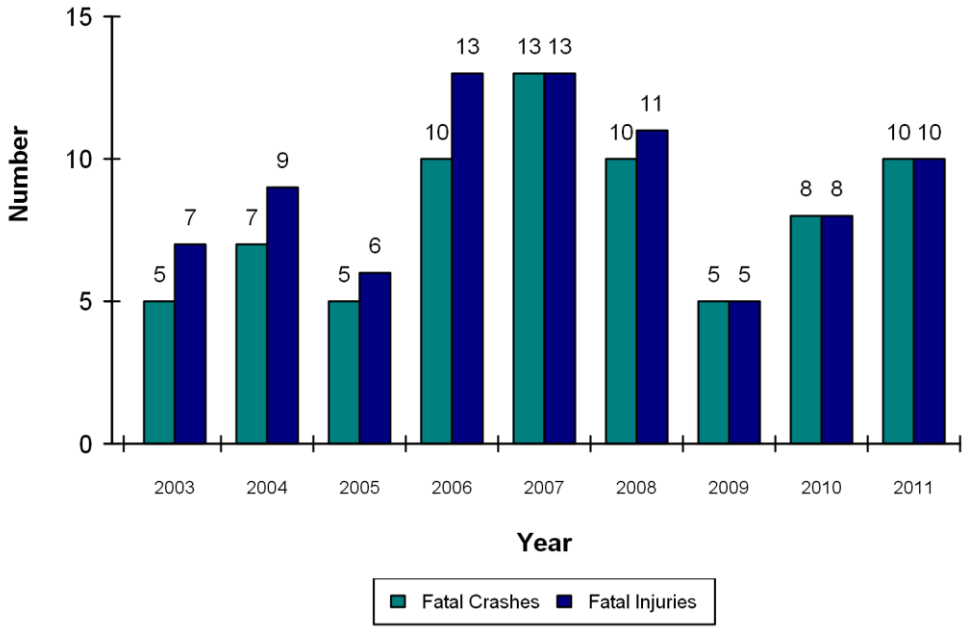


Table 154 Persons Killed or Seriously Injured by Age Group and Gender - Wheatbelt South

	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	0	1	**3**	4.6	23.0	57.4
17 - 24	12	6	**21**	32.3	6.8	1,359.2
25 - 59	23	6	**32**	49.2	46.5	302.8
60 and over	2	6	**8**	12.3	23.7	148.2
Unknown Age	0	0	**1**	1.5	N/A	N/A
Total Persons KSI	**37**	**19**	**65**	**100.0**	**100.0**	**285.9**

Source: Population data from Australian Bureau of Statistics, Customised report, 2013.

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

Figure 35 Persons Killed or Seriously Injured by Road User Type - Wheatbelt South

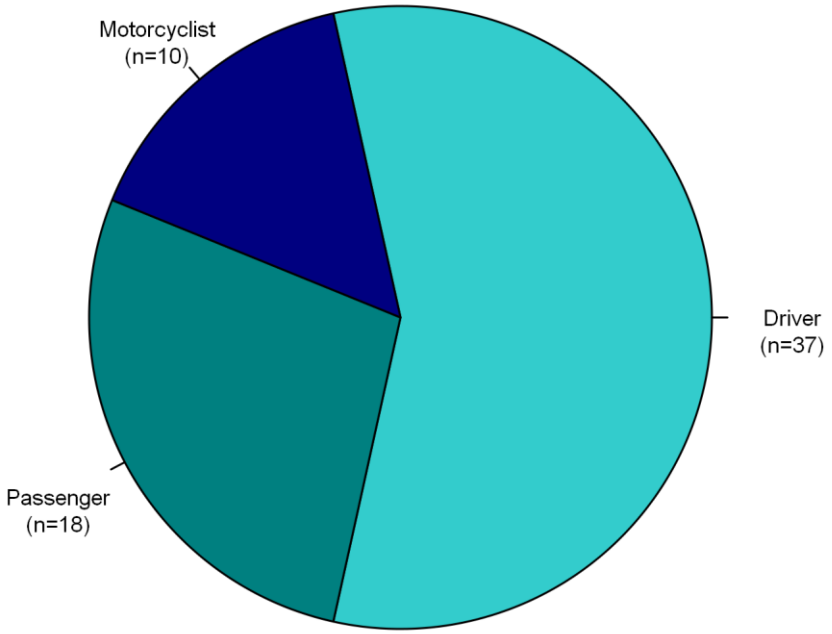


Table 155 Speed a Factor by Crash Severity, Police-Attended Crashes – Wheatbelt South

Speed a Factor in Police-Attended Crashes	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Yes	2	5	**7**
No	1	15	**16**
Unknown	7	16	**23**
Total Police-Attended Crashes	**10**	**36**	**46**

Table 156 Seat Belt Usage by Injury Severity, Police-Attended Crashes - Wheatbelt South

Seat Belt Usage	Injury Severity		
	Fatal	Serious	Total Persons KSI
	n	n	n
Worn	7	33	**40**
Not Worn	2	5	**7**
Unknown	0	5	**5**
Total Motor Vehicle Occupants	**9**	**43**	**52**

Table 157 Crash Nature by Crash Severity – Wheatbelt South

Crash Nature	Crash Severity		
	Fatal	Hospitalisation	Total Serious
	n	n	n
Multi-Vehicle Crashes			
Rear End	0	2	**2**
Head On	0	0	**0**
Sideswipe Same Dir.	0	1	**1**
Right Angle	0	1	**1**
Right Turn Through	0	0	**0**
Other/Unknown Multi	0	0	**0**
Total Multi Vehicle	**0**	**4**	**4**
Single-Vehicle Crashes			
Hit Pedestrian	0	0	**0**
Hit Animal	0	1	**1**
Hit Object	9	17	**26**
Non Collision	1	17	**18**
Other/Unknown Single	0	1	**1**
Total Single Vehicle	**10**	**36**	**46**
Total Crashes	**10**	**40**	**50**

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

	Crash Severity		
	Fatal	Hospitalisation	Total Serious
Crash Type	**n**	**n**	**n**
Intersection	0	5	**5**
Run Off Road	10	30	**40**
Head On	0	0	**0**
Other	0	7	**7**
Total Crashes	**10**	**40**	**50**

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 2011. The data was extracted on the 18th of April 2013 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".

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						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Injury Severity	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Fatal[1]	26	28	29	30	22	32	45.5
Serious	3,361	3,580	3,811	3,935	3,995	4,202	5.2
Total Hospital Inpatients	**3,387**	**3,608**	**3,840**	**3,965**	**4,017**	**4,234**	**5.4**

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						
	2006	2007	2008	2009	2010	2011	2011 Change from 2010
Road User Group	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Motor Vehicle - Driver	935	1,011	1,069	1,056	1,138	1,337	17.49
Motor Vehicle - Passenger	625	638	646	683	604	623	3.15
Motor Vehicle - Occupant-Unknown	308	308	320	317	264	273	3.41
Motor Cyclist	713	761	854	889	944	946	0.21
Pedal Cyclist	387	470	491	590	592	586	-1.01
Pedestrian	271	258	277	317	333	337	1.20
Other/Unknown	148	162	183	113	142	132	-7.04
Total Hospital Inpatients	**3,387**	**3,608**	**3,840**	**3,965**	**4,017**	**4,234**	**5.40**

Table 161 Hospital Inpatients by Age Group and Gender

	Gender					
	Male		Female		Total	
Age	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
0 - 11	118	4.3	78	5.3	196	4.6
12 - 16	184	6.7	84	5.7	268	6.3
17 - 20	340	12.3	155	10.5	495	11.7
21 - 24	324	11.7	138	9.4	462	10.9
25 - 29	301	10.9	166	11.3	467	11.0
30 - 39	460	16.6	176	12.0	636	15.0
40 - 49	403	14.6	200	13.6	603	14.2
50 - 59	304	11.0	159	10.8	463	10.9
60 and over	330	11.9	314	21.4	644	15.2
Total Hospital Inpatients	**2,764**	**100.0**	**1,470**	**100.0**	**4,234**	**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	740	26.8	597	40.6	1,337	31.6
Motor Vehicle Passenger	268	9.7	355	24.1	623	14.7
Motor Vehicle Occupant Unknown	134	4.8	139	9.5	273	6.4
Motorcyclist	855	30.9	91	6.2	946	22.3
Bicyclist	460	16.6	126	8.6	586	13.8
Pedestrian	218	7.9	119	8.1	337	8.0
Other/Unknown	89	3.2	43	2.9	132	3.1
Total Hospital Inpatients	**2,764**	**100.0**	**1,470**	**100.0**	**4,234**	**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]	9	0.7	127	20.4	15	5.5	74	7.8	145	24.7	82	24.4	12	6.1	**464**	**10.9**
17 - 20	168	12.6	98	15.7	19	7.0	121	12.8	47	8.0	31	9.2	11	8.3	**495**	**11.7**
21 - 24	156	11.7	74	11.9	24	8.8	124	13.1	37	6.3	39	11.6	8	6.1	**462**	**10.9**
25 - 29	160	12.0	80	12.8	27	9.9	109	11.5	41	7.0	36	10.7	14	10.6	**467**	**11.0**
30 - 39	219	16.4	50	8.0	28	10.3	201	21.2	85	14.5	40	11.9	13	9.8	**636**	**15.0**
40 - 49	205	15.3	56	9.0	36	13.2	162	17.1	88	15.0	31	9.2	25	18.9	**603**	**14.2**
50 - 59	172	12.9	43	6.9	23	8.4	104	11.0	79	13.5	22	6.5	20	15.2	**463**	**10.9**
60 and over	248	18.5	95	15.2	101	37.0	51	5.4	64	10.9	56	16.6	29	22.0	**644**	**15.2**
Total Hospital Inpatients	**1,337**	**100.0**	**623**	**100.0**	**273**	**100.0**	**946**	**100.0**	**586**	**100.0**	**337**	**100.0**	**132**	**100.0**	**4234**	**100.0**

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

Table 164 Hospital Inpatients by Indigenous Status by Year

	Year						
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2011 Change from 2010**
Indigenous Status	**n**	**n**	**n**	**n**	**n**	**n**	**%**
Non-indigenous	3,110	3,311	3,565	3,657	3,745	3,957	1.8
Indigenous	277	297	275	308	272	277	5.7
Total Hospital Inpatients	**3,387**	**3,608**	**3,840**	**3,965**	**4,017**	**4,234**	**5.4**

Table 165 Hospital Inpatients by Indigenous Status by Gender

	Indigenous Status					
	Non-Indigenous		Indigenous		Total	
Gender	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Male	2,572	65.0	192	69.3	**2,764**	**65.3**
Female	1,385	35.0	85	30.7	**1,470**	**34.7**
Total Hospital Inpatients	**3,957**	**100.0**	**277**	**100.0**	**4,234**	**100.0**

Figure 36 Hospital Inpatients by Indigenous Status by Age Group

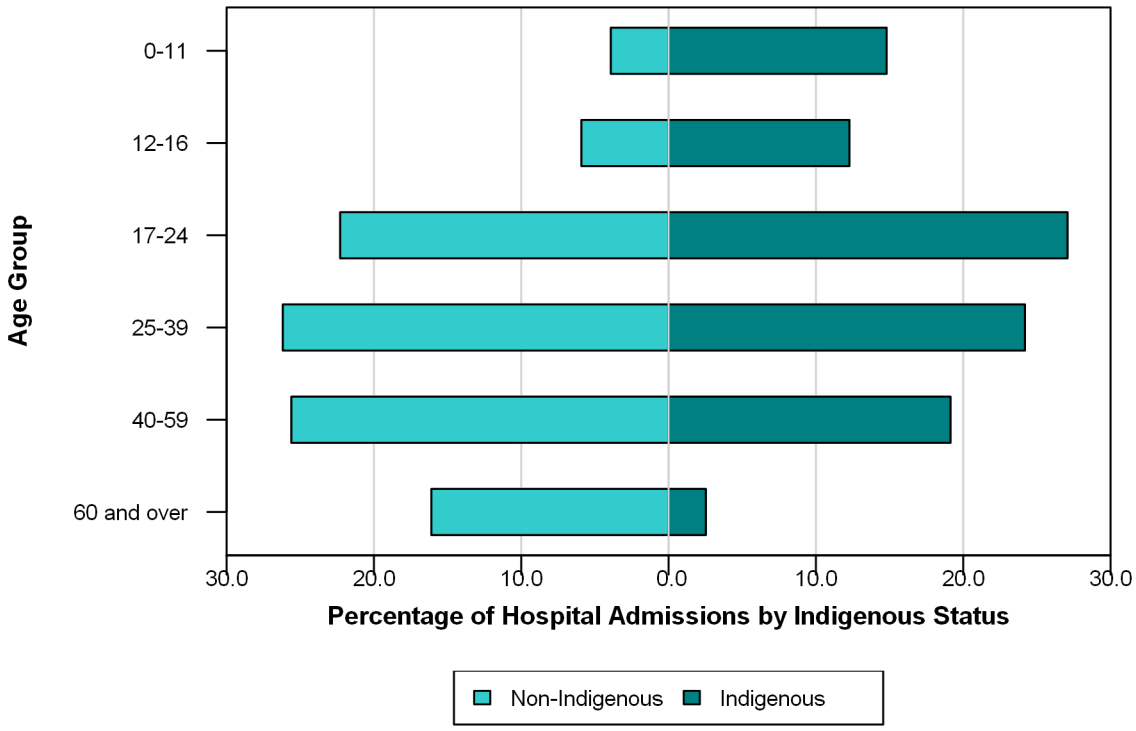


Table 166 Hospital Inpatients by Indigenous Status by Age Group

	Indigenous Status					
	Non-Indigenous		Indigenous		Total	
Age Group	n	Col %	n	Col %	n	Col %
0 - 11	155	3.9	41	14.8	**196**	**4.6**
12 - 16	234	5.9	34	12.3	**268**	**6.3**
17 - 20	455	11.5	40	14.4	**495**	**11.7**
21 - 24	427	10.8	35	12.6	**462**	**10.9**
25 - 29	433	10.9	34	12.3	**467**	**11.0**
30 - 39	603	15.2	33	11.9	**636**	**15.0**
40 - 49	569	14.4	34	12.3	**603**	**14.2**
50 - 59	444	11.2	19	6.9	**463**	**10.9**
60 and over	637	16.1	7	2.5	**644**	**15.2**
Total Hospital Inpatients	**3,957**	**100.0**	**277**	**100.0**	**4,234**	**100.0**

Figure 37 Hospital Inpatients by Indigenous Status by Road User Group

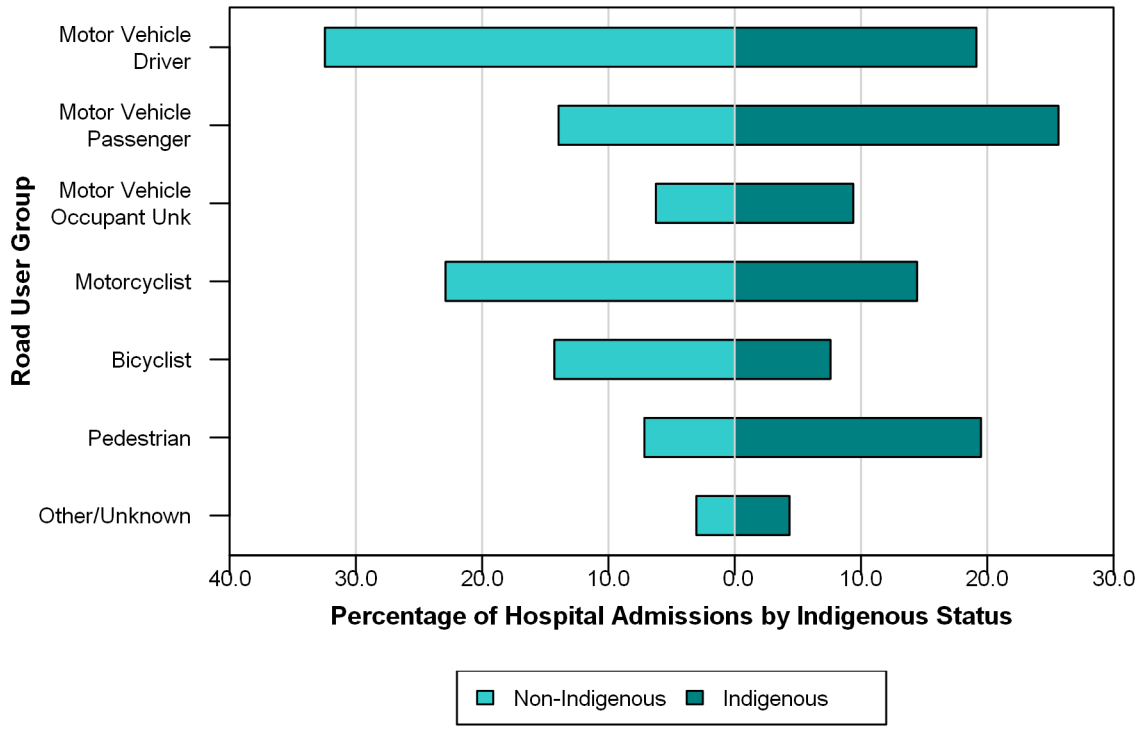


Table 167 Hospital Inpatients by Indigenous Status by Road User Group

	Indigenous Status					
	Non-Indigenous		Indigenous		Total	
Road User Group	**n**	**Col %**	**n**	**Col %**	**n**	**Col %**
Motor Vehicle Driver	1,284	32.4	53	19.1	**1,337**	**31.6**
Motor Vehicle Passenger	552	13.9	71	25.6	**623**	**14.7**
Motor Vehicle Occupant Unk	247	6.2	26	9.4	**273**	**6.4**
Motorcyclist	906	22.9	40	14.4	**946**	**22.3**
Bicyclist	565	14.3	21	7.6	**586**	**13.8**
Pedestrian	283	7.2	54	19.5	**337**	**8.0**
Other/Unknown	120	3.0	12	4.3	**132**	**3.1**
Total Hospital Inpatients	**3,957**	**100.0**	**277**	**100.0**	**4,234**	**100.0**

Appendix A Trends Over Time

Appendix A (i) Western Australia Road Crash Trends 1961 to 2011

	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	11.12	0.97	3,019	18.01	142.82	12.43
2008	185	205	1.17	9.41	0.81	3,095	17.72	142.07	12.22
2009	176	191	1.04	8.50	0.74	2,759	15.09	122.80	10.65
2010	174	191	1.02	8.32	0.73	2,722	14.56	118.55	10.36
2011	**163**	**175**	**0.91**	**7.44**	**0.65**	**2,644**	**13.82**	**112.40**	**9.89**

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 2011 *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	495	43	41,630	248	1,969	171
2008	10,214	58	469	40	39,297	225	1,804	155
2009	9,672	53	431	37	37,226	204	1,657	144
2010	10,469	56	456	40	39,615	212	1,725	151
2011	**10,544**	**55**	**448**	**39**	**39,457**	**206**	**1,677**	**148**

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- 2011

	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	2,113,841	24,289	1,480,873
2008	1,746,579	2,178,577	25,325	1,716,446
2009	1,828,346	2,246,659	25,902	1,790,500
2010	1,870,068	2,296,129	26,285	1,677,489
2011	**1,912,739**	**2,352,215**	**26,740**	**1,739,251**

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 and 2009 estimates based on average kilometres travelled per vehicle (interpolated between 2007 and 2010 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	3	4.4	93	6.6	**96**	**6.5**	2,171	6.8	**2,267**	**6.8**
February	9	13.2	120	8.6	**129**	**8.8**	2,544	8.0	**2,673**	**8.0**
March	7	10.3	136	9.7	**143**	**9.7**	3,066	9.6	**3,209**	**9.6**
April	8	11.8	118	8.4	**126**	**8.6**	2,595	8.1	**2,721**	**8.2**
May	5	7.4	112	8.0	**117**	**8.0**	2,777	8.7	**2,894**	**8.7**
June	5	7.4	109	7.8	**114**	**7.8**	2,770	8.7	**2,884**	**8.7**
July	3	4.4	109	7.8	**112**	**7.6**	2,762	8.7	**2,874**	**8.6**
August	6	8.8	135	9.6	**141**	**9.6**	2,895	9.1	**3,036**	**9.1**
September	6	8.8	106	7.6	**112**	**7.6**	2,639	8.3	**2,751**	**8.3**
October	5	7.4	119	8.5	**124**	**8.5**	2,490	7.8	**2,614**	**7.8**
November	6	8.8	103	7.4	**109**	**7.4**	2,749	8.6	**2,858**	**8.6**
December	5	7.4	139	9.9	**144**	**9.8**	2,404	7.5	**2,548**	**7.6**
Total Crashes	**68**	**100.0**	**1,399**	**100.0**	**1,467**	**100.0**	**31,862**	**100.0**	**33,329**	**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	4	7.0	27	7.0	**31**	**7.0**	310	8.0	**341**	**7.9**
February	7	12.3	31	8.0	**38**	**8.6**	286	7.4	**324**	**7.5**
March	4	7.0	48	12.4	**52**	**11.7**	363	9.4	**415**	**9.7**
April	4	7.0	35	9.0	**39**	**8.8**	321	8.3	**360**	**8.4**
May	5	8.8	26	6.7	**31**	**7.0**	320	8.3	**351**	**8.2**
June	8	14.0	29	7.5	**37**	**8.3**	336	8.7	**373**	**8.7**
July	1	1.8	23	5.9	**24**	**5.4**	362	9.4	**386**	**9.0**
August	2	3.5	29	7.5	**31**	**7.0**	330	8.6	**361**	**8.4**
September	4	7.0	33	8.5	**37**	**8.3**	274	7.1	**311**	**7.2**
October	7	12.3	30	7.8	**37**	**8.3**	317	8.2	**354**	**8.2**
November	6	10.5	36	9.3	**42**	**9.5**	291	7.6	**333**	**7.7**
December	5	8.8	40	10.3	**45**	**10.1**	344	8.9	**389**	**9.1**
Total Crashes	**57**	**100.0**	**387**	**100.0**	**444**	**100.0**	**3,854**	**100.0**	**4,298**	**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	3	7.9	14	6.4	**17**	**6.6**	96	6.1	**113**	**6.2**
February	2	5.3	13	5.9	**15**	**5.8**	100	6.4	**115**	**6.3**
March	0	0.0	14	6.4	**14**	**5.4**	119	7.6	**133**	**7.3**
April	5	13.2	12	5.5	**17**	**6.6**	143	9.1	**160**	**8.7**
May	2	5.3	22	10.0	**24**	**9.3**	158	10.1	**182**	**9.9**
June	3	7.9	27	12.3	**30**	**11.6**	150	9.5	**180**	**9.8**
July	1	2.6	19	8.6	**20**	**7.8**	165	10.5	**185**	**10.1**
August	6	15.8	22	10.0	**28**	**10.9**	143	9.1	**171**	**9.3**
September	6	15.8	21	9.5	**27**	**10.5**	128	8.1	**155**	**8.5**
October	4	10.5	14	6.4	**18**	**7.0**	130	8.3	**148**	**8.1**
November	4	10.5	23	10.5	**27**	**10.5**	133	8.5	**160**	**8.7**
December	2	5.3	19	8.6	**21**	**8.1**	107	6.8	**128**	**7.0**
Total Crashes	**38**	**100.0**	**220**	**100.0**	**258**	**100.0**	**1,572**	**100.0**	**1,830**	**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	3	4.2	111	6.7	**114**	**6.6**	571	6.9	5,277	6.6	**5,962**	**6.6**
February	10	13.9	144	8.7	**154**	**8.9**	693	8.4	6,322	7.9	**7,169**	**8.0**
March	7	9.7	159	9.6	**166**	**9.6**	891	10.8	7,583	9.5	**8,640**	**9.6**
April	8	11.1	135	8.2	**143**	**8.3**	642	7.8	6,571	8.2	**7,356**	**8.2**
May	6	8.3	132	8.0	**138**	**8.0**	794	9.6	6,964	8.7	**7,896**	**8.8**
June	5	6.9	128	7.7	**133**	**7.7**	702	8.5	6,705	8.4	**7,540**	**8.4**
July	3	4.2	129	7.8	**132**	**7.7**	753	9.1	7,265	9.1	**8,150**	**9.1**
August	6	8.3	160	9.7	**166**	**9.6**	783	9.5	7,118	8.9	**8,067**	**9.0**
September	6	8.3	131	7.9	**137**	**7.9**	650	7.9	6,467	8.1	**7,254**	**8.1**
October	6	8.3	140	8.5	**146**	**8.5**	550	6.7	6,280	7.8	**6,976**	**7.7**
November	6	8.3	120	7.3	**126**	**7.3**	666	8.1	7,158	8.9	**7,950**	**8.8**
December	6	8.3	163	9.9	**169**	**9.8**	562	6.8	6,352	7.9	**7,083**	**7.9**
Total Persons	**72**	**100.0**	**1,652**	**100.0**	**1,724**	**100.0**	**8,257**	**100.0**	**80,062**	**100.0**	**90,043**	**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	4	6.7	37	7.3	**41**	**7.3**	90	8.5	760	8.2	**891**	**8.2**
February	8	13.3	35	6.9	**43**	**7.6**	90	8.5	653	7.0	**786**	**7.2**
March	4	6.7	61	12.1	**65**	**11.5**	101	9.5	954	10.3	**1,120**	**10.3**
April	4	6.7	48	9.5	**52**	**9.2**	89	8.4	851	9.2	**992**	**9.1**
May	5	8.3	31	6.1	**36**	**6.4**	91	8.6	717	7.7	**844**	**7.7**
June	8	13.3	33	6.5	**41**	**7.3**	116	11.0	743	8.0	**900**	**8.3**
July	1	1.7	31	6.1	**32**	**5.7**	87	8.2	916	9.9	**1,035**	**9.5**
August	2	3.3	38	7.5	**40**	**7.1**	68	6.4	772	8.3	**880**	**8.1**
September	4	6.7	44	8.7	**48**	**8.5**	72	6.8	616	6.6	**736**	**6.8**
October	7	11.7	44	8.7	**51**	**9.0**	66	6.2	739	8.0	**856**	**7.9**
November	6	10.0	52	10.3	**58**	**10.3**	75	7.1	693	7.5	**826**	**7.6**
December	7	11.7	51	10.1	**58**	**10.3**	113	10.7	854	9.2	**1,025**	**9.4**
Total Persons	**60**	**100.0**	**505**	**100.0**	**565**	**100.0**	**1,058**	**100.0**	**9,268**	**100.0**	**10,891**	**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	3	7.0	20	6.4	**23**	**6.5**	40	7.6	212	5.8	**275**	**6.1**
February	2	4.7	18	5.8	**20**	**5.6**	27	5.1	214	5.9	**261**	**5.8**
March	0	0.0	16	5.1	**16**	**4.5**	36	6.8	290	7.9	**342**	**7.6**
April	7	16.3	19	6.1	**26**	**7.3**	48	9.1	387	10.6	**461**	**10.2**
May	2	4.7	28	9.0	**30**	**8.5**	47	8.9	380	10.4	**457**	**10.1**
June	3	7.0	42	13.5	**45**	**12.7**	72	13.7	354	9.7	**471**	**10.4**
July	1	2.3	23	7.4	**24**	**6.8**	47	8.9	362	9.9	**433**	**9.6**
August	8	18.6	25	8.0	**33**	**9.3**	43	8.2	321	8.8	**397**	**8.8**
September	7	16.3	40	12.8	**47**	**13.2**	35	6.7	304	8.3	**386**	**8.5**
October	4	9.3	18	5.8	**22**	**6.2**	49	9.3	288	7.9	**359**	**7.9**
November	4	9.3	37	11.9	**41**	**11.5**	41	7.8	318	8.7	**400**	**8.8**
December	2	4.7	26	8.3	**28**	**7.9**	41	7.8	218	6.0	**287**	**6.3**
Total Persons	**43**	**100.0**	**312**	**100.0**	**355**	**100.0**	**526**	**100.0**	**3,648**	**100.0**	**4,529**	**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	7	10.3	149	10.7	**156**	**10.6**	4,311	13.5	**4,467**	**13.4**
Tuesday	10	14.7	195	13.9	**205**	**14.0**	5,115	16.1	**5,320**	**16.0**
Wednesday	10	14.7	204	14.6	**214**	**14.6**	5,161	16.2	**5,375**	**16.1**
Thursday	10	14.7	216	15.4	**226**	**15.4**	5,299	16.6	**5,525**	**16.6**
Friday	13	19.1	254	18.2	**267**	**18.2**	5,548	17.4	**5,815**	**17.4**
Saturday	10	14.7	223	15.9	**233**	**15.9**	3,838	12.0	**4,071**	**12.2**
Sunday	8	11.8	158	11.3	**166**	**11.3**	2,590	8.1	**2,756**	**8.3**
Total Crashes	**68**	**100.0**	**1,399**	**100.0**	**1,467**	**100.0**	**31,862**	**100.0**	**33,329**	**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	7	12.3	56	14.5	**63**	**14.2**	521	13.5	**584**	**13.6**
Tuesday	7	12.3	44	11.4	**51**	**11.5**	514	13.3	**565**	**13.1**
Wednesday	5	8.8	45	11.6	**50**	**11.3**	541	14.0	**591**	**13.8**
Thursday	9	15.8	40	10.3	**49**	**11.0**	601	15.6	**650**	**15.1**
Friday	15	26.3	65	16.8	**80**	**18.0**	701	18.2	**781**	**18.2**
Saturday	9	15.8	79	20.4	**88**	**19.8**	553	14.3	**641**	**14.9**
Sunday	5	8.8	58	15.0	**63**	**14.2**	423	11.0	**486**	**11.3**
Total Crashes	**57**	**100.0**	**387**	**100.0**	**444**	**100.0**	**3,854**	**100.0**	**4,298**	**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	4	10.5	27	12.3	**31**	**12.0**	227	14.4	**258**	**14.1**
Tuesday	4	10.5	29	13.2	**33**	**12.8**	210	13.4	**243**	**13.3**
Wednesday	2	5.3	34	15.5	**36**	**14.0**	225	14.3	**261**	**14.3**
Thursday	2	5.3	35	15.9	**37**	**14.3**	244	15.5	**281**	**15.4**
Friday	4	10.5	27	12.3	**31**	**12.0**	265	16.9	**296**	**16.2**
Saturday	10	26.3	23	10.5	**33**	**12.8**	218	13.9	**251**	**13.7**
Sunday	12	31.6	45	20.5	**57**	**22.1**	183	11.6	**240**	**13.1**
Total Crashes	**38**	**100.0**	**220**	**100.0**	**258**	**100.0**	**1,572**	**100.0**	**1,830**	**100.0**

Appendix C P72 Form

WA Police Report of Road Traffic Crash

WESTERN AUSTRALIA POLICE

REPORT OF ROAD TRAFFIC CRASH

P72

Local No.

Crash No.

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**

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 9 6 3 / 8 5 2 / 7 4 1 **10. Back of the vehicle/wagon** **11. Towed device** **12. Bus seat** **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.**

……

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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……..……

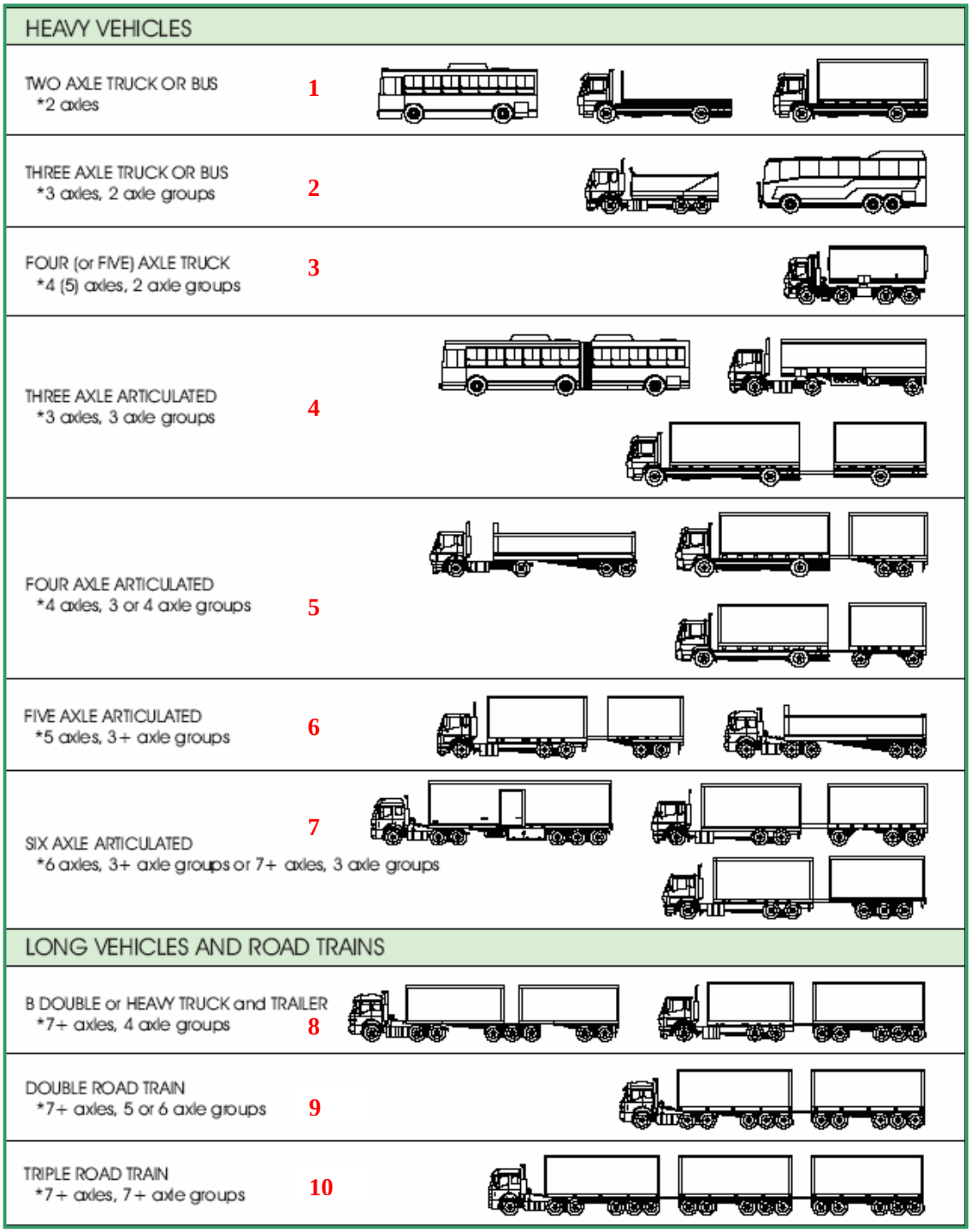
Sub District / Unit…… A/L……

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

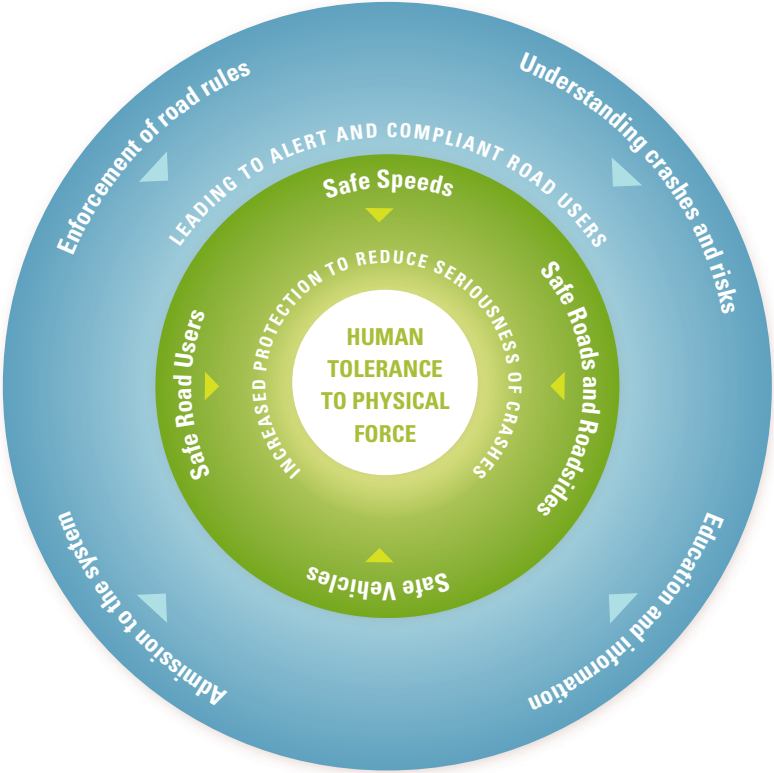


Figure 9: The Safe System (adapted from Australian Transport Council, 2007)

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).

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).

GLOSSARY OF TERMS

5YA: Five-year average. Average calculated for the five years prior to 2010 (i.e. 2005 to 2009).

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 leasxt 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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☐ Planning and Infrastructure
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