SOUTH AUSTRALIA'S ROAD SAFETY ANNUAL REPORT 2013

September 2014

TOWARDS ZERO TOGETHER

A summary of progress towards the 2020 road safety targets

This report details the crash and injury statistics and factors that influenced road safety in 2013, including levels of enforcement, numbers of Compulsory Third Party (CTP) insurance claims and the numbers of new cars sold with safety technologies. It provides an indication of how South Australia is progressing against the targets outlined in *Towards Zero Together,* South Australia's Road Safety Strategy 2020 and how the State is performing compared to other jurisdictions.

	2020 Target	2010 – 2012 Average	2010	2011	2012	2013
Fatalities	less than 80 (per year)	105	118	103	94	97
Fatality rate (per 100,000 population)	4.5	6.4	7.3	6.3	5.7	5.8

	2020 Target	2010 – 2012 Average	2010	2011	2012	2013
Serious injuries	less than 800 (per year)	914	1050	931	761	790
Serious injury rate (per 100,000 population)	45.0	55.7	64.4	56.8	46.0	47.3

Key Points for 2013

There were 97 fatalities on South Australian roads in 2013, three more fatalities than in 2012 and the second lowest recorded annual road toll. There were 29 more serious injuries in 2013 compared to 2012, representing a 4% increase. The 2013 fatality and serious injury figures, although higher than in 2012, still signify a positive trend towards the 2020 targets.

- Fatalities decreased by 8% and serious injuries by 14% compared to the 2010-2012 average.
- Serious casualty crashes on rural roads decreased by 12%, compared to the 2010-2012 averages.
- Serious casualty crashes on metropolitan roads decreased by 13% compared to the 2010-2012 average.
- A majority, 62% of the fatalities in SA occurred in rural areas, and it was mainly rural drivers who died on rural roads and city drivers who died on metropolitan roads. This is a consistent pattern with previous years.
- South Australia's road fatality rate for 2013 was 5.8 fatalities per 100,000 population, slightly higher than the national average of 5.2. Although this is a consistent pattern with previous years, South Australia has achieved substantial reductions in its fatality rate over the last decade, an average annual decrease of 5.1% per annum.

- Younger road users aged 16-24 years accounted for 18% of serious casualties in 2013. This is a decrease on the previous 3 year average where 24% of serious casualties were aged 16-24 years, 2010-2012.
- Older road users aged 70+ accounted for 12% of serious casualties in 2013 compared to 11% of serious casualties for the previous 3 year average, 2010-2012.

Within South Australia, there was a drop of 12% in serious casualty crashes on State Government rural roads and a drop of 12% on Local Government rural roads, compared to the 2010-2012 averages. More than two-thirds of drivers in rural road crashes resided in rural areas.

In metropolitan Adelaide, there was a 14% drop in serious casualty crashes on State Government roads and a drop of 7% on Local Government metropolitan roads, compared to the 2010-2012 averages. The vast majority of drivers in metropolitan crashes (86%) resided in metropolitan Adelaide.

The number of Compulsory Third Party (CTP) insurance claims in 2013 dropped by 15% from the 2010-2012 annual average.

Despite the improvements made in 2013, all South Australians must share the responsibility for improving road safety if we are to limit the consequences of death and injury on individuals and their families and meet the State's 2020 targets. The Government will consistently monitor the State's road safety performance towards 2020 and continue with efforts to reduce the number of people killed and injured on our roads.

To ensure the minimum targets set in South Australia's Road Safety Strategy 2020 – Towards Zero Together are met, The Road Safety Action Plan 2013-2016, the second chapter of road safety priorities was released on 15 August 2013. The action plan contains 66 priority actions grouped under the following 6 headings:

- Investing in safer roads,
- Creating safer communities and neighbourhoods,
- Encouraging safer behaviours,
- Continuously improving the licensing system,
- Using new technologies, and
- Creating better informed communities.

Key Performance Indicators

Performance Indicators	Annual Average 2008-2010	Annual Average 2010-2012	2013
Number of single vehicle run-off road serious casualty crashes	465	380	341
Number of intersection serious casualty crashes	368	303	256
Average metro traffic speed[1]	56.1 km/h (2010)	56.2 km/h	55.6 km/h
Average rural traffic speed[2]	103.2 (2010)	103.1 km/h	102.4 km/h
Percentage of vehicles exceeding stated speed limit[2]	23.6%	23.4%	20.7%
Percentage of new vehicles sold in SA with a 5 star safety rating	40.9% (2010)	50.1%	66.5%
Number of young people (16-24) killed or seriously injured	318	233	158
Number of drivers/riders killed with a BAC (Blood Alcohol Concentration) above legal limit	22	15	14
Number of drivers/riders tested positive for alcohol[2]	10,269	9,062	7,430
Number of drivers/riders tested positive for drugs	1,159	2,428	3,768
Number of people killed or seriously injured not wearing a seatbelt	77	54	41
Number of new CTP insurance claims	6,024	5,784	4,922

In this report it is important to make clear the following definitions:

Fatal Crash - A crash for which there is at least one fatality.
Fatality - A person who dies within 30 days of a crash as a result of injuries sustained in that crash.
Minor Injury Crash - A crash where at least one person sustains injury but no person is admitted to hospital or dies within 30 days of the crash.
Serious Casualty Crash – A crash where at least one fatality or serious injury occurs.
Serious Casualty – A fatality or serious injury.
Serious Injury Crash - A non-fatal crash in which at least one person is seriously injured.
Serious Injury - A person who sustains injuries and is admitted to hospital as a result of a road crash and who does not die as a result of those injuries within 30 days of the crash.

The data presented in this report is for information purposes only and should be used with care before making claims not already contained in the report. Results may not always match due to rounding, and databases are continuously updated over time.

[1] Based on Centre for Automotive Safety Research (CASR) speed surveys (free speeds): average metro speed is based on Adelaide 60 km/h arterial roads; average rural traffic speed is based on 110 km/h arterial roads; percentage of vehicles exceeding stated speed limit is based on Adelaide 60 and 80 km/h roads and rural 110 km/h arterial roads. Values may be subject to change as survey site characteristics change over time. Since 2013, Adelaide 80 km/h limit roads are no longer included in the speed surveys, and hence the performance indicator "Percentage of vehicles exceeding stated speed limit" in 2013 is based only on Adelaide 60 km/h limit roads and rural 110 km/h limit arterial roads. Values may be subject to change as speed survey site characteristics change over time.

[2] Note, due to changes in SA Police reporting and data extraction procedures, enforcement statistics have been revised from previously published results in *Towards Zero Together* South Australia's Road Safety Strategy 2020.

Safer Roads in 2013

Key points

- A decrease of 10% in run-off road serious casualty crashes involving single vehicles compared to the 2010-2012 average.
- A decrease of 16% in serious casualty crashes at intersections compared to the 2010-2012 average.
- A decrease of 12% in serious casualty crashes in rural South Australia, compared to the 2010-2012 average.
- Installing and activating safety cameras at high crash risk locations: intersections, school pedestrian crossings, level crossings and main roads. As at 31 December 2013, a total 117 safety camera sites were in operation: 89 at intersections for red light and speed offences, 8 at mid-block locations for speed offences, 12 at rail level crossings for red light and speed offences and 8 at school pedestrian crossings for red light and speed offences.

Safer Speeds in 2013

Key points

- A decrease in the average metropolitan travelling speed from the 2010-2012 average of 56.2 km/h to 55.6 km/h (in 60 km/h zones).
- An average of 19% of vehicles exceeded the speed limit on 60km/h metropolitan roads in 2013 compared to 25% in 2012.
- A drop in the average rural travelling speed from the 2010-2012 average of 103.1 km/h to 102.4 km/h (in 110 km/h zones).
- An average of 23% of vehicles exceeded the speed limit on 110km/h rural roads in 2013 compared to 22% in 2012.
- A 38% drop in mobile speed camera expiations, 11% increase in fixed speed camera expiations and a 20% drop in non-camera speed expiations issued by SA Police, compared to the 2010-2012 average.
- The identification of speeding as a contributing factor in road traffic crashes cannot always be directly determined and is often underreported in road crash data. However analysis suggests that in 27% of fatal crashes in 2013 speeding was considered a contributing factor, lower than the 3 year average of 31% of fatal crashes (2010-2012)[3].

[3] Based on NSW Roads and Traffic Authority criteria for determining whether or not a crash is to be considered as having involved speeding as a contributing factor. A motor vehicle is assessed as having been speeding if it satisfies the conditions described below:
(a) The vehicle's controller (driver or rider) was charged with a speeding offence; or the vehicle was described by police as travelling at excessive speed; or the stated speed of the vehicle was in excess of the speed limit.
(b) The vehicle was performing a manoeuvre characteristic of excessive speed, that is: while on a curve the vehicle jack-knifed, skidded, slid or the controller lost control; or the vehicle ran off the road while negotiating a bend or turning a corner and the controller was not distracted by something or disadvantaged by drowsiness or sudden illness and was not swerving to avoid another vehicle, animal or object and the vehicle did not suffer equipment failure.

Safer People in 2013

Key points

- Fewer young people (ages 16-24) were killed or seriously injured, a 32% reduction, compared to the 2010-2012 average.
- Fewer motorcyclists were killed or seriously injured, an 8% reduction, compared to the 2010-2012 average.
- A decrease of 18% in drivers/riders who tested positive for alcohol, compared to the 2010-2012 average.
- There were 3,768 people who tested positive to drugs in 2013, an increase of 55% compared to the 2010-2012 average. The number of drug tests performed increased by 15% in 2013 compared to the 2010-2012 average.
- A decrease of 25% in people killed or seriously injured not wearing a seatbelt, compared to the 2010-2012 average.
- Older road users aged 70+ accounted for 12% of serious casualties in 2013 compared to 11% of serious casualties for 2010-2012 average.
- There was an increase in the number of cyclists killed, but fewer seriously injured in 2013 compared to the previous 3 year average, 2010-2012.

Safer Vehicles in 2013

Key points

- An increase in the proportion of new vehicles sold with a 5-star safety rating from 40.9% in 2010 to 66.5% in 2013.
- A decrease of 16% and 3% in the number of passenger vehicles involved in serious injury crashes and fatal crashes respectively in 2013, compared with the 2010-2012 averages.
- Reductions in serious casualty crashes involving motorcycles (10%) and for heavy vehicles (18%), compared with the 2010-2012 averages.
- In 2013 of the passenger vehicles involved in fatal crashes 59% were 10 years old or greater, this is lower than the 5 year (2010-2012) average of 62% of passenger vehicles involved in fatal crashes.
- In 2013 of the passenger vehicles involved in fatal crashes 15% were less than 5 years old similar to the 5 year average of 16%, 2010-2012. ** Note need to change these to 3 year average 2010-2012

National Comparisons

South Australia's fatality rate increased slightly from 5.7 per 100,000 population in 2012 (the lowest rate South Australia has ever achieved) to 5.8 per 100,000 population in 2013, the second lowest fatality rate for the State. This rate is still slightly higher than the national average of 5.2 but a positive reduction towards the 2020 target of less than 4.5 fatalities per 100,000 population.

Figure 1: Fatalities per 100,000 population by State and Territory, Australia 2013

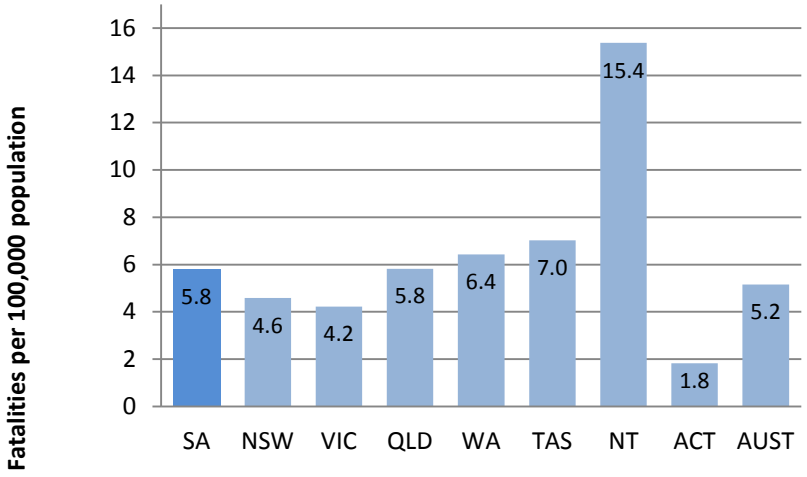


Table 1: Annual fatalities in each State and Territory, Australia[4]

Year	SA	NSW	VIC	QLD	WA	TAS	NT	ACT	AUST
2013	97	340	242	271	162	36	37	7	1,193
2012	94	369	282	280	182	31	49	12	1,299
2011	103	364	287	269	179	24	45	6	1,277
2010	118	405	288	249	193	31	50	19	1,353

[4] South Australian data from Department of Planning, Transport and Infrastructure. All other data from Bureau of Infrastructure, Transport and Regional Economics, *Road Deaths Australia 2013 statistical summary.*

Overview of casualties and crashes

Road Fatalities

Table 2: Number of fatalities per month in South Australia, 2010-2013

Month	2010-2012 Average	2010	2011	2012	2013
January	13	21	12	6	10
February	9	9	9	9	4
March	9	10	7	10	17
April	11	9	12	11	4
May	9	12	11	5	5
June	9	8	11	7	13
July	6	7	7	5	11
August	8	7	8	9	9
September	6	3	6	8	3
October	8	12	7	5	6
November	9	12	6	8	8
December	9	8	7	11	7
Total	105	118	103	94	97

Table 3: Number of fatal crashes per month in South Australia, 2010-2013

Month	2010-2012 Average	2010	2011	2012	2013
January	10	14	11	6	8
February	9	9	9	9	4
March	9	10	7	9	15
April	9	8	11	9	4
May	9	11	11	5	5
June	8	8	8	7	11
July	6	6	6	5	11
August	7	7	8	6	7
September	6	3	6	8	3
October	7	11	6	4	6
November	8	11	5	7	8
December	8	7	7	11	7
Total	95	105	95	86	89

Serious Injuries

Table 4: Number of serious injuries per month in South Australia, 2010-2013

Month	2010-2012 Average	2010	2011	2012	2013
January	69	74	81	52	59
February	73	80	74	66	51
March	92	113	98	64	73
April	76	93	69	66	70
May	78	81	77	76	76
June	77	108	74	49	55
July	77	99	71	62	65
August	70	61	82	66	54
September	71	84	76	53	65
October	77	94	65	71	65
November	73	72	74	74	89
December	81	91	90	62	68
Total	914	1050	931	761	790

Table 5: Number of serious injury crashes per month in South Australia, 2010-2013

Month	2010-2012 Average	2010	2011	2012	2013
January	56	59	69	39	54
February	64	74	62	56	46
March	77	97	83	50	63
April	65	80	59	57	58
May	67	71	66	65	61
June	60	87	54	40	47
July	62	76	58	52	54
August	57	53	63	55	43
September	61	70	71	43	57
October	65	75	56	63	59
November	63	64	61	64	68
December	70	80	78	53	56
Total	768	886	780	637	666

Where were the crashes in 2013?

Just over half (52%) of serious casualty crashes occurred in metropolitan Adelaide compared to 48% in rural South Australia. Due to the nature of the speed environment and physical environment, the majority of the fatal crashes (61.9%) occurred in rural South Australia.

Figure 2: Serious casualty crashes and casualties by Metropolitan/Rural region, South Australia, 2013

Table 6 shows the number of serious injury and fatal crashes for metropolitan Adelaide and rural South Australia. This table considers 'inner rural' (nominally within 100 km of Adelaide) and 'outer rural' separately.

Table 6: Serious injury and fatal crashes by specific region, South Australia, 2010-2013[3]

Regions	2010-2012 Average		2010		2011		2012		2013	
	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
Metropolitan Adelaide	414	38	478	44	418	41	347	29	359	35
Inner Rural	129	21	150	22	126	15	112	25	120	20
Outer Rural	224	37	258	39	236	39	178	32	187	34
Total	768	95	886	105	780	95	637	86	666	89

Within South Australia, roads are maintained and operated by both the State and Local Government. Table 7 shows that 2013 saw a decrease of 12% in serious casualty crashes on State Government rural roads (261 in 2013 compared to 297 for the 2010-2012 average) and likewise a 12% drop on Local Government rural roads from the 2010-2012 averages (100 in 2013 compared to 113 for 2010-2012 average).

In metropolitan Adelaide, there was a 14% decrease for State Government roads (309 in 2013 compared to 361 for 2010-2012 average) but only a 7% decrease in the rate for Local Government roads compared to the 2010-2012 average (85 in 2013 compared to 92 for 2010-2012 average)

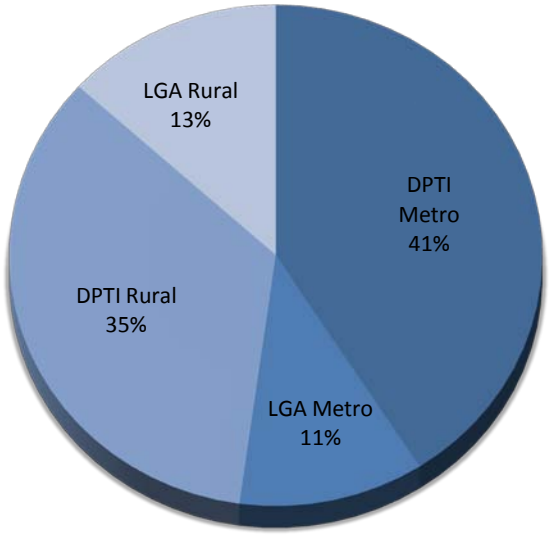
Table 7: Number of serious casualty crashes by road authority and region, South Australia, 2013[5]

Crash Region	Road Authority	2010-2012 Average	2010	2011	2012	2013
Metropolitan	State Government (DPTI)	361	436	353	293	309
	Local Government (LGA)	92	86	106	83	85
Rural	State Government (DPTI)	297	339	297	256	261
	Local Government (LGA)	113	130	119	91	100
Total		863	991	875	723	755

[5] A map of the regional areas is in *Towards Zero Together, South Australia's Road Safety Strategy 2020.*

The proportions of crashes on State Government roads and Local Government roads for 2013 are shown in Figure 3. Overall, three-quarters of serious casualty crashes occurred on State Government roads.

Figure 3: Distribution of serious casualty crashes by road authority and region, South Australia, 2013



Where do drivers who crash reside?

Most crashes in a particular region involve drivers who live in those regions. In 2013, there were 755 serious casualty crashes involving 1,055 drivers (injured or not). The numbers of drivers involved in serious casualty crashes in metropolitan and rural regions by residence are shown in Table 8.

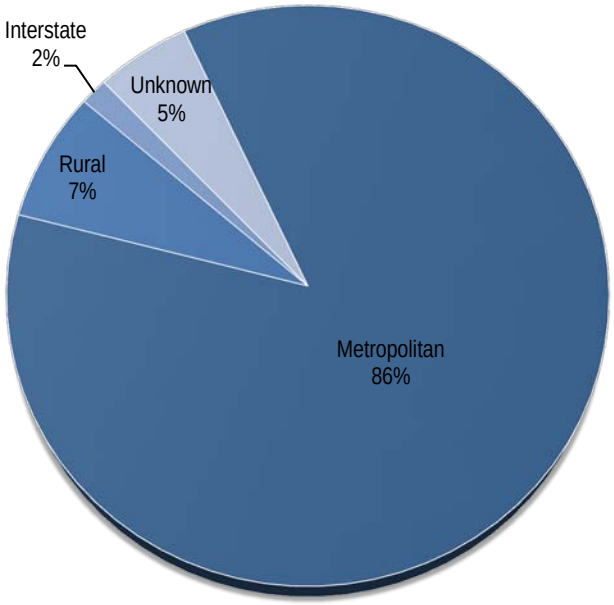
Table 8: Number of drivers involved in serious casualty crashes by postcode of residence, South Australia, 2010-2013

		Number of Drivers				
Crash Region	**Driver/Rider Residence**	**2010-2012 Average**	**2010**	**2011**	**2012**	**2013**
Metropolitan	Metropolitan	602	723	612	471	507
	Rural	39	44	46	27	43
	Interstate	6	9	6	4	9
	Unknown	46	53	51	34	31
Rural	Metro	119	119	125	114	102
	Rural	347	401	354	287	321
	Interstate	45	51	48	37	27
	Unknown	22	26	18	22	15
Total		1227	1426	1260	996	1055

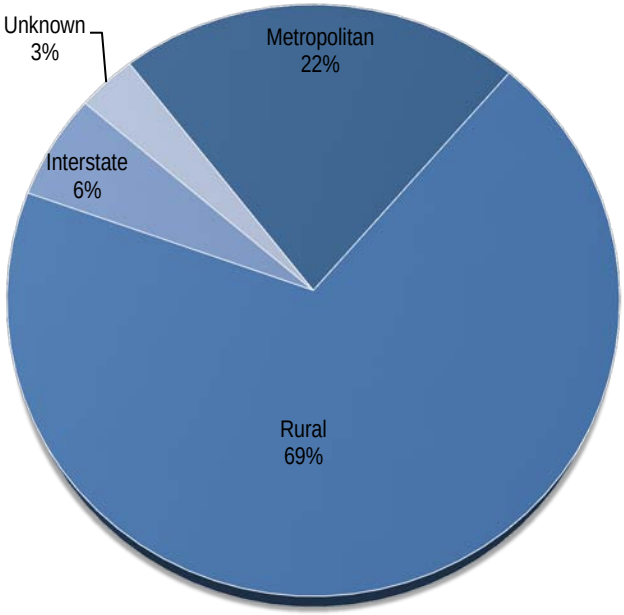
Figure 4 shows that 86% of drivers involved in crashes in metropolitan areas reside in metropolitan Adelaide. For crashes in rural areas, 69% of drivers reside in rural South Australia. This has been a consistent pattern over the last few years.

Figure 4: Proportion of drivers involved serious casualty crashes in South Australia by residence, 2013

(a) Metropolitan Crashes



(b) Rural Crashes



The Costs of Crashes

When considering the financial implications of a fatal or serious injury road crash, the direct costs associated with a crash such as medical expenses, vehicle repair costs, insurance compensation and loss of output costs have often been reported when placing a financial value on a road crash.

An alternative method for placing a financial value on the cost of a road crash is by considering the socio-economic value of safety as perceived by the community at large. The value of safety can be considered based on how much people in surveys are 'willing to pay' to reduce the risk of serious injuries or the loss of life resulting from road crashes. The *National Road Safety Strategy 2011-2020* (page 50) notes that 'willingness to pay' is widely regarded as a superior approach to estimating the costs of road crashes.

The total social cost or 'willingness to pay' of fatal and serious crashes in South Australia for 2013 was approximately $1.1 billion. The total cost of minor and property damage crashes for 2013 was a further $654 million. The 'willingness to pay' costs per crash and by seriousness of crash, for 2013 in SA are shown in Table 9.

Table 9: Willingness to pay costs in South Australia, 2013

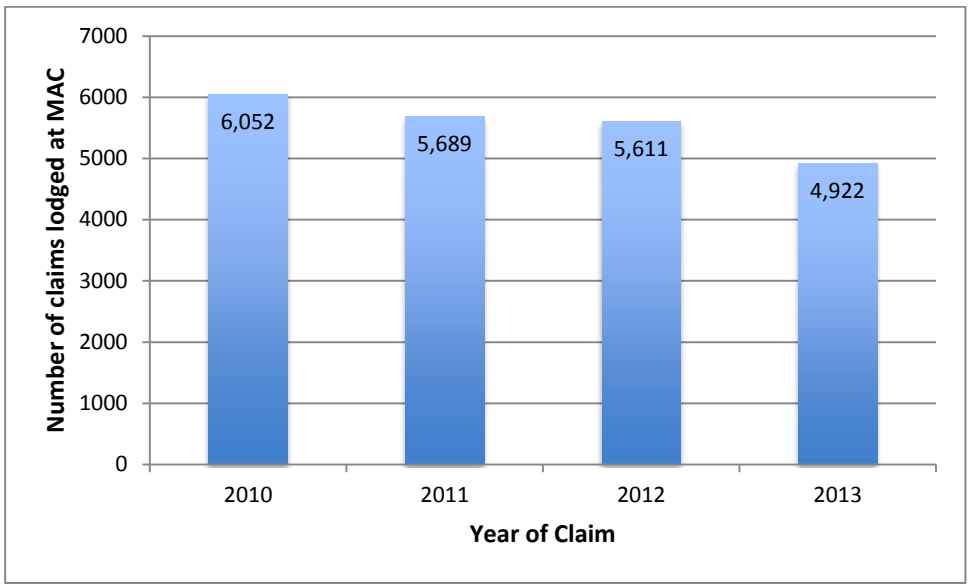
Crash severity	Per Crash ($)	Per person injured ($)	Crashes	Injuries	All crashes SA ($m)	All casualties ($m)
Fatal	7,230,661	6,455,904*	89	97	643.5	626.2
Serious	619,270	521,209*	666	790	412.4	411.8
Minor	110,430	91,295^	5,038	6,291	556.3	574.3
Property Damage	9,019^	0	10,883	-	98.2	0.0
Overall	na	na			1,710.5	1,612.3

*based on RTA's Economic Evaluation Manual (Appendix B, table 17) 2009 – weighted average rural/metro for casualty class
^ based on RTA's Economic Evaluation Manual (Appendix B table 17) 2009 – average rural/metro for casualty class
2009 RTA WTP costs adjusted to 2013 respectively using Australian Bureau of Statistics Consumer Price Index data (cat. No. 6401.0 June 2013, Table 1).

CTP claims

The Motor Accident Commission is responsible for the administration of South Australia's Compulsory Third Party (CTP) insurance scheme. This scheme provides cover to people injured in road crashes. There are differences between CTP statistics and Police statistics on crashes, largely because a driver fully responsible for a crash cannot make a claim for his or her injuries, and some claims arise from crashes not reported to Police. Approximately 45% of CTP costs arise from fatality and serious injury crashes. Minor injury crashes account for the remaining costs. Figure 5 shows the number of new CTP insurance claims annually from 2010. In 2013, there were 14.9% fewer CTP insurance claims than in the 2010-2012 average of 5,784. Please note, in July 2013, there was a change to the administrative management of claims in South Australia, which may have affected the number of claims reported.

Figure 5: Number of new CTP insurance claims[6], 2010-2013



[6] Excludes zero dollar claims

Serious casualty crashes in 2013:

Metropolitan Roads:

- 122 run-off road involving single vehicles
- 168 at intersections

Rural Roads:

- 219 run-off road involving single vehicles
- 88 at intersections

Current best practice approaches to road safety require a holistic view that recognises the interactions between roads and roadsides, travel speeds, vehicles and all road user groups, including drivers, riders, passengers and pedestrians. Roads that are well-planned, designed and maintained can provide lasting safety benefits across these road user groups, as demonstrated by the following Safer Roads performance indicators.

Single vehicle run-off road serious casualty crashes in 2013 decreased by 10% from the 2010-2012 average (380 crashes down to 341 crashes). As part of the 'safe system' approach these types of crashes can be reduced through improved roads, improved vehicle safety, lower travel speeds and better driver behavior. South Australia applies various measures proven to reduce trauma resulting from run-off-road crashes. These measures include sealed shoulders and audio tactile edge lines to reduce the risk of vehicles leaving the roadway, as well as clear zones and safety barriers to prevent vehicles from striking roadside objects. Giving initial priority to treating curved sections of roads has been shown to provide higher risk reductions. It is also worth noting, given that most run-off road crashes occur on rural roads, serious casualty crashes in the rural part of the State in 2013 dropped by 17% (263 crashes down to 219 crashes) from the 2010-2012 average (Table 10 and Table 11).

Intersection serious casualty crashes in 2013 across the state dropped by 16% from the 2010-2012 average (303 crashes down to 256 crashes). One of the most difficult tasks undertaken by drivers is to judge gaps in the opposing traffic when turning right at intersections or entering a major road from a local road. Effective treatments reduce the frequency at which drivers need to make these individual judgements. Appropriate treatments for intersections include installing roundabouts at suitable locations and reducing uncontrolled right turns. In some cases, the most appropriate treatment to improve safety may be to use engineering treatments or speed limit changes. In metropolitan Adelaide, where most intersections exist, serious casualty crashes at intersections in 2013 dropped by 24% (220 crashes down to 168 crashes) compared to the 2010-2012 average (Table 10 and Table 11).

The Road Network

The State Government maintains and operates over 22,500 km of road network within South Australia. The majority of these roads have 100 km/h (56.4%) or 110 km/h (34.0%) speed limits. Roads speed limited at 40 - 60 km/h account for 5.3% of the network and 70 - 90 km/h limited roads account for 4.3% of the network. The remaining roads in the network come under the jurisdiction of Local Government.

Crash Type

Two of the key performance indicators in *Towards Zero Together* are intersection crashes and single vehicle run-off road crashes involving a serious casualty (i.e. serious injury or fatality). Intersection crashes refer to crashes that occurred at intersections, including those involving single vehicles. Similarly, single vehicle run-off road crashes include crashes that occurred at intersections.

Compared to the 2010-2012 average of 303 serious casualty crashes across South Australia, in 2013, there were 256 serious casualty crashes at intersections, a reduction of 16%.

These crash types are shown in Table 10 for serious injury crashes and Table 11 for fatal crashes for metropolitan Adelaide and rural South Australia. Due to the overlap in crash types as discussed above, annual numbers for crash types cannot be added to get the total annual serious injuries and fatalities in the tables.

Table 10: Number of serious injury crashes by type and region, South Australia, 2010-2013[7]

Regions	Crash Type	2010-2012 Average	2010	2011	2012	2013
Metro	Intersection crashes	207	248	207	166	156
	Single vehicle run-off-road crashes	105	107	111	97	110
	All other crash types	129	147	130	110	131
Rural	Intersection crashes	77	100	84	48	77
	Single vehicle run-off-road crashes	231	263	243	188	189
	All other crash types	68	77	60	68	63

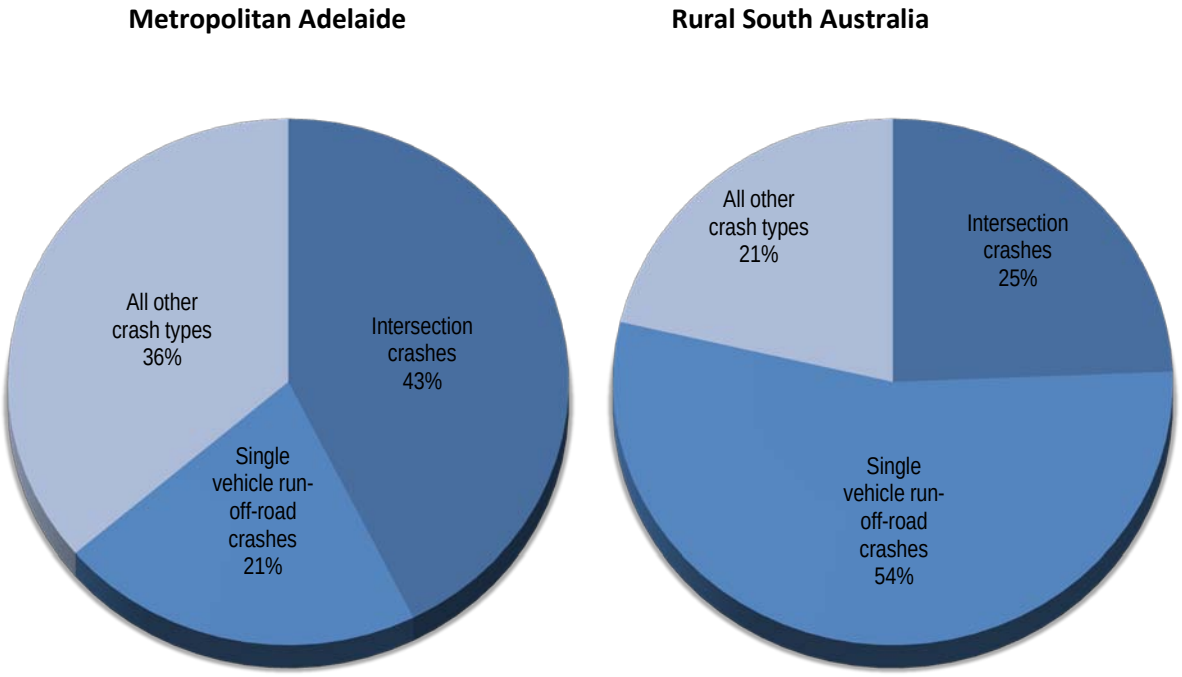
Table 11: Number of fatal crashes by type and region, South Australia, 2010-2013[7]

Regions	Crash Type	2010-2012 Average	2010	2011	2012	2013
Metro	Intersection crashes	13	16	15	8	12
	Single vehicle run-off-road crashes	12	12	12	12	12
	All other crash types	16	19	19	9	12
Rural	Intersection crashes	6	4	7	6	11
	Single vehicle run-off-road crashes	32	36	32	28	30
	All other crash types	21	21	17	24	14

[7] The type of crash categories are not mutually exclusive and must not be added together.

Figure 6 shows the distribution of crash types by region, when single vehicle run-off road crashes exclude those that occurred at intersections. Almost half of all serious casualty crashes in the metropolitan area occur at intersections. Single-vehicle-run-off road crashes still remain the leading cause of serious casualty crashes in rural areas.

Figure 6: Serious casualty crashes types as a proportion of serious casualty crashes, by region in South Australia, 2013



Serious casualty crashes in 2013:

Metropolitan roads:

- 49.5% occurred on 60 km/h roads
- 27.7% occurred on 50 km/h roads

Rural roads:

- 25.2% occurred on 110 km/h roads
- 34.9% occurred on 100 km/h roads

Whatever the speed limit, improved compliance with and enforcement of, the limit is essential for the safety of all road users. As well as having a direct causal role in a large proportion of serious casualty crashes, speed contributes significantly to the severity of crashes. Measures addressing vehicle speed can reduce the severity of crashes, regardless of the reasons behind a crash. Inappropriate speed is partly a behavioural issue but speed limits across the road network should be both safe and credible.

Reductions in travel speeds save lives and injuries, and these benefits have been clearly demonstrated on South Australian roads. Reductions in average travel speed across the network are the most effective, swift way to reduce road trauma. The wider benefits include better fuel consumption, lower greenhouse gas emissions, less traffic noise, and better support for active travel modes, which together contribute to South Australia's environmental, sustainability, and wellbeing objectives.

The Road Safety Action Plan 2013-2016 includes numerous safer speed initiatives such as the installation of demonstration wombat crossings and intersection platforms to lower travel speeds. There is also a commitment to work with stakeholders to create safer neighbourhoods and people friendly streets with lower vehicle travel speeds.

The identification of speeding as a contributing factor in road traffic crashes cannot always be directly determined and is often under reported in road crash data. However analysis suggests that in 27% of fatal crashes in 2013 speeding was considered a contributing factor[8]. This is lower than the 3 year (2010-2012) average of 31% of fatal crashes being considered as speed related. In 2012 the figure was 33%.

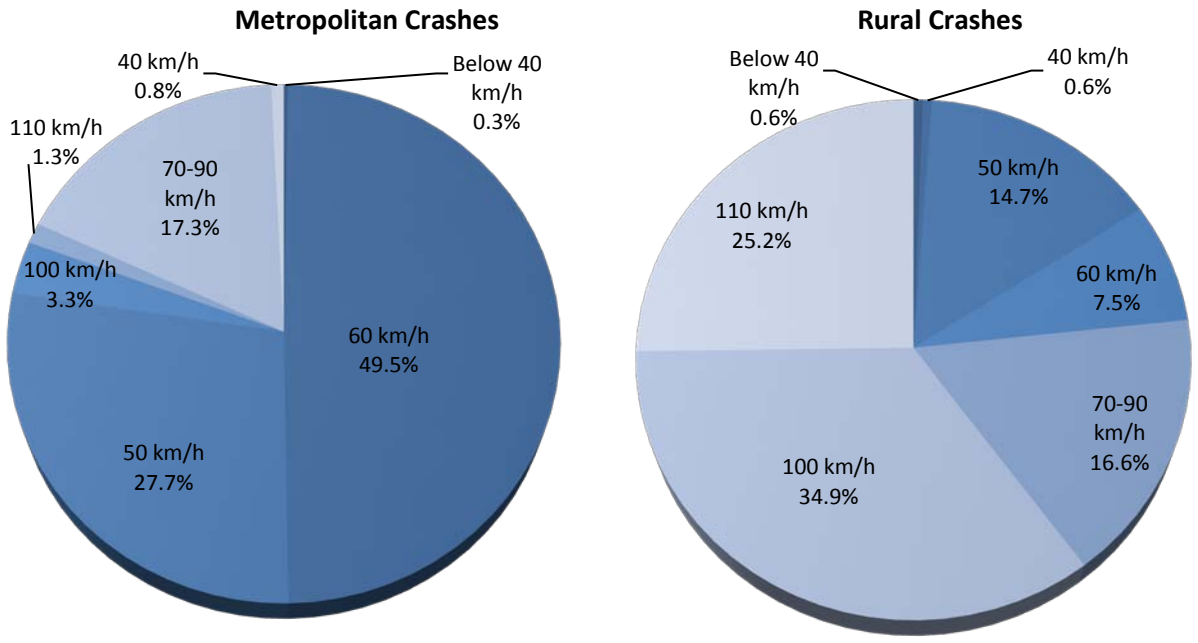
Table 12 provides a breakdown of fatal and serious injury crashes in 2013 by speed limit in both the metropolitan and rural regions, while Figure 7 presents a graphical comparison of serious casualty crashes in metropolitan and rural areas by speed limit. It can be seen in Figure 7 that in metropolitan areas a majority (49.5%) of serious casualty crashes occurred on 60 km/h speed limit roads and in rural areas the majority of serious casualty crashes (34.9%) occurred on 100 km/h limit roads.

[8] Based on NSW Roads and Traffic Authority criteria for determining whether or not a crash is to be considered as having involved speeding as a contributing factor. A motor vehicle is assessed as having been speeding if it satisfies the conditions described below:
(a) The vehicle's controller (driver or rider) was charged with a speeding offence; or the vehicle was described by police as travelling at excessive speed; or the stated speed of the vehicle was in excess of the speed limit.
(b) The vehicle was performing a manoeuvre characteristic of excessive speed, that is: while on a curve the vehicle jack-knifed, skidded, slid or the controller lost control; or the vehicle ran off the road while negotiating a bend or turning a corner and the controller was not distracted by something or disadvantaged by drowsiness or sudden illness and was not swerving to avoid another vehicle, animal or object and the vehicle did not suffer equipment failure.

Table 12: Serious injury and fatal crashes by speed limit and region, South Australia, 2010-2013

Region	Speed Limit	2010-2012 Average		2010		2011		2012		2013	
		Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
Metro	Below 40 km/h	1	0	1	0	0	0	1	0	1	0
	40 km/h	2	0	4	0	1	0	1	0	3	0
	50 km/h	104	5	119	5	112	10	80	1	96	13
	60 km/h	229	19	274	25	225	17	188	15	178	17
	70 – 90 km/h	62	11	63	9	58	13	64	11	64	4
	100 km/h	14	2	13	3	20	1	10	2	12	1
	110 km/h	3	1	4	2	2	0	3	0	5	0
Region	**Speed Limit**	**2010-2012 Average**		**2010**		**2011**		**2012**		**2013**	
		Serious	**Fatal**	**Serious**	**Fatal**	**Serious**	**Fatal**	**Serious**	**Fatal**	**Serious**	**Fatal**
Rural	Below 40 km/h	0	0	0	0	1	1	0	0	0	2
	40 km/h	4	0	7	0	0	0	4	1	2	0
	50 km/h	49	5	69	4	44	4	35	8	47	6
	60 km/h	26	1	33	2	27	0	19	2	26	1
	70 – 90 km/h	44	8	49	9	49	5	34	11	52	8
	100 km/h	116	19	115	22	116	20	116	16	103	23
	110 km/h	114	22	135	24	125	24	82	19	77	14
TOTAL		768	95	886	105	780	95	637	86	666	89

Figure 7: Serious casualty crashes by speed limit, South Australia, 2013



Speed Offences

A number of methods for detecting speed offences are employed. These include mobile cameras deployed by South Australia Police Traffic Camera Unit and also fixed speed/red light traffic safety cameras, including mid-block and pedestrian crossing cameras. Speed offences are also detected using laser speed detection devices, hand held radars, mobile radars within police vehicles, when indicated by the speed of following police vehicles and by targeting roads with high crash risk.

As at 31 December 2013 a total of 117 safety camera sites were in operation in South Australia: 89 for red light and speed offences at intersections, 8 for speed offences at mid-block locations, 12 for red light and speed offences at rail level crossings and 8 for red light and speed offences at school pedestrian crossings.

For driver speeding offences, numbers of expiations per year are reported in Figure 8. It can be seen that in 2012 and 2013 there were substantially fewer mobile speed camera expiations issued compared with 2010 and 2011. Fixed speed camera expiations in 2013 increased compared to 2011 and 2012. Overall, speed expiations (including those from mobile, static and non camera devices) totalled 182,815 in 2013, a slight increase of 6% compared to 2012 but 19% less than the 2010-2012 average of 226,728 expiations.

Figure 8: Annual numbers of expiations issued for speed camera enforcement 2010 to 2013

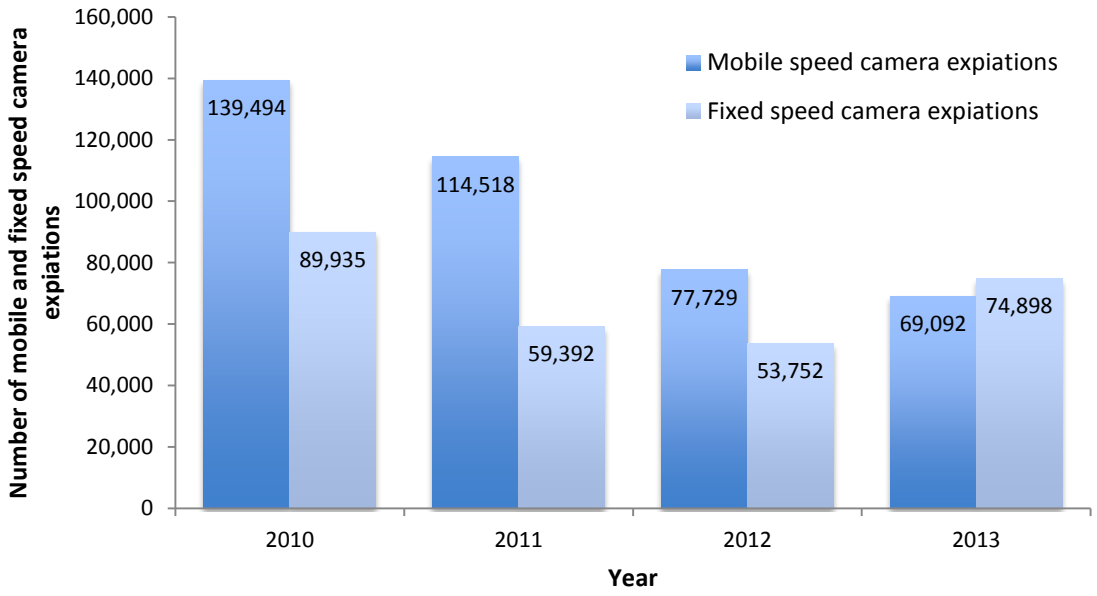
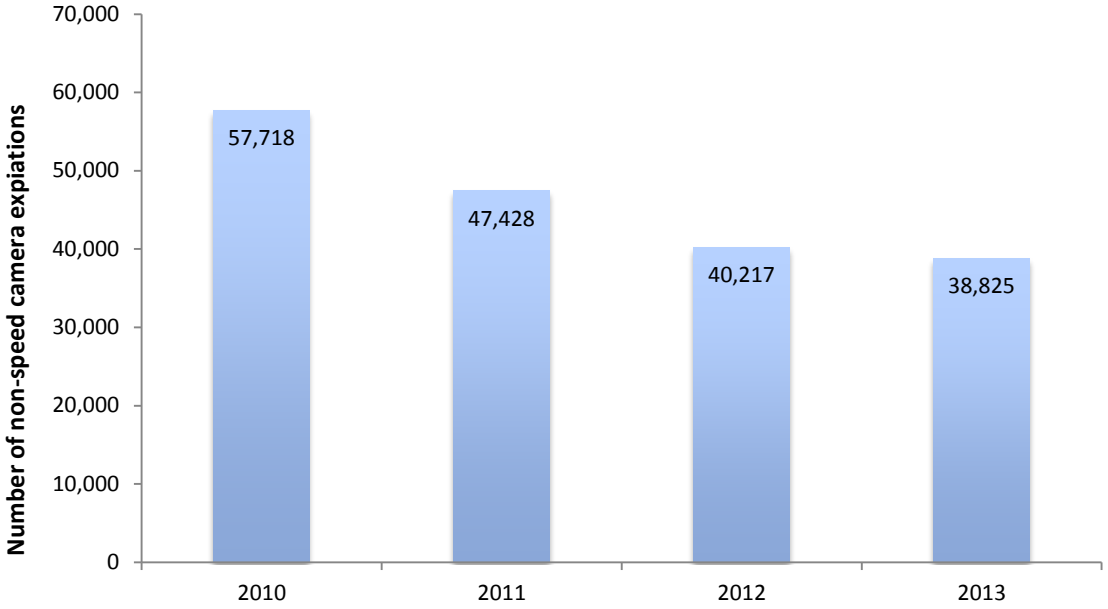


Figure 9: Annual numbers of expiations issued for non-camera speed detection 2010 to 2013



For speed offences detected other than by speed cameras, Figure 9 shows that these declined each year from 2010 to 2013.

Revenue from speed offence penalties goes into the Community Road Safety Fund used to fund a range of road safety programs. During 2013, the Community Road Safety Fund supported programs that included the State Black Spot Program, Rural Road Safety Program, road shoulder sealing, auditing of driver training, level crossing safety upgrades, information and education programs, road safety enforcement and maintenance of speed cameras.

Speed Surveys

Speed surveys are used to systematically measure changes in the travelling speed of motorists over time. Vehicle speeds at selected sites in both metropolitan and rural regions of the State are monitored by the Centre for Automotive Safety Research (CASR) by unobtrusive use of speed monitoring technology. The speed of individual vehicles is not identified in the vehicle speed data collected as this is averaged out.

Figure 10 shows that the average metropolitan travelling speed (in 60 km/h zones) dropped from 56.1 km/h in 2010 to 55.6 km/h in 2013. Figure 11 shows that the average rural travelling speed (in 110 km/h zones) has also declined, from 103.2 km/h in 2010 to 102.4 km/h in 2013, but was slightly higher compared to 102.2 km/h in 2012.

Figure 10: Average metropolitan travelling speed, South Australia, 2010-2013 (Adelaide 60 km/h arterial road free speed)[9]

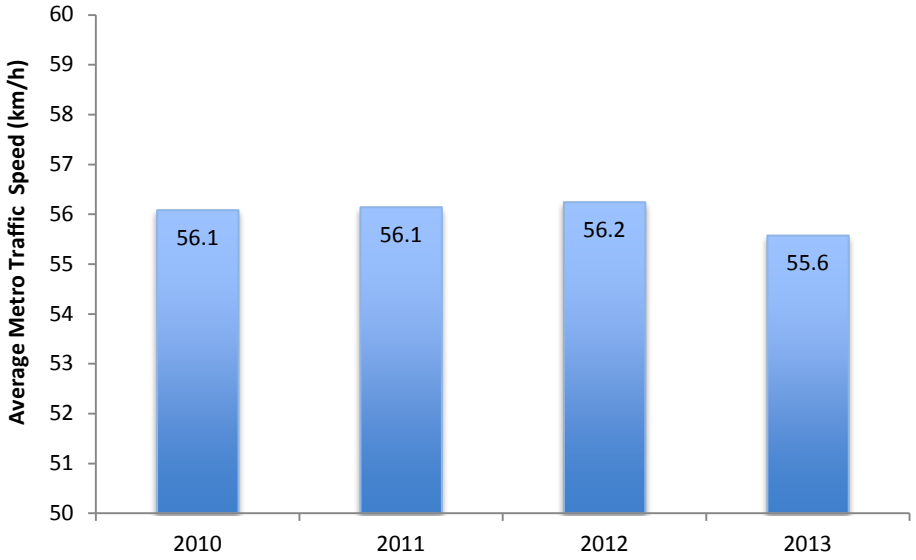
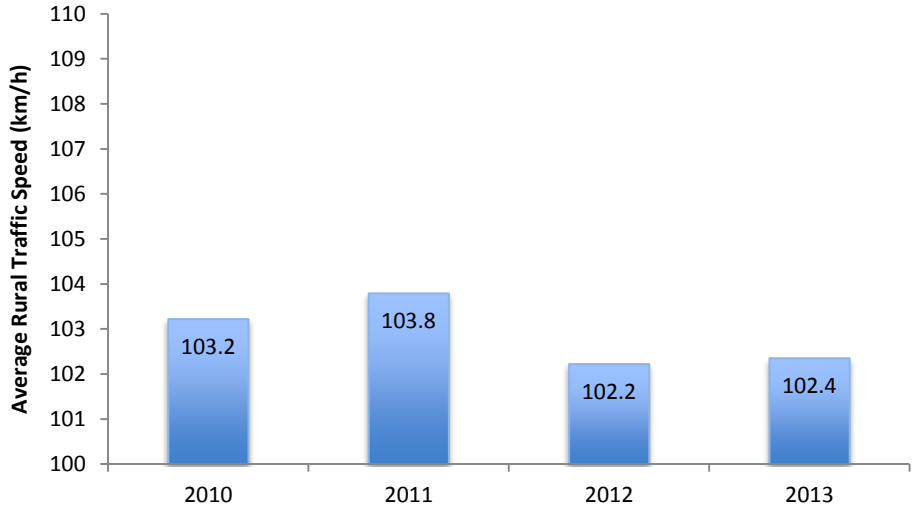


Figure 11: Average rural travelling speed, South Australia, 2010-2013 (Rural 110 km/h arterial road free speed)



[9] Speed data are subject to change as the characteristics of surveyed sites may change over time.

Key Points for 2013:

- 158 people aged 16-24 were killed or seriously injured on roads
- 14 drivers/riders killed had BACs over 0.05
- 41 people killed or seriously injured not wearing seatbelts

Influencing the behaviour of road users is critical if we are to prevent death and serious injury on our roads. Road users need to comply with the road rules, remain alert and safety conscious, and accept that continual improvement in their behaviour and that of others is vitally important if road safety is to be improved.

Human fallibility is recognised in current approaches to road safety. A large part of the solution lies in improving the safety design of roads, vehicles and speed limits to make greater allowances for human error, but there is also a need to directly help people avoid making mistakes in the first place.

The number of young people (aged 16-24) killed or seriously injured in 2013 dropped by 32% compared with the 2010-2012 average.

Fourteen drivers and riders killed in 2013 had an illegal BAC, compared to an average of 15 driver/rider fatalities with an illegal BAC per year, 2010-2012.

The number of drivers/riders who tested positive for alcohol dropped by 18% to 7,430 in 2013, compared with 9,062 for the 2010-2012 average. However, the proportion of alcohol tests in 2013 that gave a positive result was similar to the average proportion for 2010-2012 (Table 16).

The number of drivers/riders who tested positive for drugs increased by 55% to 3,768 in 2013 from the 2010-2012 average of 2,428. The number of drug tests conducted reached 51,361 in 2013 compared to the 3 year average of 44,563. The proportion of drug tests positive was 7.3% in 2013 compared to 5.4% of drug tests being positive in 2010-2012 (Table 17).

The number of people killed or seriously injured not wearing a seatbelt in 2013 dropped by 25% from the 2010-2012 average. This is reflected by the number of expiations issued for non-restraint use in 2013 being 22% lower than the 2010-2012 average.

Expiations for using a mobile phone have increased from 2012 but were 5% lower compared to the 2010-2012 average.

Road User Groups

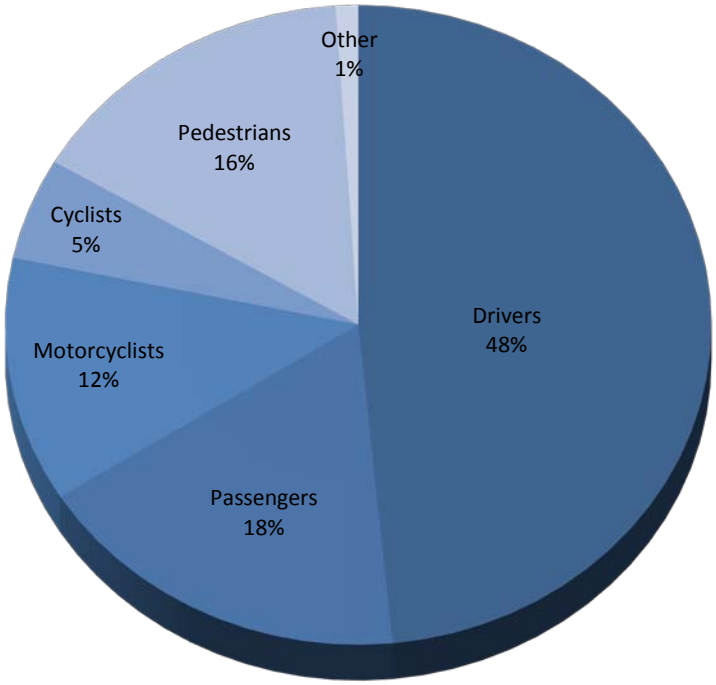
Table 13 shows that, in 2013, there were decreases from the 2010-2012 averages for serious injuries (11% reduction) and a slight decrease (5% reduction) for fatalities among drivers. Over that period there were noticeable reductions in serious injuries particularly for passengers (31% reduction) and cyclists (14% reduction). However, there was a large decrease in 2013 from previous years in motorcyclists killed, but an increase in pedestrians and cyclists killed compared to 2012.

Figures 12 and 13 show that while drivers constitute the largest proportions in both serious injuries and deaths, about a third of all serious injuries and fatalities involve vulnerable road users; that is motorcyclists, pedestrians and cyclists.

Table 13: Number of serious injuries and fatalities by road user, South Australia, 2010-2013

Road User	2010-2012 Average		2010		2011		2012		2013	
	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
Drivers[10]	429	50	497	57	442	40	348	52	382	47
Passengers	177	20	209	24	192	22	130	13	122	17
Motorcyclists[11]	141	17	153	16	152	21	119	15	134	12
Cyclists	74	4	82	5	61	3	78	3	63	5
Pedestrians[12]	85	14	103	16	76	17	77	10	87	15
Other[13]	8	0	6	0	8	0	9	1	2	1
Total	914	105	1050	118	931	103	761	94	790	97

Figure 1212: Proportion of fatalities by road user, South Australia, 2013



[10] Includes heavy vehicle drivers. Heavy vehicles includes rigid truck, semi-trailer and B-doubles.
[11] Includes pillion passengers and scooter riders/passengers.
[12] Includes motorised wheelchair.
[13] Other may include drivers and passengers of buses, other defined motor vehicles, animal drawn vehicles, ridden animals, railway vehicles, trams, small wheel vehicles and motor vehicles - type unknown.

Figure 13: Proportion of serious injuries by road user, South Australia, 2013

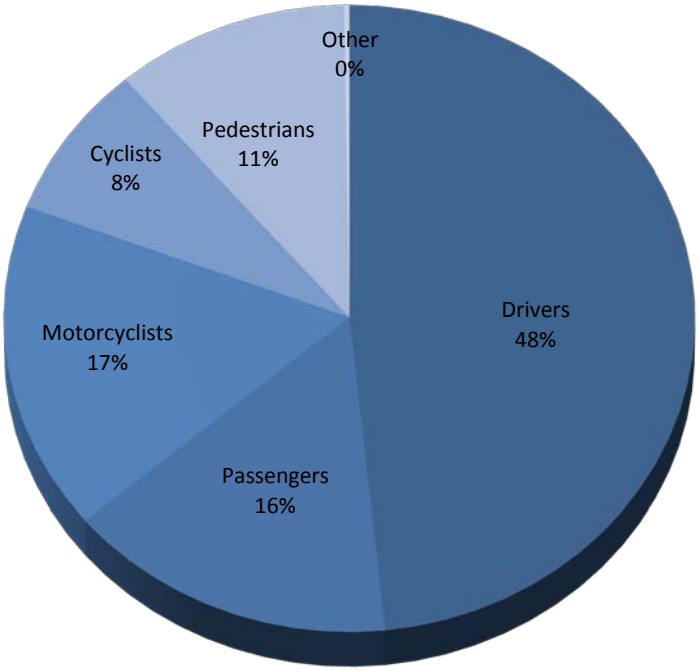


Table 13 shows that there were considerable drops in serious injuries (33% reduction) and a 24% reduction in fatalities among road users aged 16-24 in 2013, compared with the 2010-2012 averages. There were also noticeable reductions in serious injuries among all other road users, except those aged 50-59 and 70-79 where there were increases by 14% and 20% respectively, compared to the 2010-2012 averages. Additionally, there was a considerable decrease in deaths for 30-39 year olds in 2013 (62% reduction), as well as a considerable decrease in the number of deaths among the 25-29 (29% decrease) age group compared to the 2010-2012 averages.

Table 13: Number of serious injuries and fatalities by road user age, South Australia, 2010-2013

Age Group	2010-2012 Average		2010		2011		2012		2013	
	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
0-15	41	4	49	5	43	4	32	3	37	6
16-24	214	20	241	31	220	11	180	17	143	15
25-29	97	7	121	5	95	9	75	7	81	5
30-39	132	16	145	16	146	22	106	9	112	6
40-49	136	20	155	22	141	22	112	16	120	20
50-59	103	13	112	17	106	12	91	11	117	12
60-69	73	7	72	8	77	4	70	9	70	9
70-79	44	7	64	7	30	7	38	7	53	11
80-89	42	9	49	4	41	9	35	14	27	11
90+	3	2	7	3	2	3	0	1	2	2
Unknown	29	0	35	0	30	0	22	0	28	0
Total	914	105	1050	118	931	103	761	94	790	97

Despite the reductions in deaths and serious injuries for younger drivers, the high serious casualty involvement of 16-24 year olds is shown graphically in Figure 14 where the involvement of 16-24 year olds is almost one and a half times more than their proportion of the population. Additionally, 25-29 year olds are also over-represented as a proportion of their population.

Figure 14: Serious casualties (and population distribution) by age group, South Australia, 2013[14]

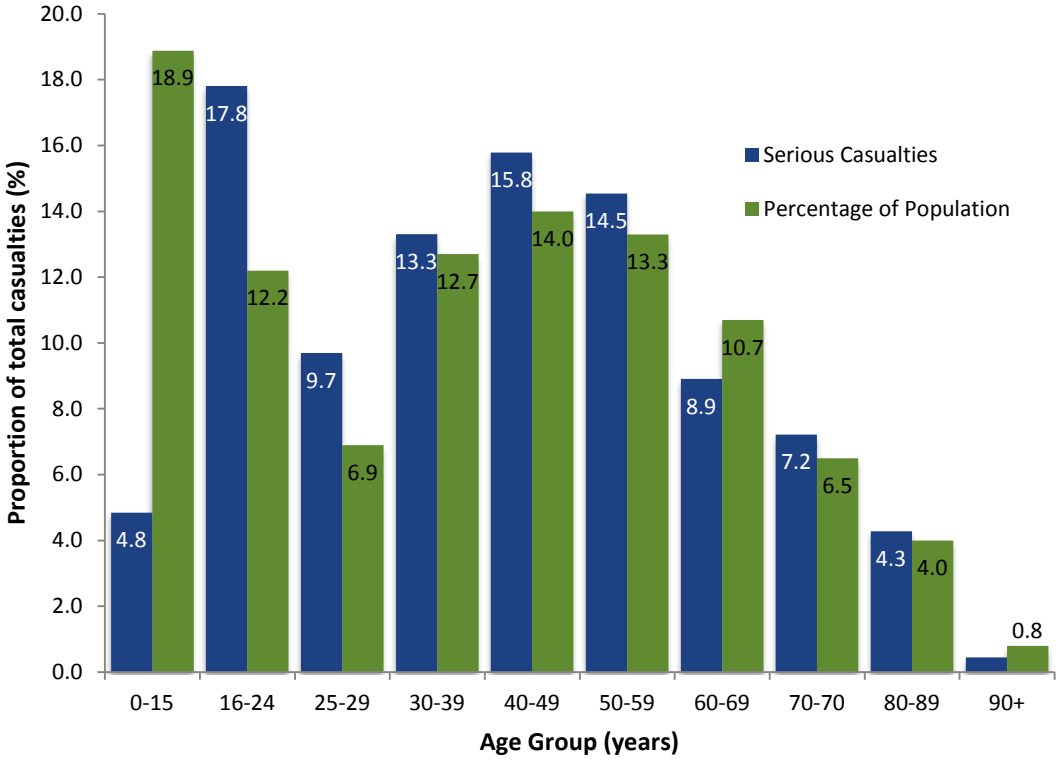


Table 14 shows that the numbers of drivers and riders killed in crashes with blood alcohol concentrations (BACs) exceeding 0.05 dropped considerably from the 2008-2010 average of 22, but has remained constant over the last few years and the 2010-2012 average.

Table 14: Number of driver and rider fatalities exceeding 0.05 BAC, South Australia, 2010-2013[15]

	2010-2012 Average	2010	2011	2012	2013
BAC > 0.05	**Fatal**	**Fatal**	**Fatal**	**Fatal**	**Fatal**
Drivers and Riders	15	19	13	13	14

[14] Population age distribution from Australian Bureau of Statistics (ABS) Cat. 3101.0 Australian Demographic Statistics
[15] Fatality BAC data are from Forensic Science SA

Alcohol and drug offences are detected through Driver Screening Tests (DST). Offences are detected through static testing and mobile testing. Static testing for alcohol or drugs occurs when drivers passing police checkpoints are randomly pulled over to undergo alcohol breath tests or saliva drug tests. Mobile testing for alcohol or drugs occurs when drivers are randomly pulled over by police officers in mobile vehicles to undergo breath and/or saliva tests. Mobile testing also includes drivers tested as a result of involvement in a crash.

Table 16: Breath Testing Statistics (mobile and static), South Australia, 2010-2013

Alcohol Enforcement	2010-2012 Average	2010	2011	2012	2013
Number of Alcohol Tests	627,878	736,955	605,011	541,668	523,131
Number of Positive Tests	9,062	9,809	9,355	8,021	7,430
Percentage Positive	1.4%	1.3%	1.5%	1.5%	1.4%

Table 16 shows that the percentage of those who tested positive in alcohol breath tests did not change in 2013 from the 2010-2012 average, although the number of tests performed in 2013 dropped by 17%. By contrast, table 17 shows that the percentage of those who tested positive to drug tests increased from 5.4% (2010-2012 average) to 7.3% in 2013, although the number of drug tests performed increased by only 15%. Some of this increase can be explained by changes in police operational procedures.

Table 17: Drug Testing Statistics, South Australia, 2010-2013

Drug Enforcement	2010-2012 average	2010	2011	2012	2013
Number of Drug Tests	44,563	45,291	44,646	43,752	51,361
Number of Positive Tests	2,428	1,699	2,315	3,269	3,768
Percentage Positive	5.4%	3.8%	5.2%	7.5%	7.3%

Figure 15 shows that the rate for expiations and apprehensions for alcohol offences per 1000 tested has declined slightly over the period 2011-2013, for combined mobile and static driver screening tests.

Figure 15: Rate of expiations and apprehensions for alcohol offences using static and mobile Driver Screening Tests (DST) per 1,000, 2008 to 2011

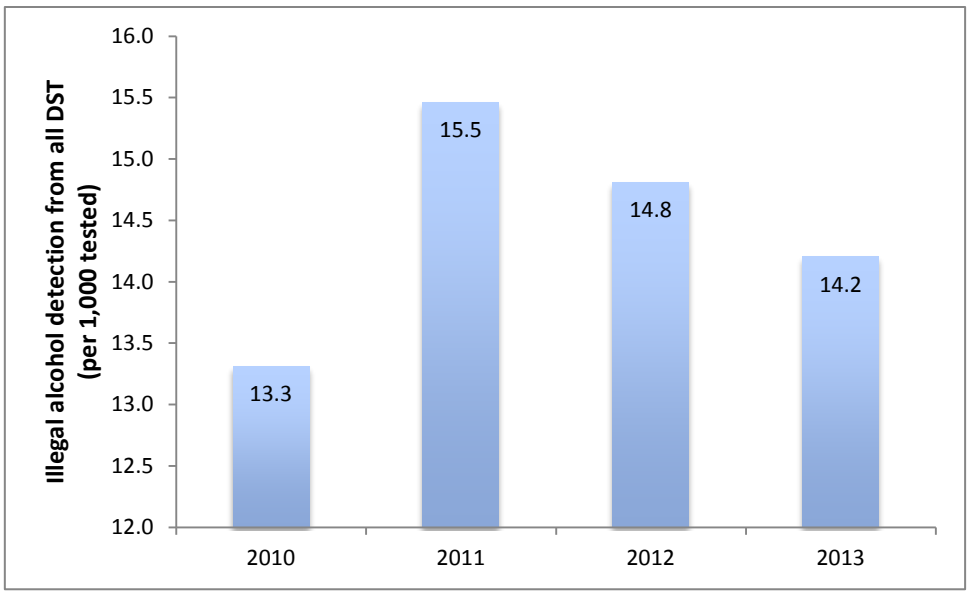
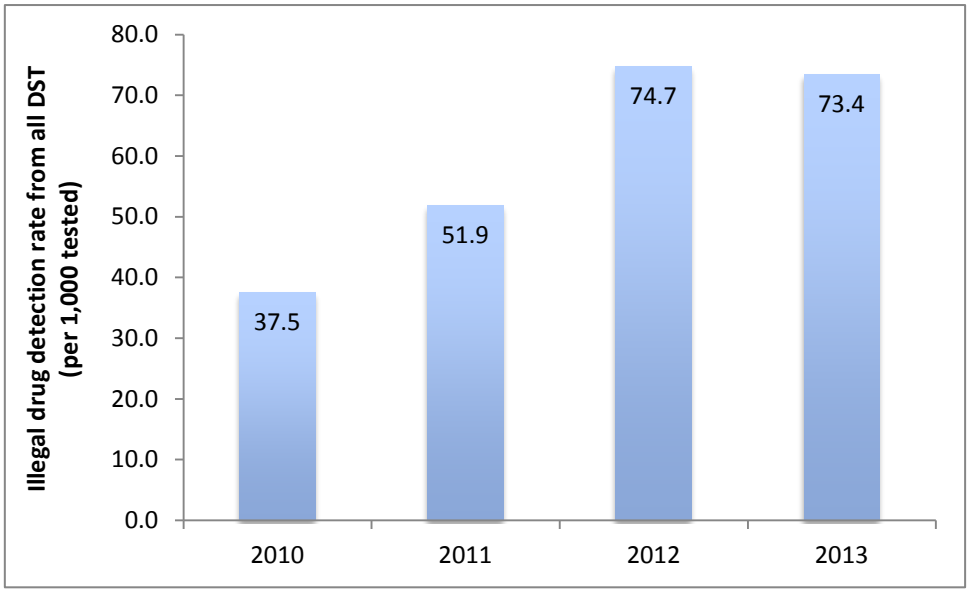


Figure 16 shows that the rate of expiations and apprehensions for drug offences per 1000 tested in 2013 was slightly lower than in 2012, but considerably higher than in 2010 and 2011.

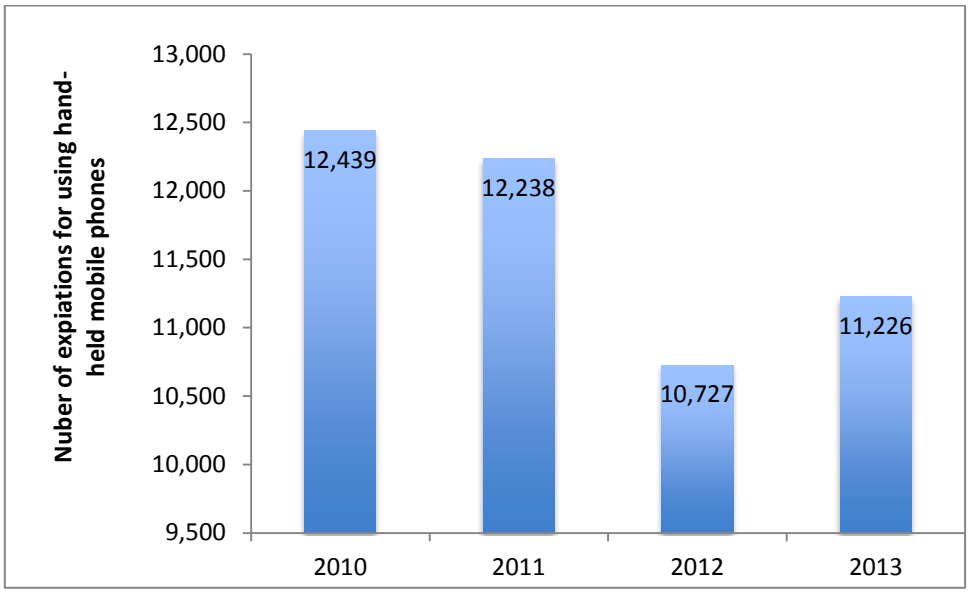
Figure 16: Rate of expiations and apprehensions for drug offences using static and mobile Driver Screening Tests (DST) per 1,000: 2010-2013



Mobile phone and restraint use offences

Driver expiations for mobile phone use and restraint use offences are reported per year. Variations in mobile phone and restraint use offences over time may be due to differences in the incidence of mobile phone and restraint use while driving, or to varying enforcement activity by police. In the case of mobile phone use, figure 17 shows that the number of expiations issued in 2013 was slightly higher than for 2012, but still lower than for 2010 and 2011.

Figure 17: Annual number of expiations for mobile phone use 2010-2013

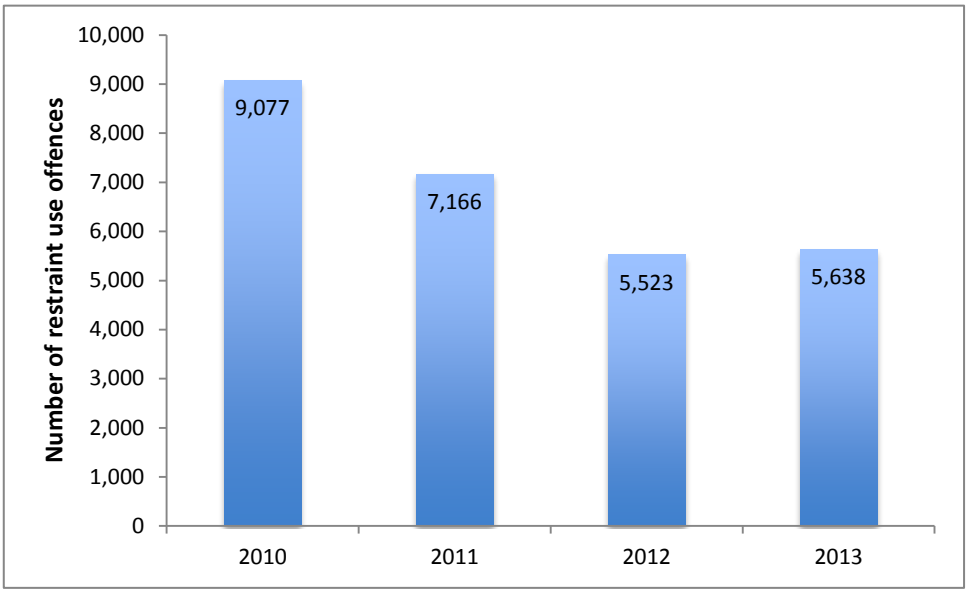


In table 18, it can be seen that the numbers of unrestrained driver and passenger serious injuries and fatalities in 2013 were substantially lower than in the 2010-2012 averages. However, despite the decreased numbers of unrestrained drivers and passengers involved in fatal and serious injury crashes, there has been little change in the percentage of fatally injured drivers and passengers who were unrestrained. In 2013, 28% of fatally injured vehicle occupants were unrestrained compared to 30% for the 2010-2012 average. Figure 18 shows that the number of expiations issued for restraint use offences in 2013 was slightly higher than for 2012, but considerably lower than for 2010 and 2011.

Table 18: Number of unrestrained driver and passenger serious injuries and fatalities, South Australia 2010-2013

	2010-2010 Average		2010		2011		2012		2013	
	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
Unrestrained Drivers and Passengers	34	21	40	25	34	17	27	20	23	18
Percentage unrestrained	6%	30%	6%	31%	5%	27%	6%	31%	5%	28%

Figure 18: Annual number of expiations for restraint use offences 2010-2013



In 2013:

New Cars Sold in SA:

- 66.5% of new cars sold were 5-Star ANCAP rated
- 17.1% of new cars sold were 4-Star ANCAP rated

Serious Casualty Crashes:

- 24.1% involved 10-14 year old vehicles
- 23.0% involved 5-9 year old vehicles

Safer Vehicles constitute an important element in road safety as improvements in vehicle safety have contributed significantly to road trauma reduction. Improvements in vehicle safety are both helping drivers avoid crashes and protecting occupants and other road users when crashes happen. Vehicle technology is developing at a rapid rate, however as the average age of the South Australian vehicle fleet is almost 11 years, it will take considerable time for those technologies to be available for the majority of vehicles.

The safety of vehicles being sold

The Australasian New Car Assessment Program (ANCAP) and the Used Car Safety Rating (UCSR) program allow buyers to make informed decisions, encouraging levels of safety that exceed those required by regulation. These programs assess the crashworthiness and safety features of new vehicles and assign stars based on safety performance. It has been estimated that occupants have twice the chance of being killed or seriously injured in an ANCAP 1-star rated vehicle compared to an ANCAP 5-star rated vehicle.

In 2011 the requirements for a vehicle to achieve a 5-star rating included[16]:

- Achieving a suitable standard in each of the full scale test types
- Electronic stability control
- Lap-sash (3-point) safety belts for all forward facing seats
- Head protecting airbags for the front seats

In 2012 this was extended to also include:

- a marginal pedestrian rating, an acceptable whiplash rating
- two additional safety assist technologies (SATs)(or more if not fitted as standard equipment).

[16] ANCAP, ANCAP Rating Road Map 2011-2017, June 2012.

In 2013, in addition to the 5-star rating requirements of previous years, there is now a mandatory requirement for seatbelt reminders in the front seats, emergency brake assist and a minimum of three additional SATs.

South Australia's Stars on Cars campaign involves promoting ANCAP's star rating system to raise awareness, educate consumers and new car dealers, and ultimately influence selling processes and buying decisions in favour of safer cars. In 2012, the Stars on Cars program was increased to 156 new car dealerships and this was maintained and supported throughout 2013 by the Department of Planning, Transport and Infrastructure (DPTI).

In addition, the State Government's vehicle fleet leasing provider, Fleet SA, amended its purchasing policies to mandate Government purchasing of 5-star ANCAP rated passenger vehicles from July 2011.

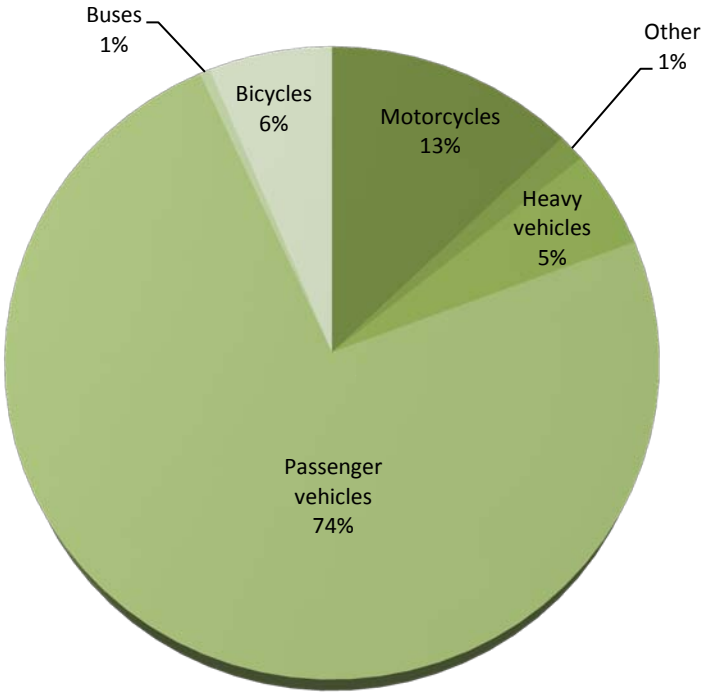
Other 2013 initiatives included that electronic stability control was nationally mandated for all new passenger vehicles sold from 1 November 2013 under the Australian Design Rules (ADRs).

Table 19 shows that there was a 16% decrease in passenger vehicle involvement in serious injury crashes in 2013 compared with the 2010-2012 average. However, for passenger vehicle involvement in fatal crashes there was very little change. There were also reductions in serious injury crashes involving heavy vehicles, motorcycles and bicycles. Figure 19 shows the 2013 information in graphical format.

Table 19: Number of vehicles involved in serious injury and fatal crashes by vehicle type, South Australia, 2010-2013

Vehicle type	2010-2012 Average		2010		2011		2012		2013	
	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
Passenger vehicles	875	105	1033	126	903	93	688	95	731	102
Heavy vehicles	54	15	63	10	57	19	43	16	45	12
Buses	7	1	6	3	9	0	6	1	6	0
Motorcycles	141	19	155	17	148	23	120	17	132	12
Bicycles	80	4	87	5	70	3	84	3	66	5
Other	12	2	13	1	14	1	8	3	15	1
Total	1169	145	1357	162	1201	139	949	135	995	132

Figure 19: Percentage of vehicles involved in serious casualty crashes by vehicle type, South Australia, 2013



Age profile of crashed vehicles

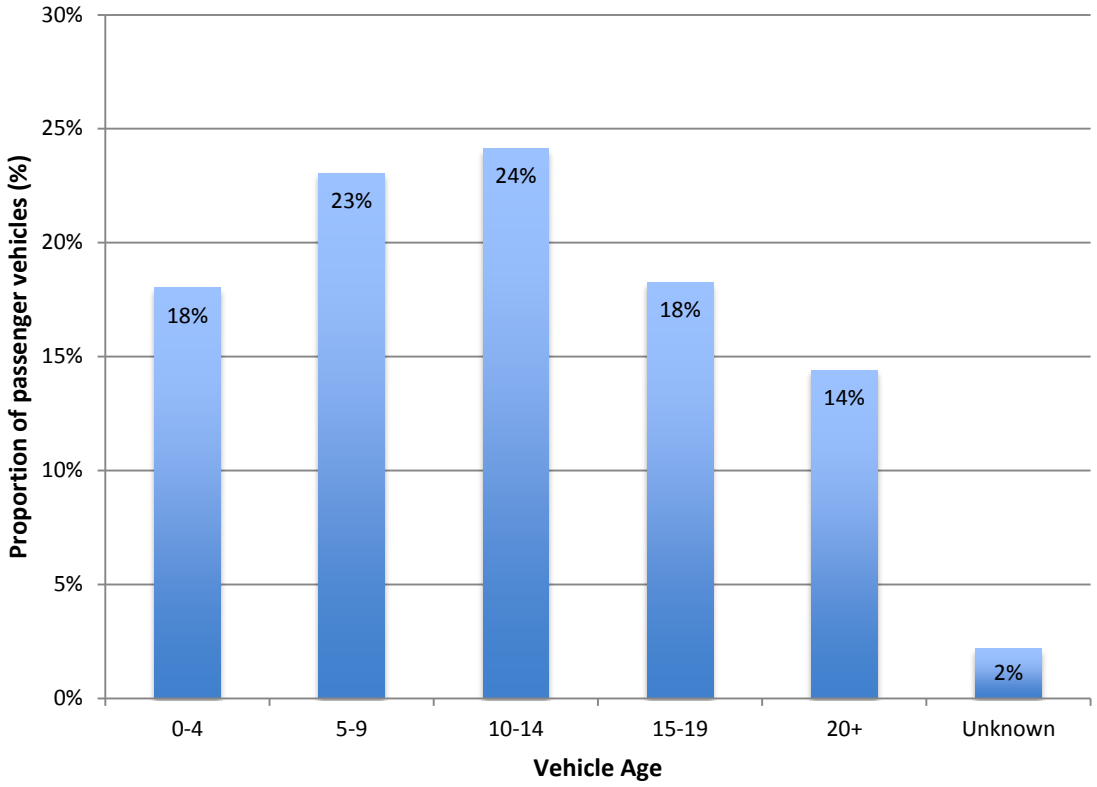
Table 20 shows the number of crash-involved passenger vehicles in 2013 broken down by age of the vehicle. For all vehicle age groups, there were considerable reductions in the numbers of serious injury crashes compared with the 2010-2012 average, except that, for 0-4 year old vehicles, the reductions were not so significant which may be representative of the high usage of these newer vehicles. Figure 20 shows that the majority of passenger vehicles involved in serious casualty crashes were aged between five and 14 years old.

Table 20: Vehicle age and number of passenger vehicles involved in serious injury and fatal crashes, South Australia, 2010-2013[17]

Vehicle Age (years)	2010-2012 Average		2010		2011		2012		2013	
	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal	Serious	Fatal
0-4	138	17	158	17	143	18	112	16	134	16
5-9	193	22	230	22	215	20	135	24	168	24
10-14	208	24	244	25	215	26	166	20	175	26
15-19	165	22	191	33	161	13	143	20	133	19
20+	122	17	167	26	108	13	90	13	106	14
Unknown	49	3	43	3	61	3	42	2	15	3
Total	875	105	1033	126	903	93	688	95	731	102

[17] Excludes motorcycles, scooters, buses and heavy vehicles.

Figure 20: Age and percentage of passenger vehicles involved in serious casualty crashes, South Australia, 2013



New vehicle safety features

Table 21 shows that the percentage of new vehicles sold that had 5-star ANCAP ratings rose from 40.9% in 2010 to 66.5% in 2013. This is depicted graphically in Figure 21, where it can be seen that as the proportion of 5-star new vehicles rose from 2010 to 2013, the proportion of vehicles rated as 3-stars or fewer has dropped considerably over the same period.

Table 21: Percentage of new vehicles sold with a 5-star rating, South Australia, 2010-2013[18]

New Vehicles sold	2010	2011	2012	2013
5-star	40.9%	49.4%	60.2%	66.5%
Total number of new vehicles	64,257	60,821	65,636	68,012

[18] POLK, *ANCAP reports*, 2010-2013; Sales and safety figures from POLK, *Vehicle Safety Reports 2010-2013.*

Figure 21: Annual changes in new vehicle star ratings 2010-2013 for new vehicles sold in South Australia with a known ANCAP star rating[19]

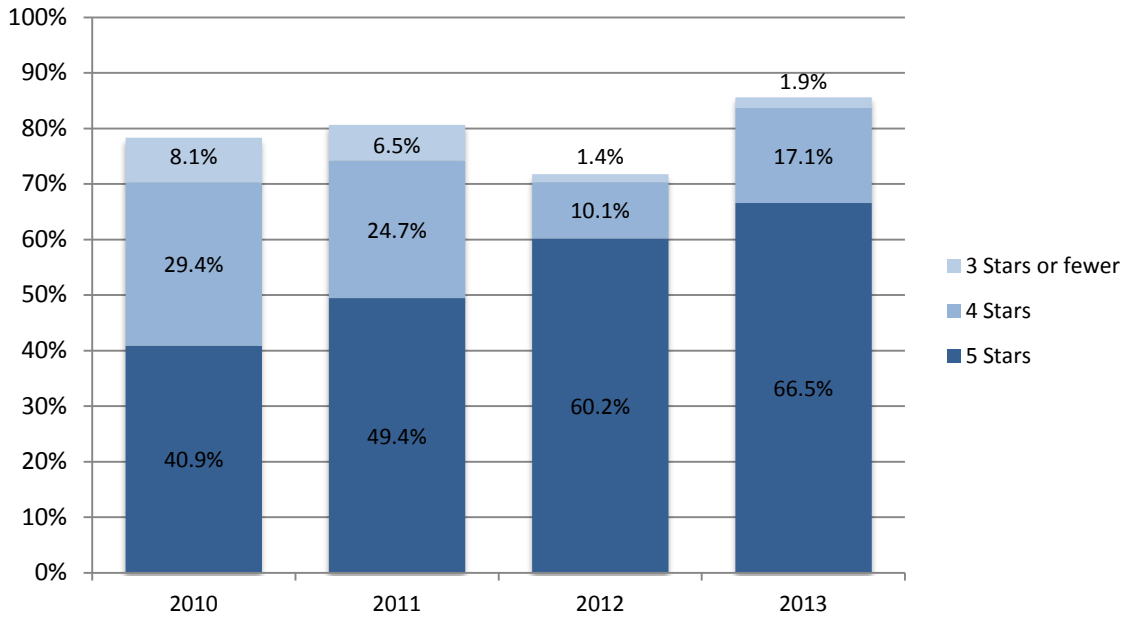


Table 22 shows that there were substantial increases between 2010 and 2013 in the percentage of new vehicles sold equipped with electronic stability control, front side curtain airbags and/or emergency brake assist as standard features.

Table 22: Percentage of new vehicles sold in South Australia with specified safety features as standard, 2010-2013 Error! Bookmark not defined.

Safety Feature	2010	2011	2012	2013
Electronic stability control	66%	77%	89%	93%
Front side curtain airbags	54%	68%	83%	83%
Emergency brake assist	69%	75%	84%	84%
Rear side curtain airbags	52%	65%	81%	81%
Centre 2nd row lap/sash belt	75%	76%	82%	82%

[19] POLK, *ANCAP reports*, 2010-2013; Sales and safety figures from POLK, *Vehicle Safety Reports 2010-2013.*

Useful links

Towards Zero Together - South Australia's Road Safety Strategy:

https://towardszerotogether.sa.gov.au

Centre for Automotive Safety Research (CASR):

www.casr.adelaide.edu.au

Enquiries

For further information about data in this report, contact:

Safer People section, Road Safety, Registration and Licensing Directorate

Department of Planning, Transport and Infrastructure

GPO Box 1533

Adelaide SA 5001

Email: dpti.enquiries@sa.gov.au

Internet: www.dpti.sa.gov.au