

ALCOHOL AND DRUGS IN ROAD CRASHES IN SOUTH AUSTRALIA

OVERVIEW

During 2012 – 2016, on average 12 drivers and motorcycle riders killed per year had an illegal BAC. The incidence of driver and rider fatalities with an illegal BAC has seen a shift in the last decade. From 2007-2011, 31% of driver and rider fatalities had an illegal BAC, this has decreased to 22% for 2012-2016.

In contrast, drug involvement amongst driver and motorcycle rider fatalities has remained fairly steady over the last decade. On average 13 drivers and riders killed tested positive each year. This equates to 24% of drivers/riders killed.

Overall, 37% of drivers and motorcycles riders killed test positive to either drugs or alcohol or a combination of both for the 5 year period 2012-2016. This means over a third of vehicle operators killed each year are driving with an illegal BAC and/or drugs in their system.

In South Australia, the prescribed limit for blood alcohol concentration (BAC) while driving is 0.05mg/l. Some licences however are subject to a zero BAC. The presence of cannabis, speed, ice, crystal meth or ecstasy detected in a driver also constitutes as an offence.

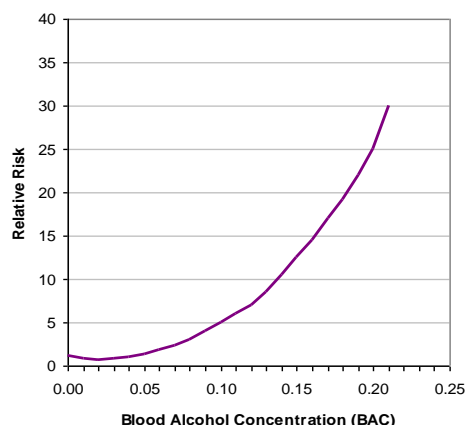
Note: Not all fatal and serious crash drivers are tested for blood alcohol content and presence of drugs, and therefore this fact sheet includes only those who were tested and whose results are known. Therefore, some crashes where alcohol or drug involvement was unknown, may have been alcohol or drug-related. Hence, the terminology 'at least' may be used to describe the proportion of crashes that involve drink and drug driving.

2016 data is preliminary and subject to change

Risk of drink driving

Alcohol impairs skill and decision making and increases confidence and aggression. It can also lead to an increase in other risk-taking behaviour. Studies have shown that every increase of 0.05 above zero in BAC level doubles the risk of being involved in a casualty crash. The higher the blood alcohol level, the more rapidly that risk increases as shown in Figure 1.

Figure 1 – Relative risk of involvement in a casualty crash by driver’s BAC¹



Risk of drug driving

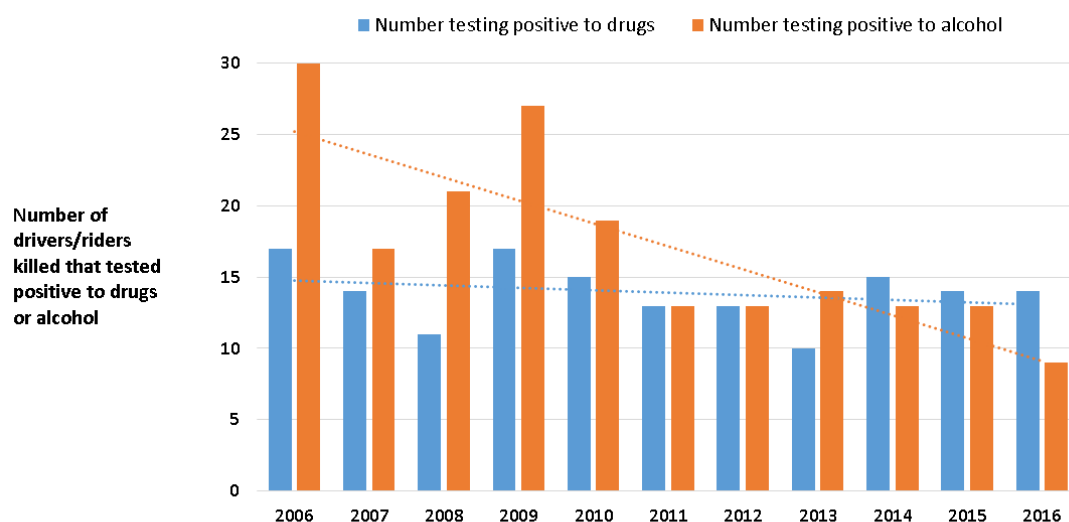
Driving with THC (cannabis), methyl amphetamine (speed, ice or crystal meth) or MDMA (ecstasy) present in saliva or blood has been shown to have the potential to increase the risk of road crashes. Many drivers remain unaware of the effects that these types of drugs can have on their driving ability – including impaired coordination, muscle weakness, impaired reaction time, poor vision, an inability to judge distance and speed and distortions of time, place and space.

¹ AJ McLean & OT Holubowycz, 'Alcohol and the risk of accident involvement;', in L Goldberg(ed.), *Proc. Eighth International Conference on Alcohol, Drugs and Traffic Safety*, Almgvist & Wilksell International, Stockholm, 1981, vol.1, pp.113-123

Drivers and Riders

Figure 2 shows that compared to alcohol-related road fatalities, the number of drivers/riders killed testing positive to drugs is marginally decreasing. Since 2006 the number of drivers and riders killed that have tested positive to an illegal BAC has decreased by an average of **8.9%** per year. The number testing positive to drugs has reduced by only **1.1%**. Each year since 2014 the number of drivers/riders killed testing positive to drugs has overtaken the number of driver/riders killed with an illegal BAC.

Figure 2: Number of drivers and riders killed with an illegal BAC or drugs, South Australia, 2006-2016



Between 2012 and 2016, of the drivers and riders seriously injured and tested at least 14% had an illegal BAC. Table 1 shows the number of fatalities and serious injuries of drivers and riders with a BAC above .05.

Table 1: Fatalities and serious injuries of driver/riders with illegal BAC, South Australia, 2012-2016²

Year	Fatal	Serious Injury
2012	13	49
2013	14	38
2014	13	41
2015	13	51
2016	9	35 (Jan to Oct only)
Avg	12	43

72% of drivers and riders killed and 45% seriously injured with an illegal BAC during 2012 - 2016 were *three or more times* the legal limit.

² Please note that 2016 serious injury data is preliminary only and includes crash data results from 1 January 1 to 31 October 2016.

Between 2012 and 2016, 24% of the drivers and riders killed tested positive to THC, Methamphetamine, MDMA, or a combination of these, as shown in Table 2 below.

Table 2: Drivers and riders killed and the percent of those testing positive to THC, Meth or MDMA, South Australia, 2012-2016

Year	Driver and rider fatalities	Driver and rider fatalities tested	Tested positive to drugs	Percent tested positive
2012	65	59	13	22%
2013	60	56	10	18%
2014	63	61	15	25%
2015	64	58	14	24%
2016	49	47	14	30%
Avg	60	56	13	24%

Of the drivers and riders killed, 2012-16 37% had either tested positive to drugs listed above, or had an illegal alcohol level or had a combination of both.

Gender

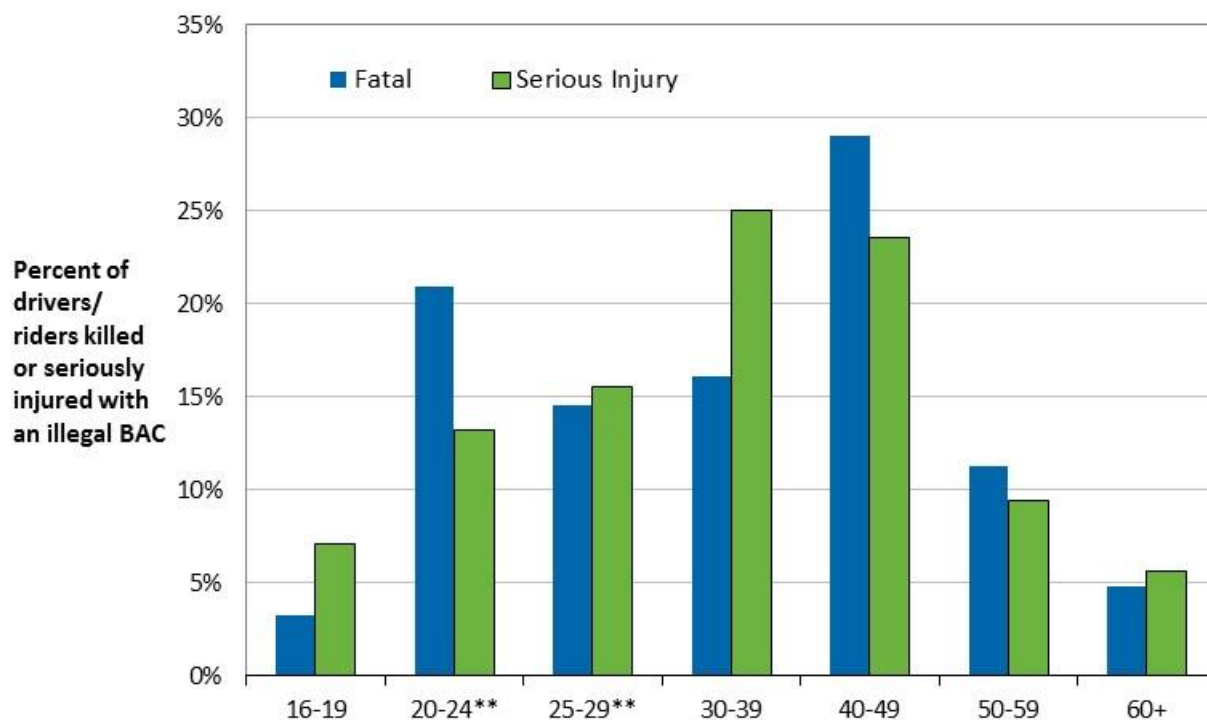
Of the drivers and riders killed, between 2012 and 2016, with a BAC over the legal limit, 88% were male, this is compared to 76% of all driver and rider fatalities for the same period being male. Of the seriously injured drivers and riders over the legal limit for the 2012-2016 period, 84% were male, again this is higher than the 68% of all driver and riders seriously injured being male. Of the drivers and riders killed that tested positive to drugs, between 2012 and 2016, 82% were male.

Age

The 20-29 year old age group (20-24 and 25-29 years combined in Figure 3) represents the largest percentage of the population of drivers and riders with an illegal BAC sustaining serious injuries 29%, and fatal injuries 35% (Figure 3).

The 20-29 year old age group also represents the largest percentage of the population of driver and riders killed that tested positive for drugs 38%, followed by the 30-39 year old age group with 26%.

Figure 3: Percentage of drivers/riders with a BAC above .05 killed or seriously injured by age group, South Australia, 2012- 2016



Crash Types

Fatal and serious injury crashes where the driver or rider had an illegal BAC are most likely to be hit fixed object crashes at 62%, indicating a lack of control of the vehicle under the influence of alcohol. This compares to 29% of all fatal and serious injury crashes generally. The next most frequent crash type is a rollover (21%) this is comparable with rollover serious casualty crashes generally representing 15%.

Fatal crashes where the driver or rider had tested positive for drugs were again hit fixed object crashes 52%. The next most frequent crash type was head on crashes (15%).

Seatbelts and Helmets

Driving with an illegal BAC is already a risk taking behaviour, combine this with failure to wear a seatbelt or helmet and the risk of serious injury and death increases. During the five years, 2012 – 2016, of the drivers killed that had a BAC of .05 or above 61% were not wearing their seatbelt and 25% of riders were not wearing a helmet. This compares to 19% of drivers killed that had a legal or nil BAC not wearing a seatbelt, and all riders with a legal or nil BAC were wearing a helmet.

Of the drivers killed between 2012- 2016 that tested positive for drugs, 41% of these were not wearing their seatbelt at the time of the crash and one rider who tested positive was not wearing a helmet.

Area and Speed Limit

Of the drivers and riders killed or seriously injured with an illegal BAC, 59% of crashes occurred in rural South Australia. This compares to 43% all fatal and serious injury crashes occurring in the rural areas. Table 2 shows the breakdown of crashes by speed limit and area.

Table 2: Speed limit and area of drivers and riders killed or seriously injured with a BAC .05 or above, South Australia, 2012-2016

Speed Limit	Greater Adelaide	Rural
50km/h and under	33%	15%
60km/h	41%	2%
70-90km/h	16%	12%
100km/h and over	10%	70%
Total	100%	100%

80% of drivers and riders killed or seriously injured with an illegal BAC that crashed in rural areas lived in a rural area outside of the Greater Adelaide area.

Of the drivers and riders killed that tested positive for drugs, 73% occurred in rural South Australia.

The majority (79%) of the drug drivers and riders killed in rural areas lived in rural areas.

Rural roads and the rural area is any area outside of the Greater Adelaide area and can include open rural roads and roads within rural cities and towns.

Month and Day of the Week

May had the lowest occurrence of drink drive fatality and serious injuries while March had the highest proportion (11%). As expected the majority of drink driving serious casualty crashes take place Friday through to Sunday – 56% occur on these days. This compares with 47% of fatal and serious injury crashes generally occurring on a Friday through to Sunday.

February had the lowest number of drug driving fatalities with only 3% for the year occurring in February compared to January, April and May being the most common months for a drug related road crash fatality to occur (collectively 36% of drug related fatalities occurred in these 3 months). The most common day for drug driving fatalities occurred on Sunday, 26%.

Time of the Day

Predictably the majority of drink driving crashes occur between the hours of 6pm and 6am (80%), compared to 34% of fatal and serious injury crashes generally.

The majority (56%) of drug driving crashes where a driver/rider is killed were also between the hours of 6pm and 6 am.

Pedestrians Affected by Alcohol and/or Other Drugs

The presence of alcohol or drugs in a pedestrian's system can also impair their ability to safely negotiate roads and traffic. Of the pedestrian fatalities that were tested between 2012 and 2016, 18% were found to have a blood alcohol content of more than 0.05. Of the pedestrians over the limit 70% of them had a BAC of 0.15 or over, indicating that a high level of alcohol in a pedestrian's system increases the risk of being involved in a fatal crash. Of the pedestrians killed and tested for drugs, 11% tested positive to THC, MDMA, methamphetamine or a combination of these drugs.

Definitions of police reported casualty types:

Casualty Crash - A crash where at least one fatality, serious injury or minor injury occurs.

Casualty – A fatality, serious injury or minor injury.

Fatal Crash - A crash for which there is at least one fatality.

Fatality - A person who dies within 30 days of a crash as a result of injuries sustained in that crash.

Serious 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.

Minor Injury Crash - A crash for at least one person sustains injury but no person is admitted to hospital or dies within 30 days of the crash.

Minor Injury – A person who sustains injuries requiring medical treatment, either by a doctor or in a hospital, as a result of a road crash and who does not die as a result of those injuries with 30 days of the crash.

Property Damage Only Crash – A crash resulting in property damage in excess of the prescribed amount in which no person is injured or dies within 30 days of the crash.

Data sources

The data presented in this reports was obtained from the Department of Planning, Transport and Infrastructure Road Crash Database. The information was compiled from police reported road casualty crashes only.

Enquiries

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