

Alcohol consumption and related harm in South Australia 2018

Summary of available data

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Acknowledgements

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Executive Summary¹

Alcohol consumption – frequency and quantity²

- In 2017, 81% of South Australians aged 15 years and over had consumed alcohol at least once in the previous 12 months and 19% were abstainers.
- Almost half (46%) reported drinking at least weekly; this has remained stable over time. Daily drinkers comprised 7.5% of South Australians in 2017; identical to 2016.
- A significantly higher proportion of males reported consuming alcohol (85% vs. 77% of females). This difference in consumption was more striking for those drinking daily (10% vs. 5.1%) and at least weekly (54% vs. 38%).
- Men consistently drink alcohol more often than women, although daily drinking among men decreased significantly from 12% in 2011 to 9.6% in 2016, remaining stable in 2017.
- The frequency of alcohol consumption was highest among those aged 40-49 years and 50-59 years, with 56% and 52%, respectively, drinking at least weekly. Daily drinking was highest among those aged 60 years and over (14%).
- For 78% of South Australians in 2017, quantities of alcohol usually consumed in a session fell within the national guidelines for consumption at levels that would not put them at risk of injury from a single drinking occasion (four drinks or less).
- A significantly higher proportion of women reported usually drinking this amount (86% vs. 72%). In contrast, the proportion of men who reported usually drinking five drinks or more was twice that of females (28% vs. 14%).
- The proportion of South Australians who reported usually drinking four drinks or less generally increased with age, with the youngest group (15-19 years) least likely to drink this amount in a session (66%) and those aged 60 years and over most likely (91%).
- For 53% of South Australians in 2017, quantities of alcohol consumed over the last 12 months fell within the national guidelines for consumption at levels that would not put them at risk of injury or disease over a lifetime (two drinks or less on average).
- Alcohol consumption was significantly lower among those aged 12-17 years: in 2016, 78% had never consumed alcohol (vs. 11% of those aged 18 years and over).
- There was a significant decrease between 2011 and 2014 in the proportion of students (12-17 years) who had ever consumed alcohol (78% to 68%) and had consumed in the previous week (15% to 10%). There were no differences between men and women in either 2011 or 2014 but there were significant decreases in consumption within each group over time.
- Alcohol consumption among Aboriginal South Australians was measured in 2012-13 and found that 68% of women and 77% of men had consumed alcohol at least once in the previous 12 months (71% of persons).

¹ Due to changes in the weighting that was applied to the initial dataset, some data in this report from the 2012 Health Omnibus Survey vary slightly from those published elsewhere: <http://www.dassa.sa.gov.au/webdata/resources/files/StatBullNo5HOS12Apr2013.pdf>

² Unless stated otherwise, data are from the 2017 South Australian Health Omnibus Survey.

Alcohol consumption – risky drinking³

Single occasion risk

- Single occasion risk is defined as the consumption of five or more standard drinks on at least one occasion in the previous 12 months.
- In 2017, 43% of South Australians consumed alcohol at least once in the previous 12 months at levels that increased their risk of injury from a single drinking occasion, unchanged from 2011 or 2016. There were 25% that consumed alcohol at these levels at least monthly, which was also unchanged from 2011 or 2016.
- There was no change over time among men and women in the proportion who reported drinking at levels that increased their risk of injury on a single occasion at least yearly or at least monthly between 2011 and 2017.
- There was a significant change between 2011 and 2016 in the proportion of men drinking at these levels at least weekly from 22% to 16%, which remained stable in 2017.
- From 2011-2017, the age group with the highest proportion drinking at risky levels at least monthly was aged 20-29 years (ranging from 38% to 48%).
- There were significant decreases between 2011 and 2017 in the proportion of 15-19 (29% to 15%) and 30-39 (32% to 26%) year olds drinking at these levels at least monthly, and a decrease between 2012 and 2017 among 20-29 year olds (48% to 38%).
- There were also significant decreases between 2011 and 2017 in the proportion of 15-19 year olds drinking at these levels at least weekly (13% to 5.3%).
- In 2014-15, 34% of Aboriginal South Australian men drank at levels that put them at risk of injury from a single occasion of drinking at least once in the last 12 months; this was lower among women (16%), and has decreased significantly since 2008.
- Single occasion risky drinking is higher among Aboriginal South Australians: in 2011-13, 52% reported drinking at these levels, compared with 43% of non-Aboriginal South Australians.

Lifetime risk

- Lifetime risk is defined as, on average, the consumption of three or more standard drinks per day over the previous 12 months.
- In 2017, 16% of South Australians aged 15 years and over drank at levels that put them at risk of injury or disease over a lifetime. There was a significant decrease between 2011 (19%) and 2017, as well as among men, from 29% in 2011 to 24% in 2017.
- From 2014 to 2017, the highest proportion drinking at these levels were aged 40-49 years (22% in 2017) and 50-59 years (20% in 2017).
- There were significant decreases in lifetime risk between 2011 and 2017 for those aged 15-19 (15% to 3.7%), 20-29 (24% to 14%), and 30-39 (21% to 14%) years.
- In 2014-15, 16% of Aboriginal South Australian men reported drinking at levels that put them at risk of injury or disease over a lifetime. This was higher than among women (5.2%), and has decreased significantly since 2008.

³ Unless stated otherwise, data are from the 2017 South Australian Health Omnibus Survey.

- Lifetime risky drinking is higher among Aboriginal South Australians: in 2011-13, 20% reported drinking at these levels, compared with 17% of non-Aboriginal South Australians.

Alcohol consumption – drinking behaviour and attitudes

- In 2016, the average age of initiation for alcohol consumption among South Australian recent and ex-drinkers aged 14-24 years was 15.9 years. This was similar to 2013 (15.5 years); the average age was 16.1 years among men and 15.7 among women.
- In 2016, 36% of South Australians reported that bottled wine was the alcoholic drink consumed most often, followed by regular strength beer (18%) and bottled spirits and liqueurs (15%). Men preferred regular strength beer (32% vs. 4.1%) whereas women preferred bottled wine (52% vs. 21%) and premixed drinks (12% vs. 5.1%).
- In 2016, underage drinkers (12-17 years) usually drank premixed spirits in a bottle or can (46%), cider (20%) and bottled spirits and liqueurs (13%).
- In 2016, 39% of South Australians aged 14 years and over had their first alcoholic drink supplied by a friend or acquaintance, followed by a parent (22%). Almost 12% purchased it themselves. The most common source of supply of alcohol was purchasing it themselves (84%).
- In 2016, South Australians aged 12-17 years were more likely to obtain alcohol from friends or acquaintances than those over the age of 18 (49% vs. 2.4%) and none reported buying it themselves (vs. 88% of those aged 18 years and over). Almost one-quarter (24%) of underage drinkers 'usually' obtained alcohol from their parents; this is much lower than in 2013 (37%).

Alcohol-related harms

- In 2016, 23% of South Australians had been the victim of an alcohol-related incident, predominantly verbal abuse (19%). This was a significant decrease from 2013 (26%).
- Physical abuse was involved in 6.9% of incidents and 11% where respondents were put in fear. The majority of both men and women reported that the perpetrator was a stranger or an acquaintance.
- In 2016, South Australians aged 20-29 years had the largest proportion that had been victims of at least one alcohol-related incident (36%), followed by 14-19 years (29%).
- Drink-driving offences as a proportion of drivers tested decreased between 2006-07 (1.6%) and 2015-16 (1.1%).
- From 2001 to 2016 the proportion of road fatality cases with an illegal BAC fluctuated, but has declined since 2009 (from 37% to 19%). The proportion of serious injury cases with an illegal BAC also declined between 2009 (20%) and 2016 (12%).
- In South Australia, treatment episodes where alcohol was the principal drug of concern made up the majority of episodes between 2006-07 and 2014-15, although the proportion decreased between 2011-12 (50%) and 2014-15 (32%). In 2016-17, alcohol was the second most common principal drug of concern, making up 27% of treatment episodes.
- The proportion of treatment episodes among Aboriginal South Australians where alcohol was the principal drug of concern decreased from 49% in 2006-07 to 35% in 2015-16.
- Alcohol overdoses made up 1% of all SA Ambulance Service transports. Among all overdoses, 49% were related to alcohol.

- The number of estimated hospitalisations attributable to the use of alcohol has increased over the 10 years of data collection; from 11899 in 2007-08 to 13893 in 2016-17, the rate has also increased slightly, from 74.2 to 81.1 persons per 10,000 population.
- The pattern of hospitalisations was the same for both men and women, but rates were 1-6-1.7 times higher among males across the 10 years of data collection.
- Hospitalisations among Aboriginal South Australians decreased overall between 2007-08 and 2014-15, and then increased during the last two years of data collection, although not to levels seen in 2007-08. The rate attributable to the use of alcohol was 3-4 times higher than the overall South Australian population, and hospitalisations were more likely to be for acute conditions (81% vs. 59% of all hospitalisations in 2016-17).
- The estimated number and rate of metropolitan emergency department injury presentations attributable to the use of alcohol for persons aged 15 years and over decreased between 2007-08 and 2016-17 (the overall number from 16,416 to 16,007 presentations and the rate from 169.6 to 155.1 per 10,000 persons).
- There has been a small decrease over time in the estimated rate of alcohol-related deaths, from 3.4 per 10,000 population in 2005 to 3.1 in 2011. Men comprised 68% of all alcohol-related deaths from 2005-2011, and alcohol-related mortality rates among men were more than double that of women.
- The alcohol-related mortality rate among Aboriginal South Australians was almost double that of other South Australians in 2005 and from 2008-2011, primarily due to the much higher number of deaths among men. However, there has also been a small decrease over time in the estimated rate of alcohol-related deaths, from 6.7 per 10,000 population in 2005 to 4.7 in 2011.

Introduction

Alcohol consumption is entrenched in the Australian social landscape. While drinking in moderation can be part of enjoyable moments spent with family and friends, the social costs associated with intoxication and risky drinking are substantial. There is increasing recognition of the burden of alcohol consumption in terms of health and social issues, with the economic costs of alcohol abuse in Australia estimated to be in excess of \$15 billion⁴.

Excessive alcohol consumption can be associated with a range of short and long-term harms that may require hospitalisation for a number of conditions including injuries and cancer. Additionally, alcohol intoxication can contribute to the incidence of domestic violence, public violence, sexual assault, motor vehicle fatalities and injuries and other crimes⁵⁻⁶. These issues take a considerable toll on the lives of those affected and put a substantial strain on health and welfare services, including hospitals and police.

The South Australian Government is committed to addressing the range of harms associated with excessive alcohol use. The South Australian Alcohol and Other Drug Strategy 2011-2016 has as one of its primary objectives the reduction of the rate of alcohol-related harm. This strategy complements a number of other key policy documents⁷.

The aim of this document is to bring together the most recent data relating to alcohol consumption and misuse. These data can be used to inform decisions about the development of meaningful alcohol policy and alcohol programs and interventions. In addition, tracking trends will inform the impact of alcohol policy and alcohol related interventions.

Data Sources

This report draws on two major sources of data:

1. Population surveys.
2. Administrative data sets.

Each data source is summarised below. Appendix 1 provides more detailed information on the data sources used with their relative strengths and weaknesses.

Population surveys

These surveys gather information directly from respondents on patterns of alcohol consumption and associated harms, behaviours and attitudes. Data are typically derived from a large, representative sample of the Australian population, and are weighted to accurately reflect demographic characteristics.

4 Collins, D J and Lapsley H M (2008) The Costs of Tobacco, Alcohol and Illicit Drug Abuse to Australian Society in 2004/05.

5 Morgan, A. and A. McAtamney, Research in practice: Key issues in alcohol-related violence, Australian Institute of Criminology, Editor. 2009.

6 South Australia Police, Alcohol and Crime. 2010.

7 For example; The National Drug Strategy, COAG National Partnership Agreement on Preventive Health, COAG National Partnership in Closing the Gap in Indigenous Health Outcomes.

There is variation in the methodologies used for these surveys, and differences fall into four broad categories: method of administration; frequency of collection; age of respondents and measurement of alcohol consumption patterns. In addition, some comparisons by age, sex and Indigenous status are limited to national data due to small sample sizes. Although two national surveys focus exclusively on Aboriginal and/or Torres Strait Islander Australians⁸, data are only collected every six years. Each survey used in this report is listed below:

- *National Drug Strategy Household Survey (NDSHS)*: triennial survey on drug use patterns, attitudes and behaviours among respondents aged 12 years and over.
- *Health Omnibus Survey (HOS)*⁹: annual survey of South Australians aged 15 years and over that examines attitudes about health and wellbeing, including alcohol consumption.
- *Australian Secondary Students Alcohol and Drug Survey (ASSADS)*: triennial survey on the use of licit and illicit substances among school students aged 12-17 years.
- *Australian Health Survey (AHS)*; formerly the *National Health Survey (NHS)*: triennial survey of health status, health related behaviours and use of health services among respondents aged 15 years and over, including alcohol consumption.
- *National Aboriginal & Torres Strait Islander Health Survey (NATSIHS; now the Australian Aboriginal & Torres Strait Islander Health Survey or AATSIHS, conducted as part of the AHS) and National Aboriginal & Torres Strait Islander Social Survey (NATSISS)*: surveys conducted every six years among a large and representative sample of Aboriginal Australians aged 15 years and over, and include data on alcohol consumption.

Administrative data sets

A number of data sets have been used as indirect measures of the harms associated with alcohol consumption. The alcohol-related data collected varies widely. Each source is summarised below (see Appendix 1 for more details).

- *Mortality and Morbidity data*: using hospitalisations, emergency department (ED) presentations and death data, and applying population alcohol-aetiological fractions (PAAFs) specific to South Australia to produce alcohol-attributable morbidity and mortality rates.
- *South Australian Ambulance Service (SAAS)*: total number of incidents attended and the number of patients identified as being affected by alcohol.
- *Alcohol-Related Offences*: number of alcohol-related offences at licensed premises recorded by SAPol; number of drink driving related offences recorded on expiation notices and apprehension reports by the South Australian Police (SAPol).
- *Road Crash Data*: alcohol involvement in traffic casualties and fatalities.

⁸ In this document, Aboriginal includes people who identify as either Aboriginal, or Torres Strait Islander, or both. Note that Torres Strait Islander people make up a very small proportion of the South Australian population

⁹ Statistical tests include: The Pearson chi-squared statistic and linear regression. The Pearson chi-squared is corrected for the survey design with the second-order correction of Rao & Scott (1984: On chi-squared tests for multi-way contingency tables with cell proportions estimated from survey data. *Annals of Statistics* 12: 46-60) and is converted into an F statistic. Statistical significance was accepted at $p < 0.05$. All figures presented in this report are rounded to one decimal place. Two types of analyses are carried out on the risky drinking data: (1) Two-level ordinal variable: 'not risky at least monthly' and 'risky at least monthly' for single occasion risk, and 'no risk' 'risk' for lifetime risk; (2) Multi-level ordinal variables that include all levels of risk, including abstainers. Analyses on alcohol quantity and frequency are based on both multi-level ordinal variables: five for quantity and 11 for frequency, as well as more specific comparisons ('four drinks or less' vs 'five drinks or more' for quantity and 'abstainers' vs 'less than weekly' vs 'at least weekly' for frequency). For age and sex breakdowns, unless otherwise stated, comparisons are as stated above for the total sample.

- *Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS)*: use of publicly funded government and non-government alcohol treatment services by clients with alcohol as the principal drug of concern. The unit of measurement is a 'closed treatment episode'.

In some sections of this report that use data from population surveys, data from the HOS are discussed together with the NDSHS¹⁰, which primarily includes data from 2013 and 2016. While HOS data are not directly comparable with those from the NDSHS due to methodological differences, they can still be used to identify possible trends over time. Statistical significance testing was not carried out between the two surveys due to these differences; testing only occurred within each survey (see Appendix 1 for more details).

Alcohol Consumption – Frequency and Quantity

Alcohol consumption has remained stable over time, with Figure 1 showing the proportion of the South Australian population aged 15 years and over who reported drinking alcohol in the last 12 months between 2011 and 2017.

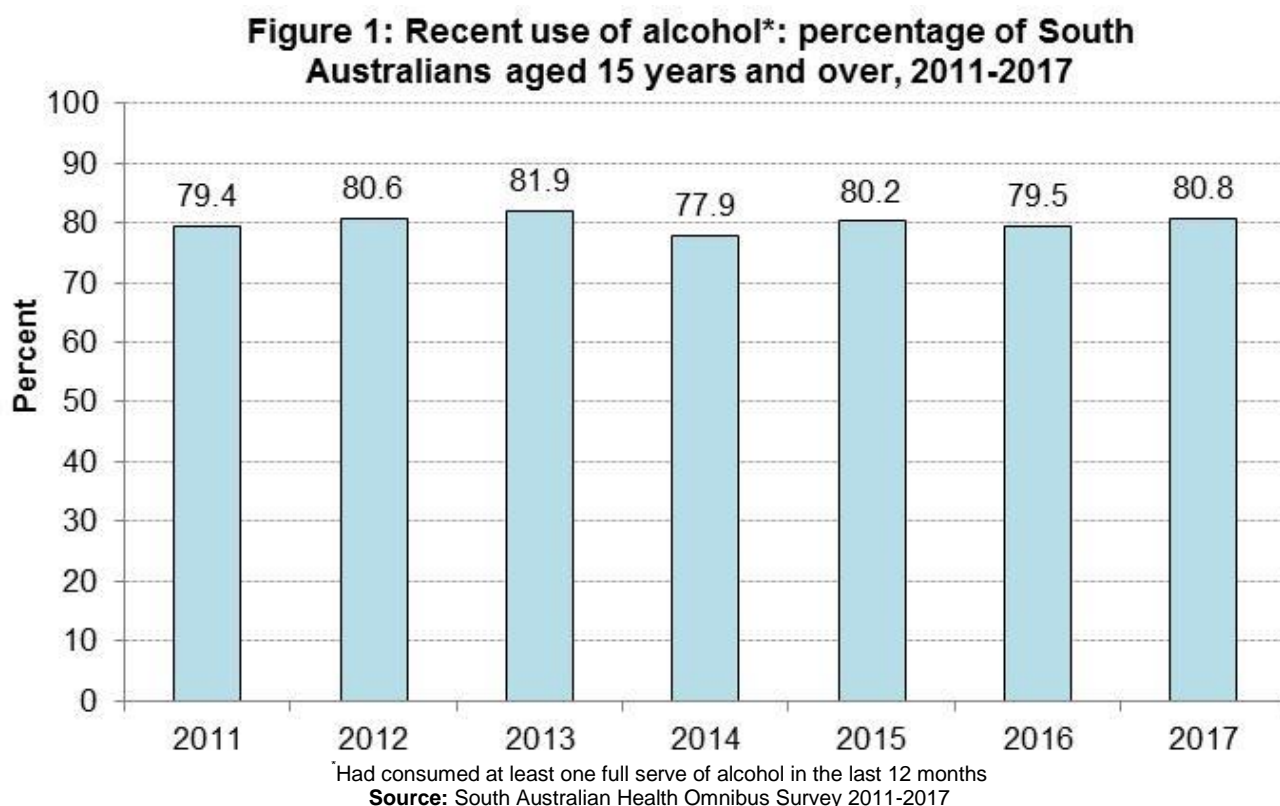
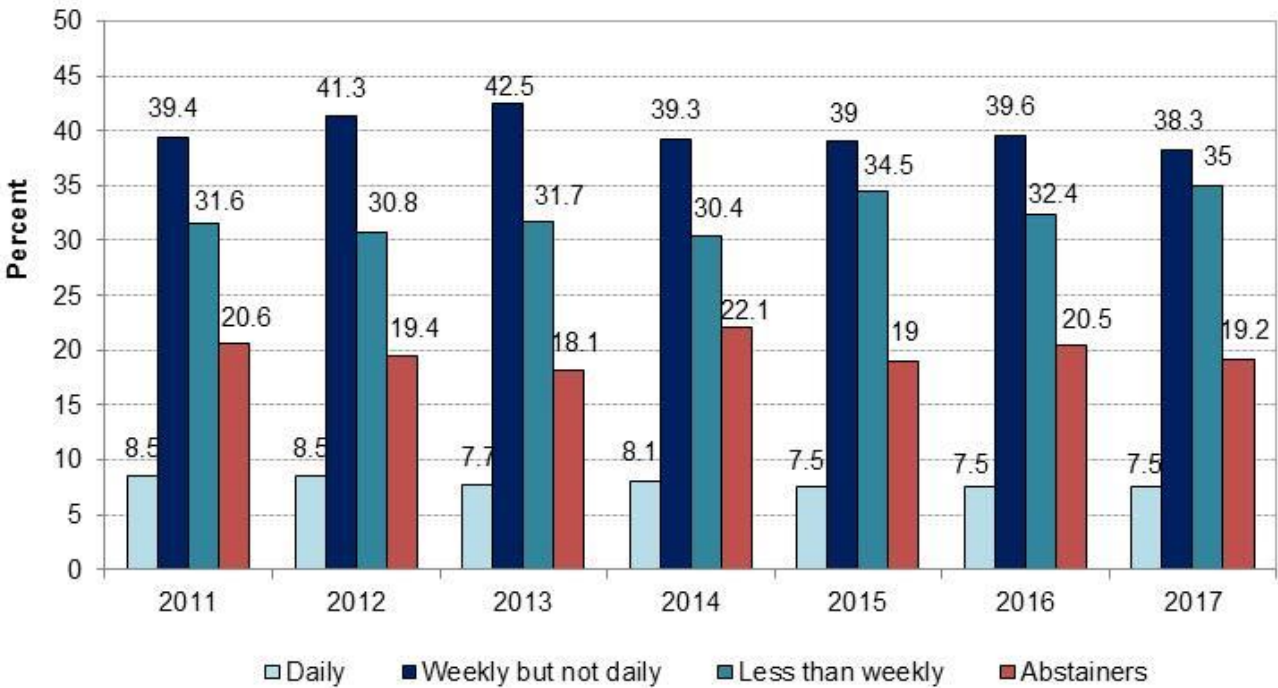


Figure 2 shows the frequency of alcohol consumption among South Australians. There was no change in the proportion of daily drinkers between 2011 (8.5%) and 2017 (7.5%). The proportion consuming alcohol at least weekly but not daily has also remained stable between 2011 (39.4%) and 2017 (38.3%). The proportion of abstainers has remained stable over time.

¹⁰ Australian Institute of Health and Welfare, Canberra, Australia: <http://www.aihw.gov.au/alcohol-and-other-drugs/ndshs/>

Nationally, there were decreases in drinking frequency between 2013 and 2016. The National Drug Strategy Household Survey (NDSHS)¹¹ reported significant decreases in the proportion of daily (6.5% to 5.9%) and weekly (37.3% to 35.8%) drinkers, with a significant increase in less than weekly drinkers (34.5% to 35.8%).

Figure 2: Alcohol consumption in the previous 12 months among South Australians aged 15 years and over, 2011-2017



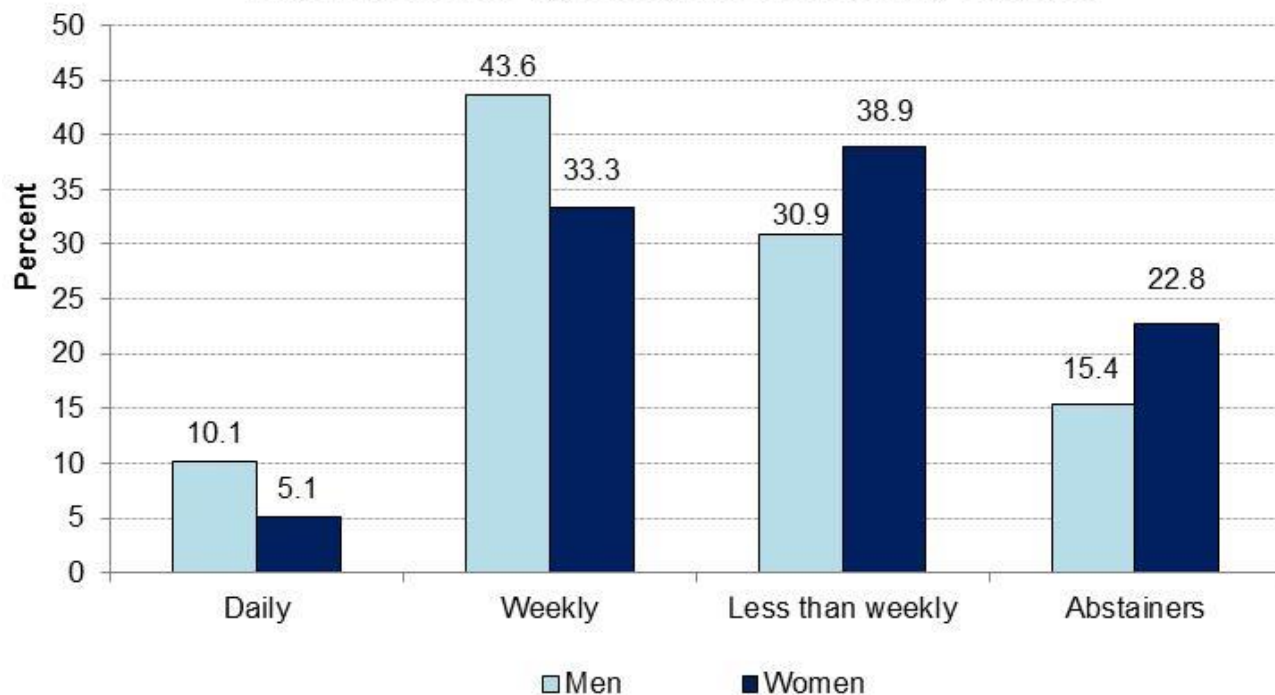
Source: South Australian Health Omnibus Survey 2011-2017

The 2017 HOS shows a significantly higher proportion of men (85%) than women (77%) reported alcohol consumption in the previous 12 months (Figure 3). Men were significantly more likely to consume alcohol at least once a week (54% compared with 38% of women), and almost twice as likely to drink daily (10% compared with 5.1% of women). The difference in drinking frequency between sexes was unchanged from previous years, and although daily drinking decreased significantly among men from 2011 (12%) to 2016 (9.6%), it remained stable in 2017.

Almost one-fifth (19.2%) of South Australians in 2017 were abstainers: 61% were women and 58% were 40 years and over, with a median age of 47 years. Although there was a significant decrease between 2011 and 2015 in the proportion of women who abstained (from 25% to 21%), suggesting increased consumption among women, this was not maintained in 2016 and 2017 (both 23%).

11 Note that 23 respondents in the 2016 NDSHS dataset were potentially identifiable and were removed from the Confidentialised Unit Record Files (CURF). Analysis presented here may not match AIHW published data (may result in a discrepancy of around 0.1%).

Figure 3: Alcohol consumption in the previous 12 months among South Australians aged 15 years and over, by sex, 2017



Source: South Australian Health Omnibus Survey 2017

Nationally, there was a significant decrease between 2013 and 2016 among men in the proportion of daily (8.5% to 7.6%) and weekly (43.2% to 40.8%) drinkers, with a significant increase in less than weekly drinkers reported in the NDSHS (29.4% to 31.5%). Alcohol consumption among women remained stable, with 4.2% drinking daily in 2016, 31% weekly and 39.9% less than weekly. A higher proportion of women were abstainers (16.1% compared with 12.9% of men).

Figure 4 shows the proportion of South Australians in the 2017 HOS who reported consuming alcohol by age group. At least weekly (that is, including daily) consumption was highest among those aged 40-49 and 50-59 years (55.3% and 52.2%, respectively), and lowest among those aged 15-19 years (10.5%).

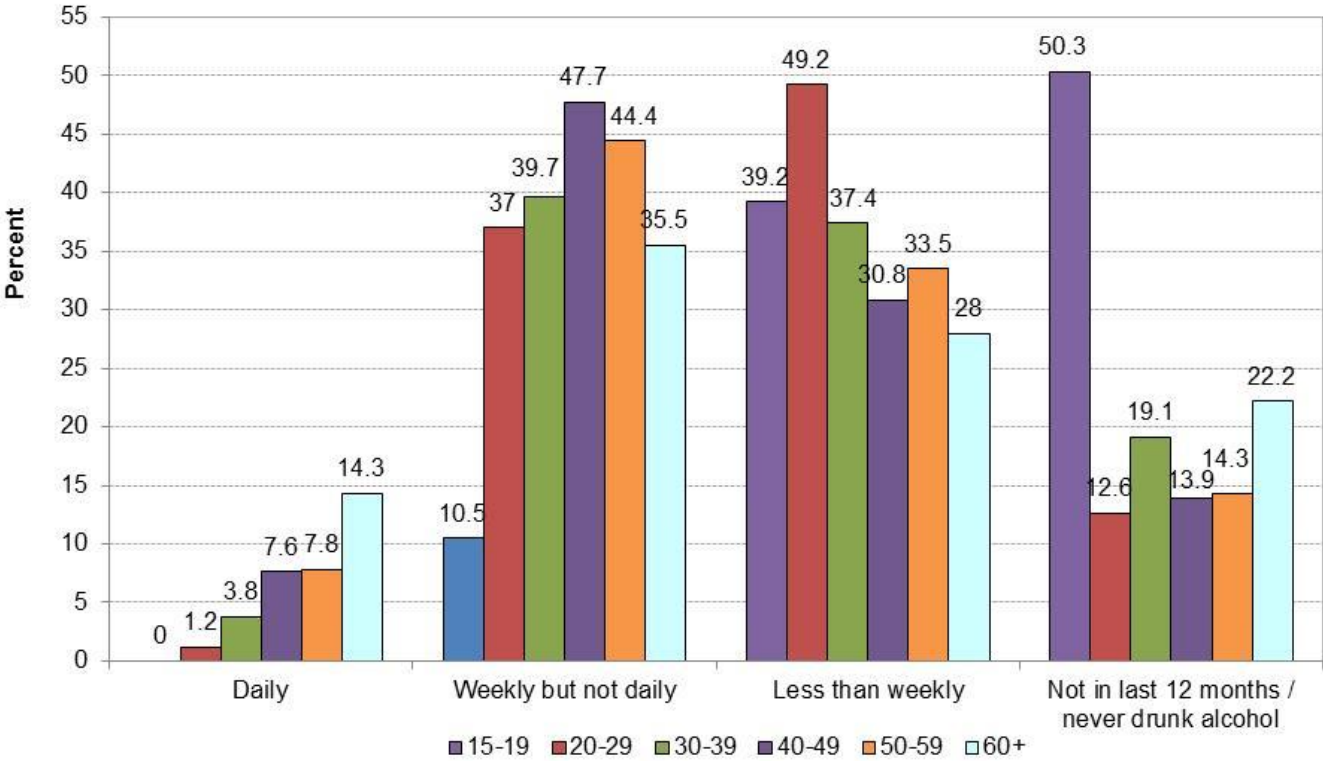
Between 2011 and 2017, there were significant changes in drinking frequency for those aged 15-19 years and 20-29 years. For the youngest age group, the proportion of abstainers increased from 38% to 50%. Conversely, the proportion decreased among those aged 20-29 years, from 17% to 13%. This translates to a significant decrease in at least weekly drinking among both age groups, from 21% to 11% among 15-19 year olds, and from 47% to 38% among 20-29 year olds, and increases in drinking less than weekly. In addition, there was a significant change in drinking frequency between 2016 and 2017 among those aged 15-19 years, with abstainers increasing from 34% to 50% (a 47 percent increase), and at least weekly drinking decreasing from 19% to 11%.

When comparing South Australians who had never consumed alcohol with those who had consumed in the last 12 months (that is, omitting ex-drinkers), there was a significant increase

between 2011 and 2017 in the proportion of 15-19 year olds who had never consumed alcohol (from 30% to 49%), and a significant decrease among those aged 60 years and over (from 13% to 9.1%). The increase among 15-19 year olds was also significant between 2016 (30%) and 2017.

Daily drinking in 2017 was highest among those aged 60 years and over (14.3%), stable from 2016. There was a significant decrease between 2011 and 2017 in daily drinking among those aged 50-59 years (from 13% in 2011 to 7.8% in 2017), and a significant increase between 2016 and 2017 among those aged 30-39 years (from 1.3% to 3.8%). No 15-19 year olds reported daily drinking in 2017.

Figure 4: Alcohol consumption in the previous 12 months among South Australians aged 15 years and over by age group, 2017



Source: South Australian Health Omnibus Survey 2017

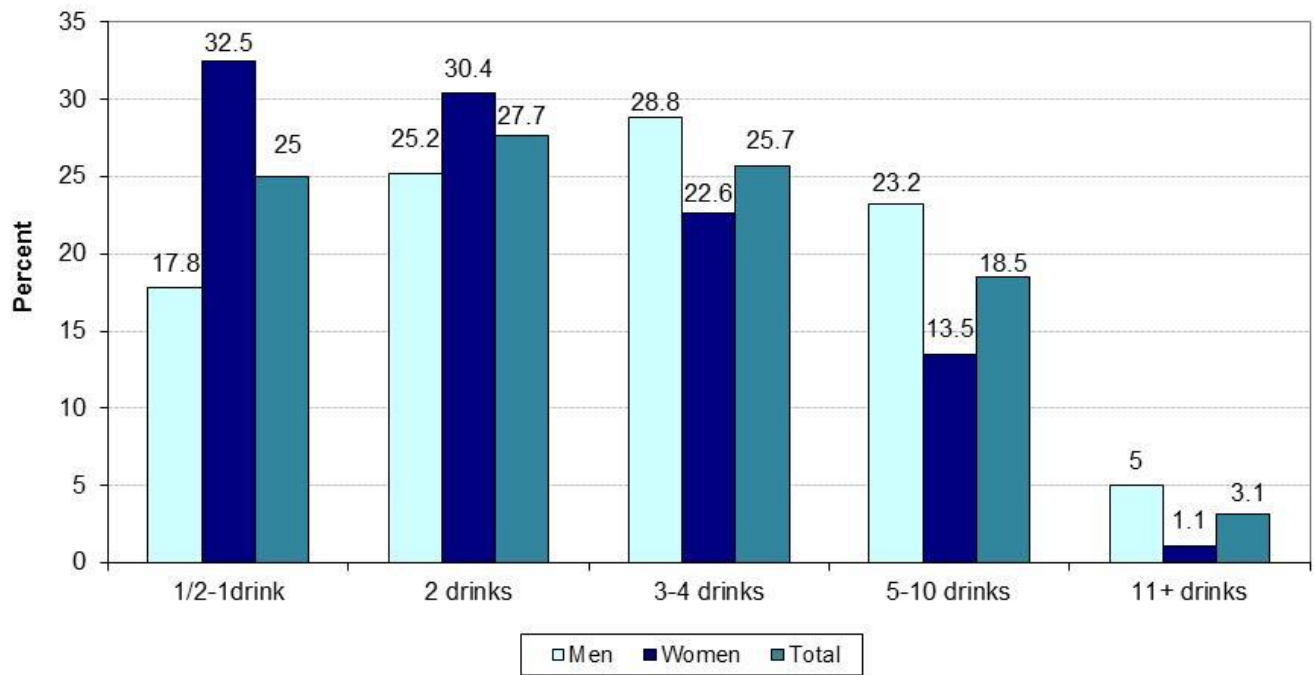
Figure 5 shows the ‘usual’ number of standard drinks consumed by those who had drunk alcohol in the previous 12 months in the 2017 HOS, for men and women. For over three-quarters of South Australians (78.4%), quantities of alcohol usually consumed in a session fell within the National Health and Medical Research Council (NH&MRC) Guidelines¹².

The majority of men and women reported usually drinking between a half and four standard drinks on a day when alcohol is consumed; significantly more women (85.5%) than men (71.8%) drank this amount. In contrast, the proportion of men who reported usually drinking 5-10 drinks on a drinking day was twice that of women (28.2% vs. 14.5%). Of those who drank,

12 For consumption at levels that would not put them at risk of injury from a single drinking occasion (less than five drinks; see following section on risky drinking).

the majority (91%) reported at least one alcohol-free day per week in the previous 12 months (88% of men and 93% of women). This is unchanged from previous years.

Figure 5: Number of standard drinks usually consumed on a day when drinking alcohol, by sex, South Australia, 2017



Source: South Australian Health Omnibus Survey 2017

The proportion of South Australians who usually consumed four drinks or less on a single drinking occasion (within the guidelines) generally increased with age (see Figure 4). Almost two-thirds (65.7%) of those aged 15-19 years consumed four drinks or less, followed by 61.7% of those aged 20-29 years, and 77.4% of those aged 30-39 years. This decreased to 75.4% of those aged 40-49 years, followed by 81% of those aged 50-59 years. Nearly all (90.9%) of those aged 60 years and over usually consumed four drinks or less on a single drinking occasion. There was a significant decrease between 2011 and 2017 in the proportion consuming five or more drinks among those aged 15-19 years, from 51% to 34%, and a significant increase among those aged 40-49 years, from 17% to 25%. There were no changes among other age groups.

Age of onset of drinking

The overall age of onset of drinking appears to be decreasing, with younger age groups reporting that they consumed their first full serve of alcohol at an earlier age than the older age groups: Among South Australians in the 2016 NDSHS, 28.3% of those aged 60 years and over had consumed a full serve of alcohol by the time they were 16 (mean age of onset 19 years) compared with 61.4% of those aged 20-29 years (mean age of onset 16 years)¹³.

13 These data are unpublished.

However, when only looking at **recent and ex-drinkers aged 14-24 years**, there was a significant increase in the average age of initiation between 2013 (15.7 years) and 2016 (16.1 years) for all Australians, and this increased significantly among both men (from 15.7 to 16.3 years) and women (from 15.6 to 16 years). In 2016, the average age of initiation for alcohol consumption among South Australian recent and ex-drinkers aged 14-24 years was 15.9 years. This was similar to 2013 (15.5 years); the average age was 16.1 years among men and 15.7 among women.

Young South Australians aged 12-17 years

Table 1 shows that those aged 12-17 years were far more likely to have never consumed alcohol than those aged 18 years and over (78.3% vs. 10.8% in 2016). No 12-17 year olds reported daily drinking, and there was an increase in the proportion of 12-17 year old non-drinkers between 2013 (68.1%) and 2016 (78.3%).

These trends are consistent with those reported nationally: in 2016, the proportion of 12-17 year olds who had never consumed alcohol was higher than among those aged 18 years and over (77.9% vs. 11.1%), and there was an increase in the proportion of 12-17 year olds who had never consumed alcohol between 2013 and 2016 (from 68.1% to 77.9%).

Table 1: Recent use of alcohol^{*}: proportion of South Australians aged 12-17 years and 18 years and over, 2013 and 2016

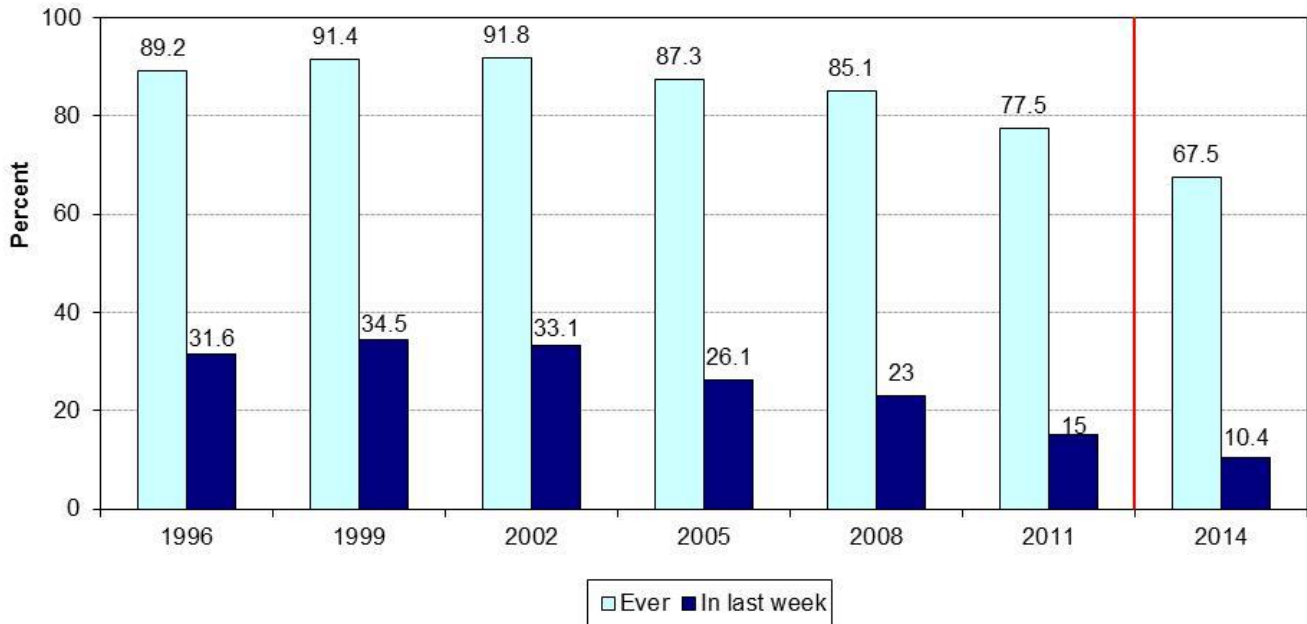
Drinking status	12-17 years			18 years and over	
	2013	2016	(%)	2013	2016
Daily	-	-		6.9	6.3
Weekly	#	#		40.2	37.9
<i>[At least weekly]</i>	#	#		47.1	44.2
Less than weekly	25.7	19.3		35.3	37.5
Ex-drinker ^{**}	-	1.3		9.2	7.5
Never drank alcohol ^{***}	68.1	78.3		8.3	10.8

^{*}Has consumed at least one full serve of alcohol in the last 12 months. ^{**}Has consumed at least one full serve of alcohol, but not in the last 12 months. ^{***}Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: National Drug Strategy Household Survey 2013 & 2016.

Figure 6 shows that from 1996 to 2014, the proportion of secondary school students who had ever tried alcohol and who had consumed alcohol in the previous week declined. In 2014, 67.5% of students reported that they had ever tried alcohol; significantly lower than in 2011 (77.5%), and the lowest it has been. The proportion of students who recently consumed alcohol (in the previous week) also decreased significantly, from 15% in 2011 to 10.4% in 2014. However, there was a change to the way in which consent was obtained in the 2014 survey in South Australia, and any results comparing 2011 and 2014 should be interpreted with caution (see Appendix 1 for further details).

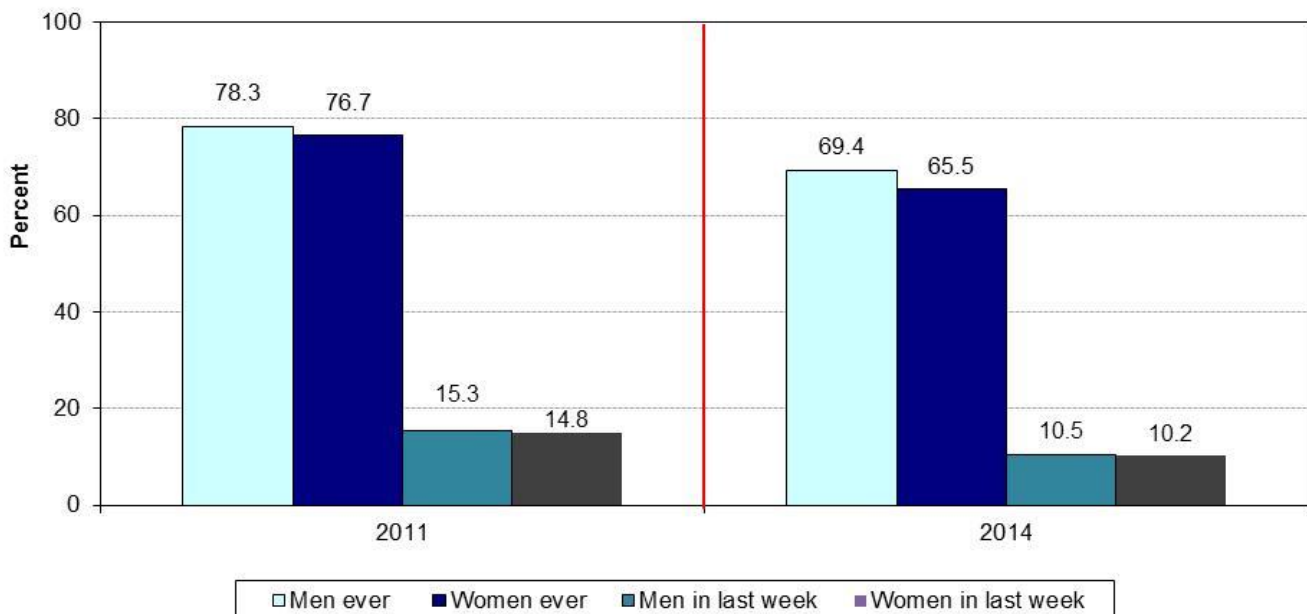
Figure 6: Percentage of students who had ever consumed alcohol and who had consumed alcohol in the previous week by survey year, South Australia, 1996-2014[#]



Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014. [#] Comparisons between 2011 and 2014 should be interpreted with caution due to a methodological change in 2014 in how consent was obtained

Figure 7 shows that while the proportions of male and female students in South Australia who had ever tried alcohol or consumed in the last week did not differ significantly from each other, both had significantly decreased between 2011 and 2014 (from 78.3% to 69.4% for male students, and from 76.7% to 65.5% for female students for lifetime use; and from 15.3% to 10.5% for male students and 14.8% to 10.2% for female students for recent use).

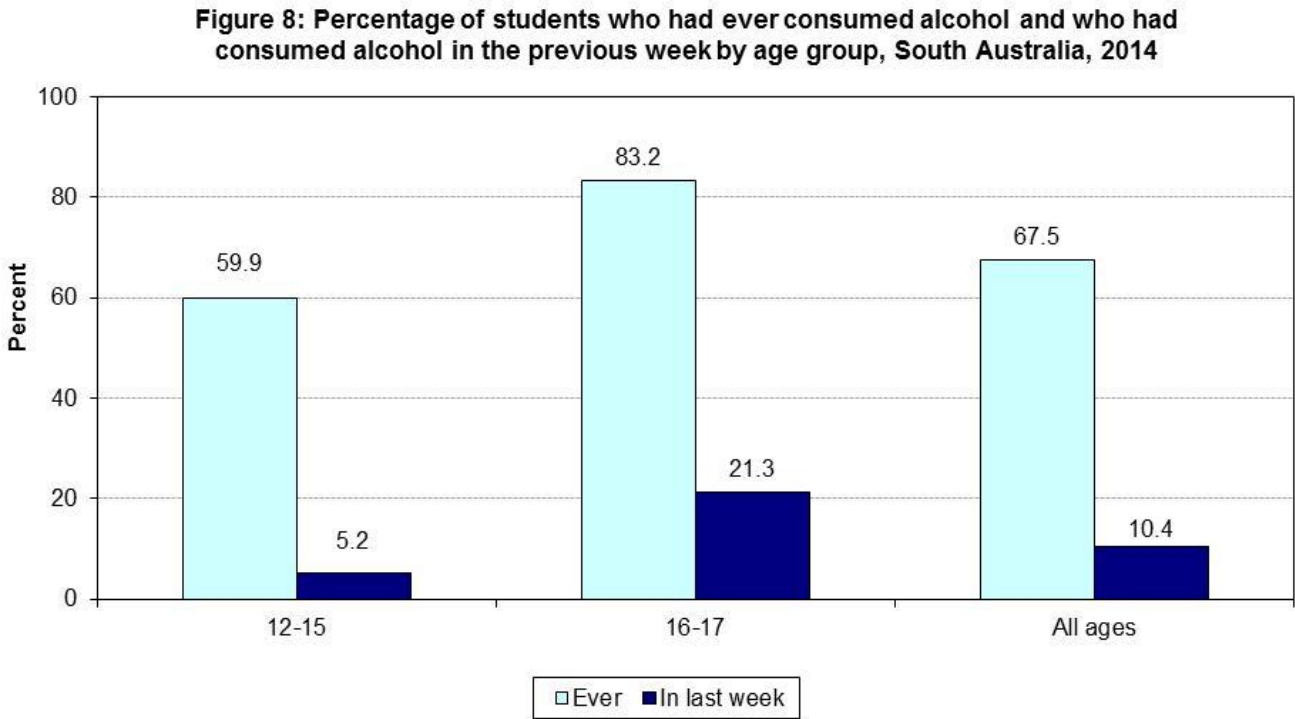
Figure 7: Percentage of students who had ever consumed alcohol and who had consumed alcohol in the previous week by sex, South Australia, 2011 & 2014[#]



Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014. [#] Comparisons between 2011 and 2014 should be interpreted with caution due to a methodological change in 2014 in how consent was obtained

Figure 8 shows that 67.5% of South Australian secondary students in 2014 had tried alcohol. Due to small sample sizes, accurate comparisons could not be made for individual ages. However, when grouping students into those aged 12-15 years and those aged 16-17 years, a much higher proportion of older students reporting having tried alcohol. Nearly 60% of 12-15 year olds had ever tried alcohol, increasing to 83.2% of 16-17 year olds. National data are not yet available for 2014.

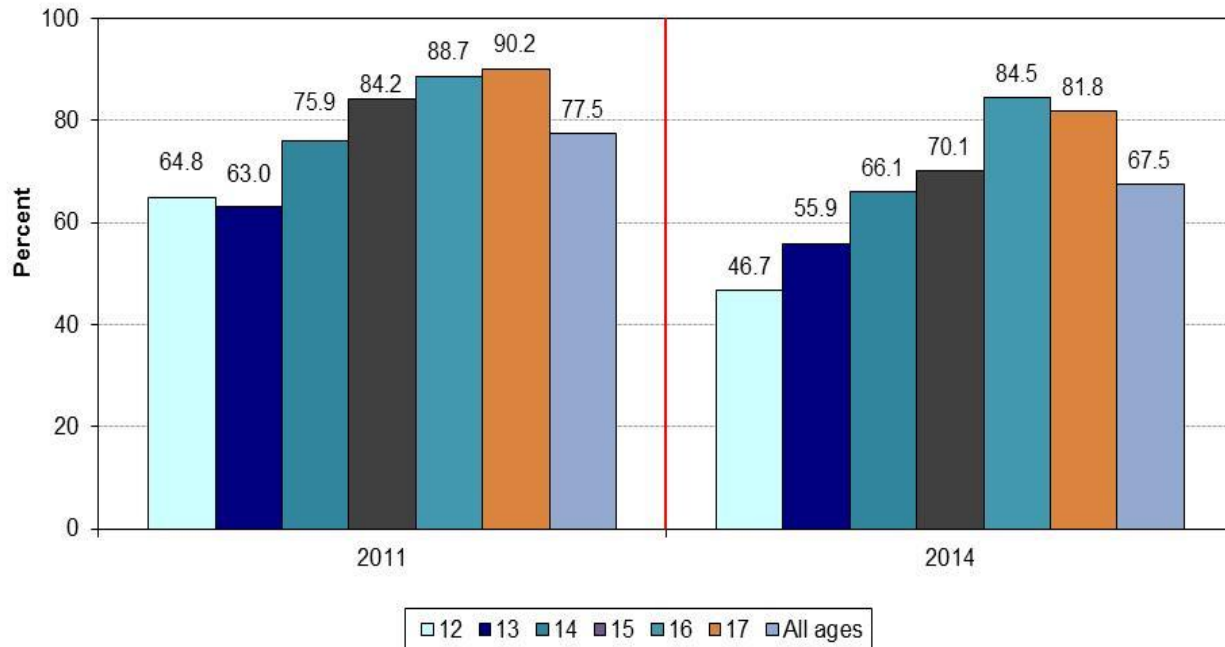
The same pattern was observed for recent alcohol consumption. Overall, 10.4% of 12-17 year olds had consumed alcohol in the previous week, ranging from 5.2% of 12-15 year olds to 21.3% of those aged 16-17 years.



Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014.

Since 1996, the most marked decline in the lifetime use of alcohol has occurred amongst 12 and 13 year olds. In 1996, 78.9% of 12 year olds and 86.8% of 13 year olds reported ever having consumed alcohol, compared with 46.7% and 55.9%, respectively, in 2014. Figure 9 shows lifetime alcohol use for 2011 and 2014 by age.

Figure 9: Percentage of students who had ever consumed alcohol by age, South Australia, 2011 & 2014[#]



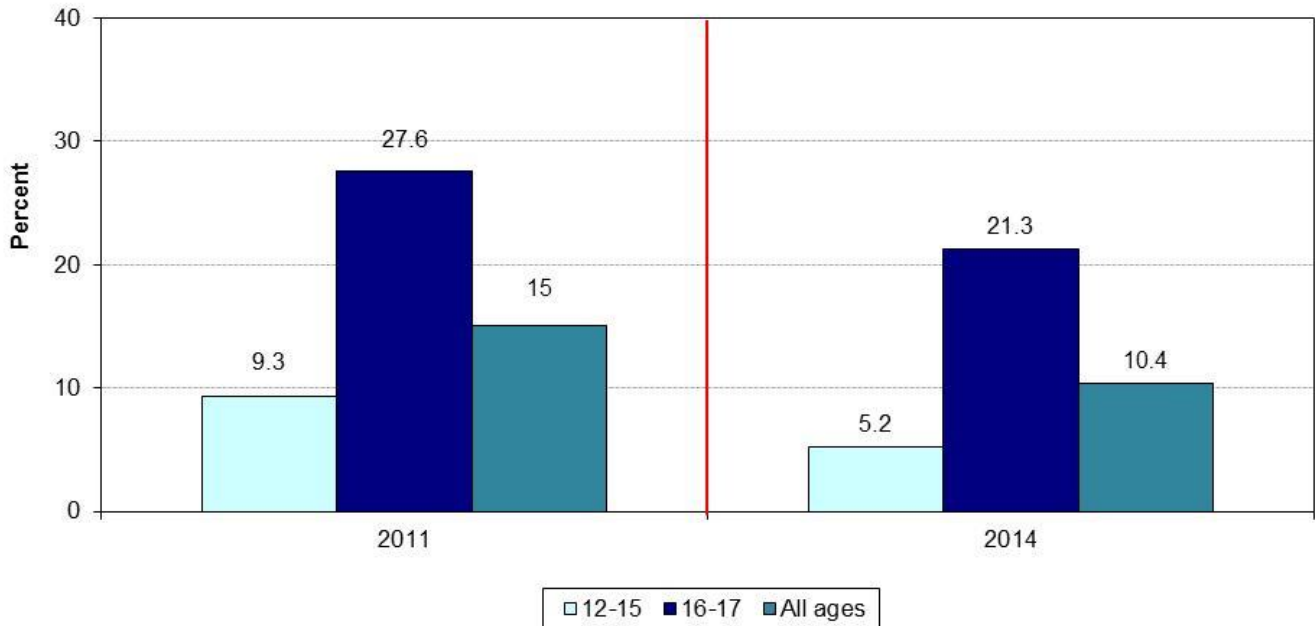
Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014. [#] Comparisons between 2011 and 2014 should be interpreted with caution due to a methodological change in 2014 in how consent was obtained

While the proportion of students who had recently consumed alcohol declined between 1996 and 2014 for all ages (31.6% to 10.4%) the greatest decline occurred amongst students aged 15-17 years.

Again, accurate comparisons could not be made for individual ages due to small sample sizes. When grouping students into those aged 12-15 years and those aged 16-17 years, a much higher proportion of older students reported recent use of alcohol. In 2014, 5.2% of 12-15 year olds consumed alcohol in the last week compared with 21.3% of those aged 16-17 years. The same trend was found in 2011, and there were significant decreases over time among both age groups (see Figure 10).

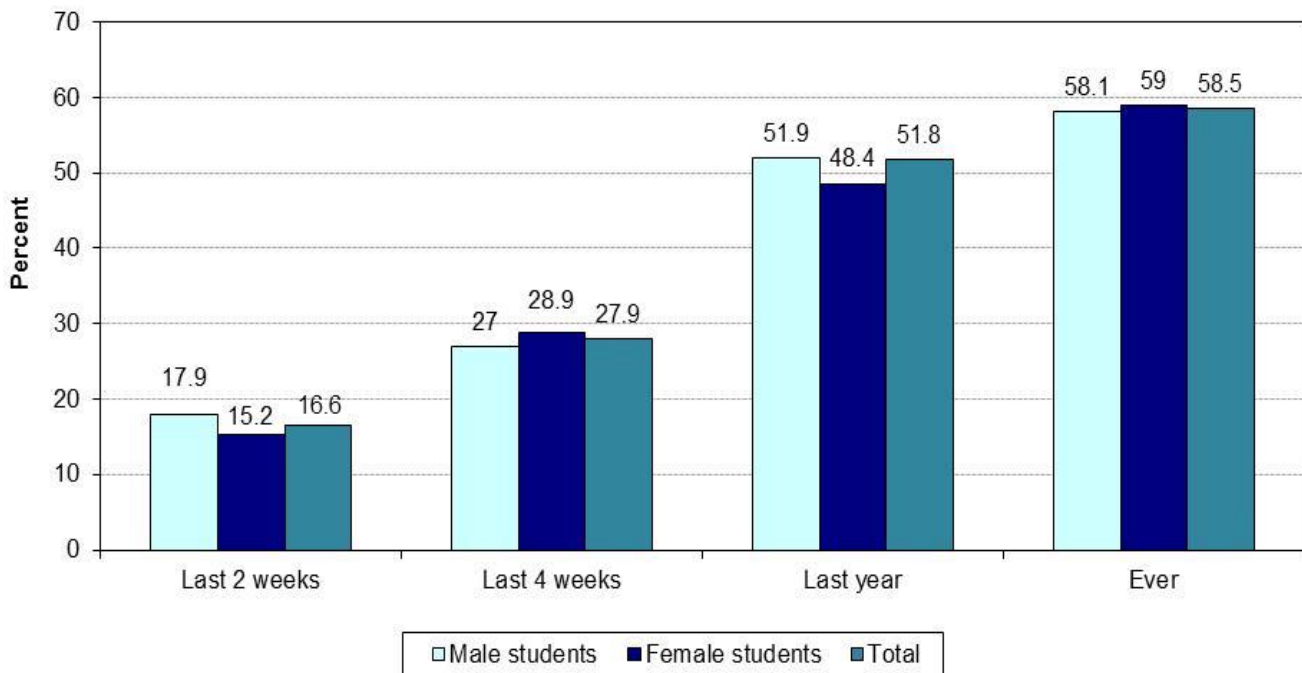
Figure 11 shows that in 2014, 16.6% of 12-17 year old students in South Australia consumed more than four standard drinks at least once in the past two weeks, with 27.9% in the last month. Around half had done so in the last year, and 58.5% in their lifetime. There were no statistically significant differences between men and women.

Figure 10: Percentage of students who had consumed alcohol in the previous week by age group, South Australia, 2011 & 2014[#]



Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014. [#] Comparisons between 2011 and 2014 should be interpreted with caution due to a methodological change in 2014 in how consent was obtained

Figure 11: Percentage of students consuming more than four drinks on one occasion at various frequencies, South Australia, 2014



Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014.

Aboriginal South Australians

Reliable data on alcohol consumption among Aboriginal South Australians is limited by very few surveys specifically targeting this population. While surveys such as the NDSHS and HOS include Aboriginal Australians in their sample, numbers are too small to enable reliable or valid estimations of prevalence of use and comparisons to be made for South Australia.

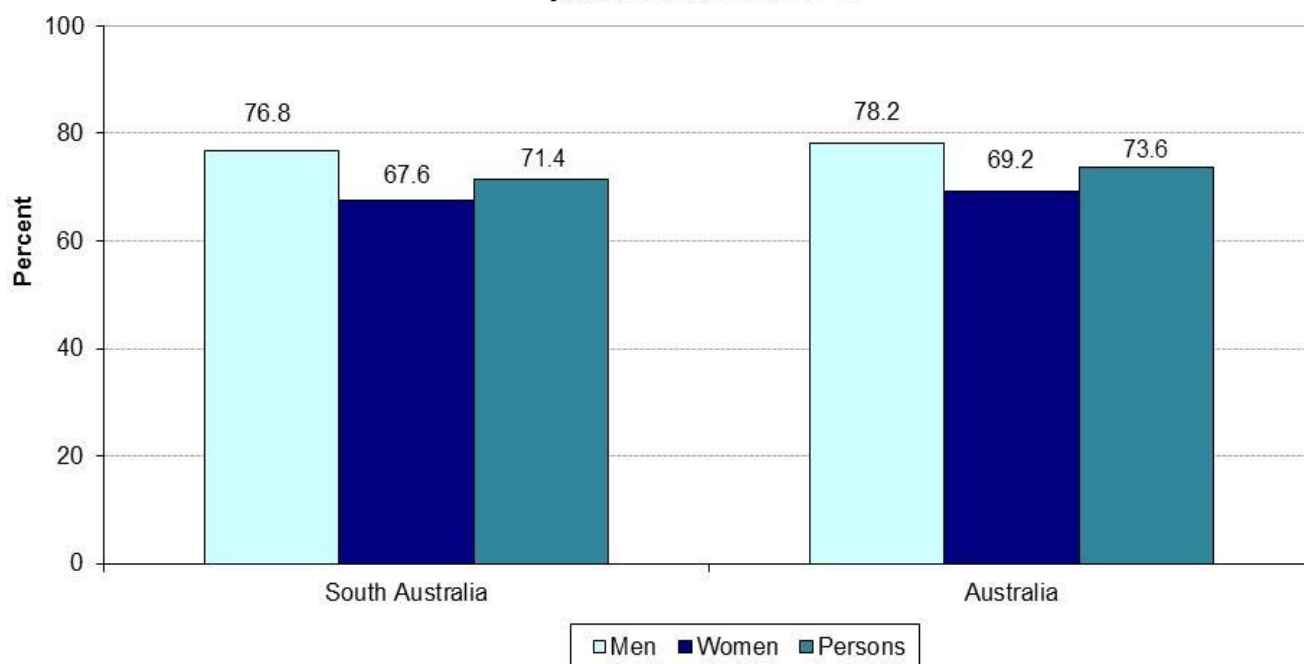
There currently exist two national surveys that include a large sample of Aboriginal Australians: the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and the National Aboriginal and Torres Strait Islander Social Survey (NATSISS). Data from the NATSIHS are available from 2004-05 and 2012-13 (now known as the Australian Aboriginal and Torres Strait Islander Health Survey; AATSIHS) and data from the NATSISS from 2002, 2008 and 2014-15.

Figure 12 shows consumption in the previous 12 months based on the 2012-13 AATSIHS¹⁴, for South Australia and Australia. Alcohol consumption was higher among men in both South Australia and Australia, with an overall prevalence (measured as having drunk alcohol at least once in the last 12 months) of 71.4% in South Australia and 73.6% in Australia. In addition, 76.8% of South Australian men and 67.5% of women drank alcohol at least once in the previous 12 months in 2012-13, an increase from 2008 (where 74.7% of men and 58.7% of women drank alcohol at least once in the previous 12 months). This increase was also seen nationally. Note that these data are from two different surveys, as information on consumption was not available in the 2014-15 NATSISS.

Figure 13 shows the percentage of Aboriginal and non-Aboriginal South Australians who abstain from alcohol. Abstinence rates are higher among Aboriginal South Australians, with 28.6% reporting that they had not consumed alcohol in the last 12 months or had never consumed alcohol (23.2% of men and 32.4% of women), compared with 18.1% of non-Aboriginal South Australians (13.4% of men and 22.7% of women). However, this difference has decreased over time: in 2008 (NATSISS) and 2007-08 (NHS) 17.8% of non-Aboriginal South Australians were abstinent compared with 33.7% of Aboriginal South Australians. Data on abstinence were not available in 2014-15.

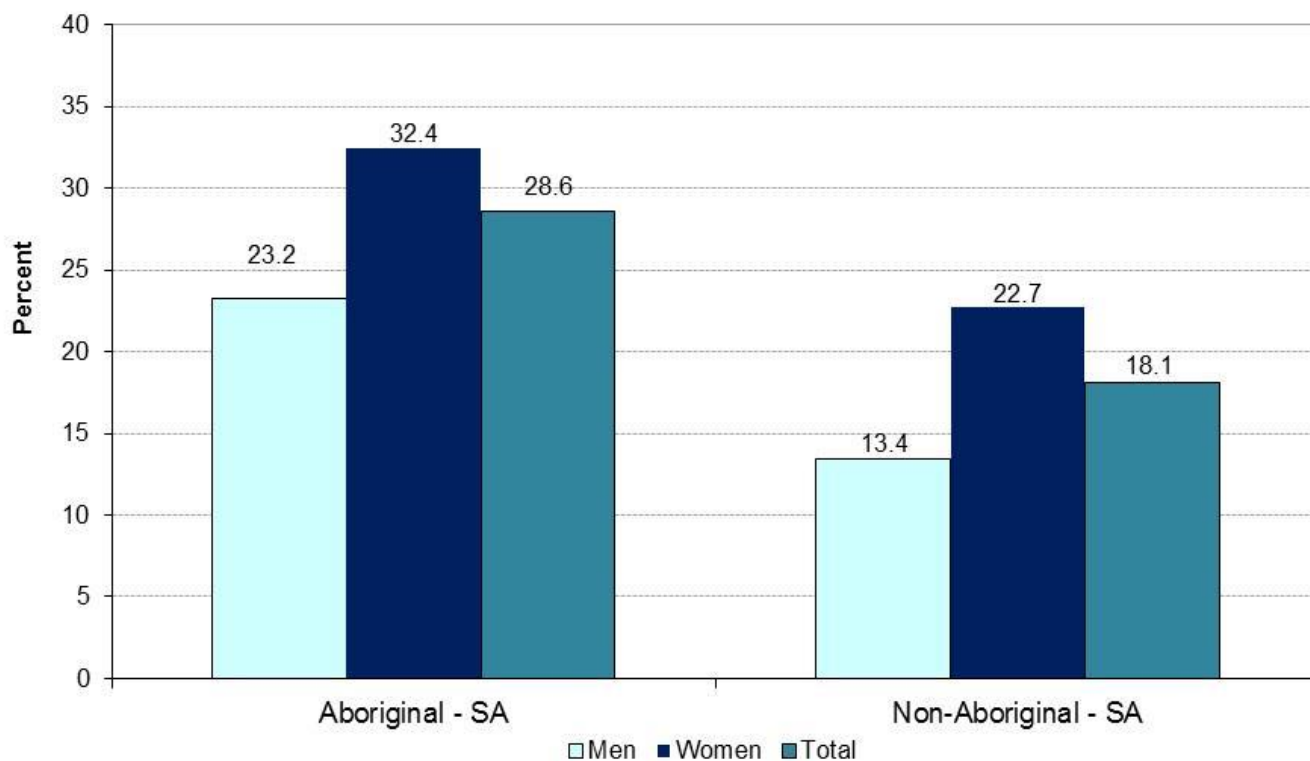
¹⁴ Australian Aboriginal & Torres Strait Islander Health Survey (AATSIHS) 2012-13, Australian Bureau of Statistics. Note that South Australian data from were extracted from TableBuilder by Population Research & Outcomes Studies (PROS), Discipline of Medicine, School of Medicine, Faculty of Health Sciences, The University of Adelaide.

Figure 12: Consumption of alcohol at least once in the past 12 months: percentage of Aboriginal and Torres Strait Islander Australians and South Australians aged 15 years and over, 2012-13



Source: Australian Aboriginal and Torres Strait Islander Health Survey 2012-13.

Figure 13: Percentage of South Australians aged 15 years and over who had not consumed alcohol in the last 12 months or ever by sex and Indigenous status, 2011-13



Source: Australian Aboriginal and Torres Strait Islander Health Survey 2012-13; Australian Health Survey, 2011-13.

Alcohol Consumption – Risky Drinking¹⁵

Reporting the frequency and quantity of alcohol consumption only provides part of the picture. It is important to ascertain the extent to which alcohol is consumed at levels that place drinkers at risk of harm either in the short-term or in the longer-term.

In 2009, new Guidelines to reduce health risks from alcohol consumption^{16,17} were released by the NH&MRC, replacing those developed in 2001. These revised Guidelines indicate the amount of alcohol that should be consumed to reduce the lifetime risk of alcohol-related injury or disease, as well as the risk of alcohol-related injury from a single drinking occasion, and have resulted in an increase in the prevalence of risky drinking as they include more risky drinkers due to having more stringent criteria around what constitutes a risky level. Table 2 presents the Guidelines for each indicator of harm.

Table 2: Alcohol risk categories from the 2009 Guidelines

	Single occasion risk	Lifetime risk
Abstainers	Ex-drinkers/had never drunk alcohol	Ex-drinkers/had never drunk alcohol
Low risk	The consumption of no more than 4 standard drinks on any occasion in the previous 12 months	On average, the consumption of no more than 2 standard drinks per day over the previous 12 months
Risky / high risk	The consumption of 5 or more standard drinks on at least one occasion in the previous 12 months	On average, the consumption of 3 or more standard drinks per day over the previous 12 months

Risk of injury from a single drinking occasion

This NH&MRC Guideline states that ‘for healthy men and women, drinking no more than 4 standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion.’¹⁸ A single occasion is defined as ‘a sequence of drinks taken without the blood alcohol concentration reaching zero in between. The risk of an alcohol-related injury arising from a single occasion of drinking increases with the amount consumed’¹⁹.

The extent to which drinkers drank at levels putting them at risk of injury from a single drinking occasion was calculated at least yearly (but not as often as monthly); at least monthly (but not as often as weekly); and at least weekly. Figures 14 and 15 present data from the HOS on the proportion of South Australians aged 15 years and over drinking at risky levels in the previous 12 months.

There was no significant change between 2011 and 2017 or between 2016 and 2017 in the proportion of South Australians that reported drinking at levels that increased their risk of injury from a single occasion at least once in the previous 12 months (43%-44%). The proportion that reported drinking at these levels at least monthly also remained unchanged between 2011

¹⁵ NH&MRC Guidelines state that for persons under 18 years, not drinking alcohol is the safest option. However, for comparability with other age groups, data presented in this report on those aged 12-17 includes a low-risk category for both single occasion and lifetime risk.

¹⁶ http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ds10-alcohol.pdf

¹⁷ <http://www.aihw.gov.au/publication-detail/?id=10737420094andtab=2>

¹⁸ http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ds10-alcohol.pdf

¹⁹ <http://www.aihw.gov.au/publication-detail/?id=32212254712andtab=2>, page 247.

(26.4%) and 2017 (24.6%), and 2016 (26%) and 2017. While there was a significant decrease between 2011 (14.3%) and 2016 (11.4%) in the proportion that reported drinking at these levels at least weekly, this was not significant between 2011 and 2017 (12.3%).

As was found for all South Australians, single occasion risky drinking at least monthly did not change significantly among men between 2011 (36%) and 2017 (34%) or between 2016 (25%) and 2017. There was also no significant change in the proportion that drank at these levels at least yearly (from 55% in 2011 to 53% in 2017). However, there was a significant decrease between 2011 (22%) and 2017 (18%) in the proportion of men who reported drinking at these levels at least weekly.

There was no significant change among women between 2011 (17%) and 2017 (16%) or between 2016 (17%) and 2017 in the proportion that reported drinking at these levels at least monthly. There was also no significant change in the proportion that drank at these levels at least yearly (34% in both 2011 and 2017) or at least weekly (from 6.7% in 2011 to 6.5% in 2017).

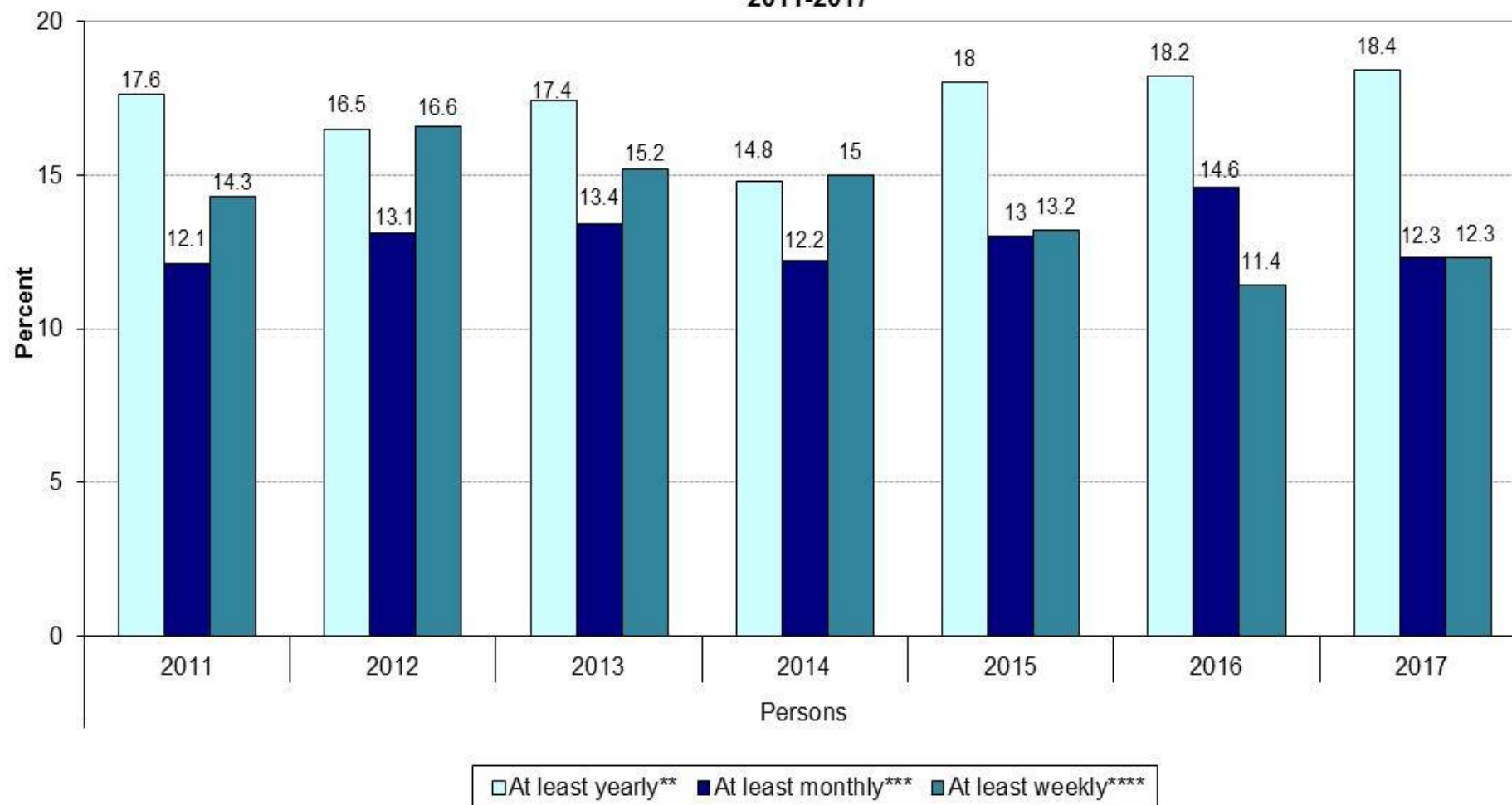
National data from the 2016 NDSHS found that the proportion of Australians who drank at levels that put them at risk of injury from a single occasion of drinking at least monthly did not change between 2013 (26.4%) and 2016 (25.5%) after a significant decrease between 2010 (29%) and 2013. In addition, there were no changes in the proportion of Australians who drank at risky levels at least once in the last 12 months (from 37.8% to 37.3%).

Figure 16 presents the proportion of those who reported drinking at levels that increased their risk of injury from a single occasion at least monthly by age group in the HOS (2011-2017). In all seven years, the group with the highest proportion drinking at risky levels at least monthly was aged 20-29 years (ranging from 38% to 48%). In 2017 this was followed by those aged 40-49 (32%) and 30-39 (26%) years. The groups with the lowest proportion in 2017 were aged 60 years or over (14%) and 15-19 (15%). This differs from previous years, where the proportion of 15-19 year olds drinking at these levels was much higher, ranging from 23% to 30%.

Although 20-29 year olds had the highest proportion that drank at risky levels at least monthly, there has been a significant decrease among this group since its peak in 2012 (48%), to 38% in 2017. However, there was no change between 2016 (41%) and 2017. Between 2011 and 2017, there were significant decreases in risky drinking at least monthly among those aged 15-19 (from 29% to 15%) and 30-39 (from 32% to 26%) years. Drinking at risky levels at least monthly also decreased significantly among 15-19 year olds between 2016 (30%) and 2017 (15%), and drinking at risky levels at least weekly between 2011 and 2017 (from 13% to 5.3%). There were no changes among older South Australians.

The proportion of Australians drinking at levels that increased the risk of injury from a single occasion at least monthly decreased significantly between 2013 and 2016 among 12-17 and 18-24 year olds (from 8.7% to 5.4% and from 47% to 42%). There were also significant decreases among 14-19 year old men (from 28.1% to 20%) and women (from 21.7% to 15.6%). There was a significant increase among 30-39 year old women (from 17.2% to 20.8%).

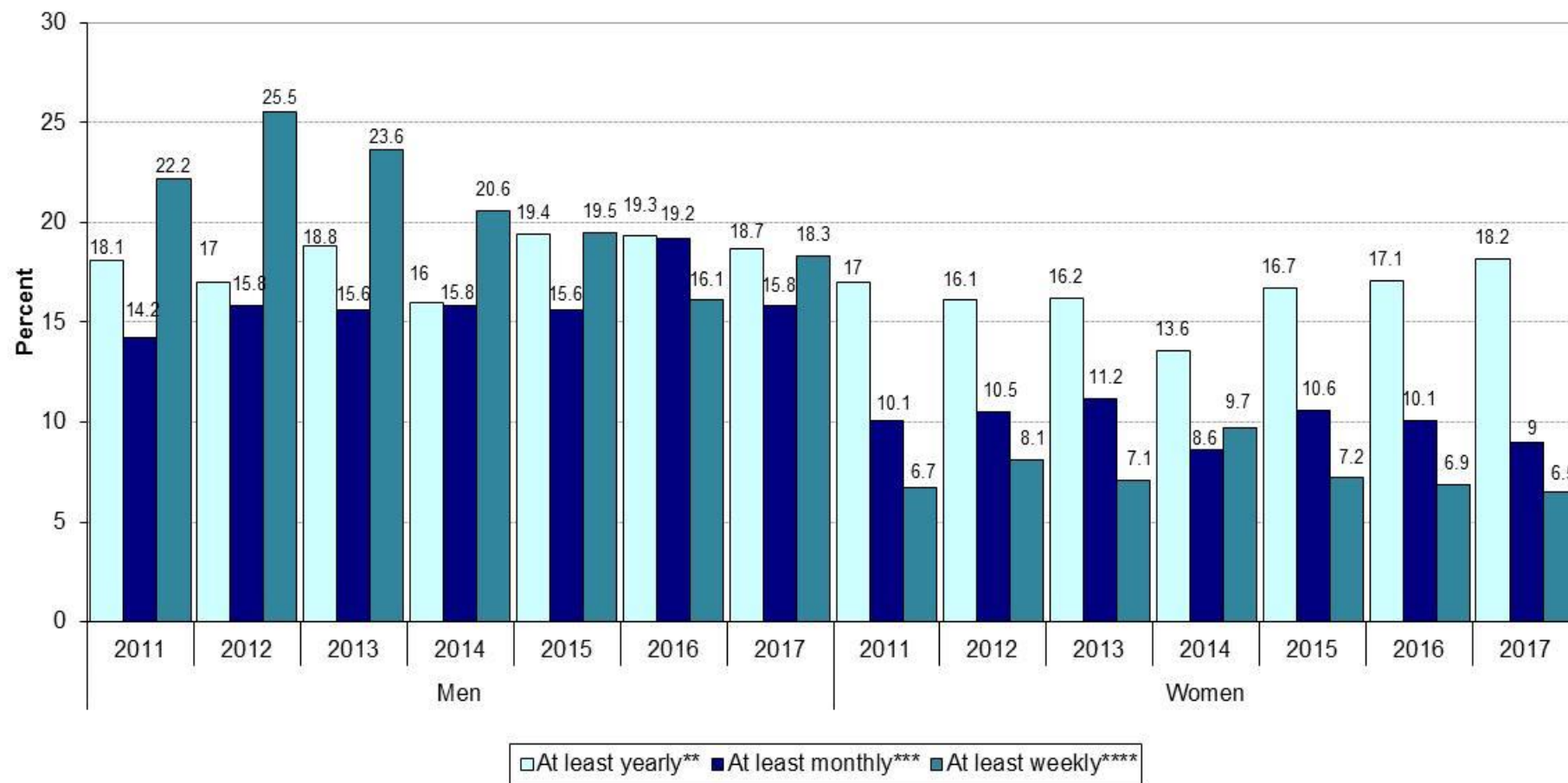
Figure 14: Percentage of South Australians aged 15 years and over who drank at levels that put them at risk of injury from a single drinking occasion at least once in the previous 12 months, 2011-2017*



*Total risk is calculated by adding the three mutually exclusive categories; any differences are due to rounding. **Had more than 4 standard drinks at least once in the last year but not as often as monthly. ***Had more than 4 standard drinks at least once a month but not as often as weekly. ****Had more than 4 standard drinks at least once a week.

Source: South Australian Health Omnibus Survey, 2011-2017

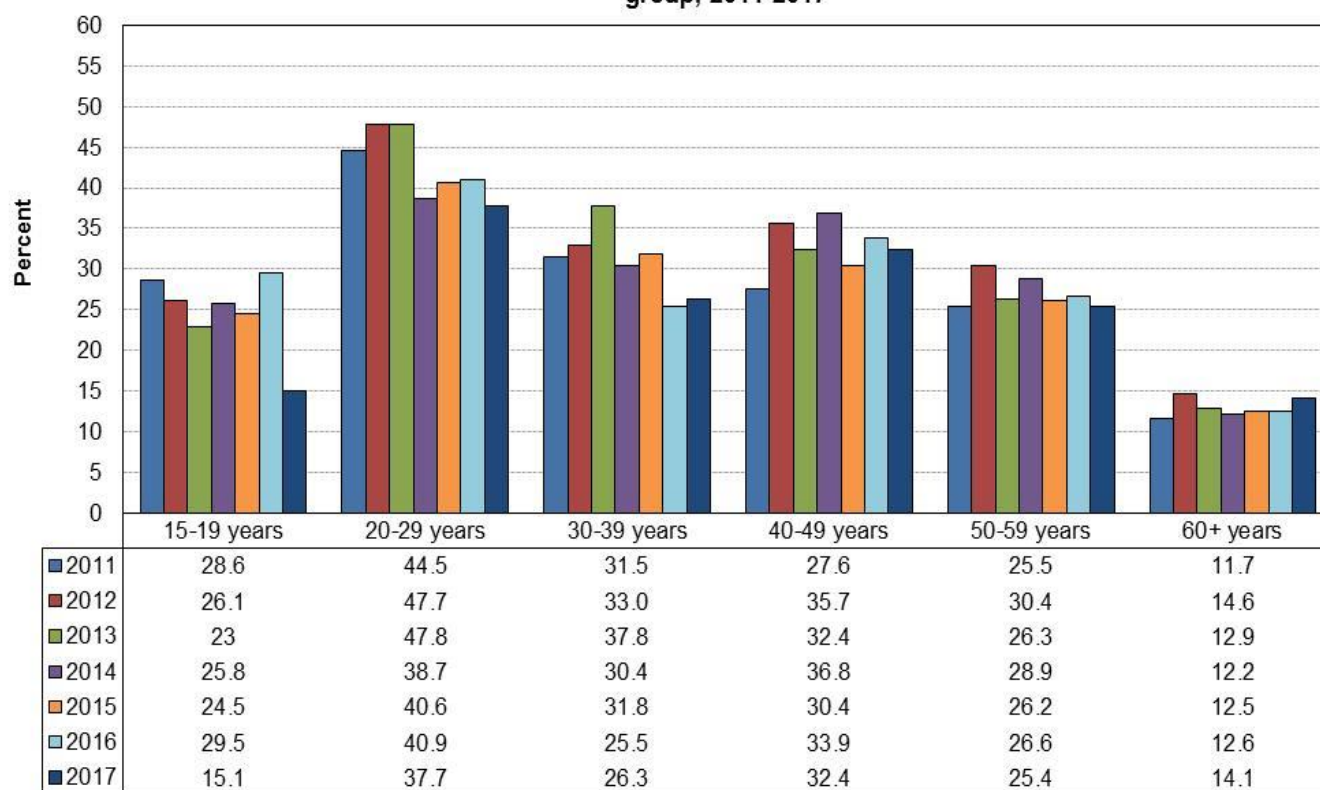
Figure 15: Percentage of South Australians aged 15 years and over who drank at levels that put them at risk of injury from a single drinking occasion at least once in the previous 12 months, by sex, 2011-2017*



*Total risk is calculated by adding the three mutually exclusive categories; any differences are due to rounding. **Had more than 4 standard drinks at least once in the last year but not as often as monthly. ***Had more than 4 standard drinks at least once a month but not as often as weekly. ****Had more than 4 standard drinks at least once a week.

Source: South Australian Health Omnibus Survey, 2011-2017

Figure 16: Percentage of South Australians who drank at levels that put them at risk of injury from a single drinking occasion at least monthly in the previous 12 months, by age group, 2011-2017



Source: South Australian Health Omnibus Survey, 2011-2017

Risk of injury or disease over a lifetime

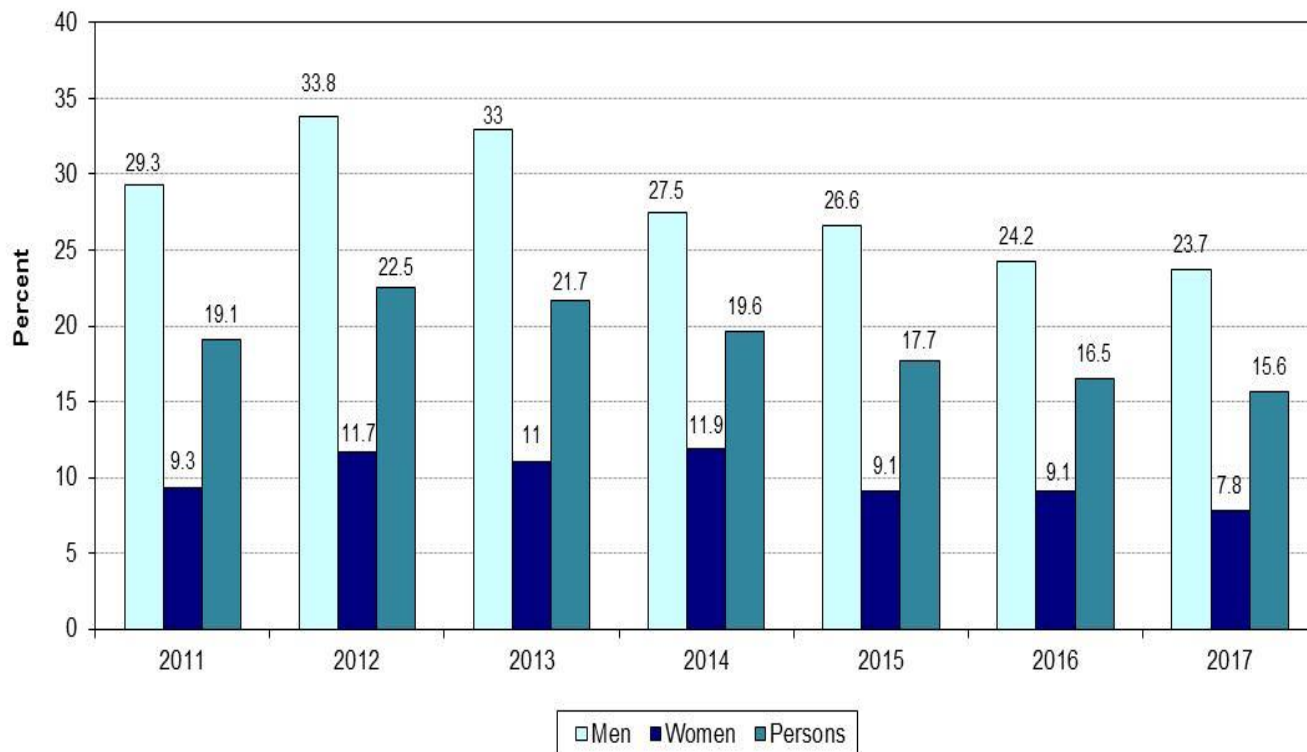
The NH&MRC Guideline relating to the risk of injury or disease over a lifetime states that ‘for healthy men and women, drinking no more than 2 standard drinks on any day reduces the lifetime risk of harm from alcohol-related injury or disease’²⁰. Lifetime risk is defined as ‘the accumulated risk from drinking either on many drinking occasions, or on a regular (for example, daily) basis over a lifetime. The lifetime risk of harm from alcohol-related injury or disease increases with the amount consumed.’²¹

Figure 17 shows that in 2017, 15.6% of South Australians aged 15 years and over drank at levels that put them at risk of injury or disease over a lifetime. There was a significant increase between 2011 (19%) and 2013 (22%) for both men and women, followed by a return to 2011 levels in 2014 (20%). However, there has been a significant decrease since data collection began, from 19% in 2011 to 16% in 2017. Lifetime risky drinking also decreased significantly among men (29% to 24%) but not women (9.3% to 7.8%). There were no changes between 2016 and 2017.

²⁰ http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ds10-alcohol.pdf

²¹ <http://www.aihw.gov.au/publication-detail/?id=32212254712andtab=2>, page 246.

Figure 17: Percentage of South Australians aged 15 years and over who drank at levels that put them at risk of disease or injury over a lifetime, by sex, 2011-2017



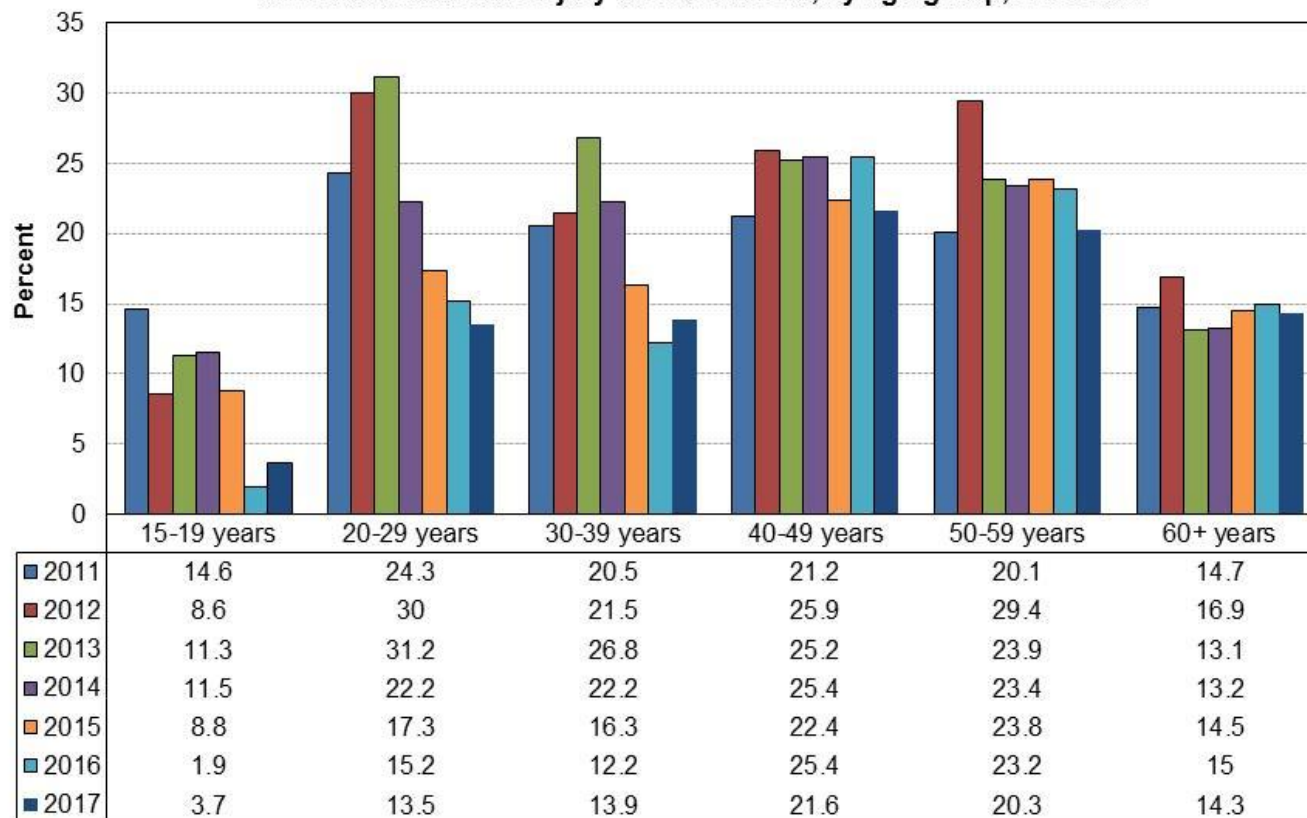
Source: South Australian Health Omnibus Survey, 2011-2017

National data from the 2016 NDSHS found that the proportion of Australians who consumed alcohol at levels that put them at risk of alcohol related injury or disease over their lifetime decreased significantly from 18.2% in 2013 to 17.1% in 2016, following a significant decrease between 2010 (20.5%) and 2013. There was no change between 2013 and 2016 among women (from 10% to 9.8%), but significant decreases were reported among Australian men (from 26.5% to 24.5%), men aged 20-29 years (from 31.2% to 25.9%) and young adults aged 18-24 years (from 31% in 2013 to 18.5% in 2016).

Figure 18 shows that from 2011-2013, the group with the highest proportion drinking at levels that put them at risk of injury or disease over a lifetime was aged 20-29 years (ranging from 24% in 2011 to 31% in 2013). However, by 2017 the proportion had decreased significantly, to 14%.

From 2014 to 2017, the highest proportion drinking at these levels were aged 40-49 (22% in 2017) and 50-59 (20% in 2017) years. There were significant decreases in lifetime risk between 2011 and 2017 for those aged 15-19 (from 15% to 3.7%), 20-29 (from 24% to 14%), and 30-39 (from 21% to 14%) years. There were no changes among the other age groups, or between 2016 and 2017.

Figure 18: Percentage of South Australians who drank at levels that put them at risk of disease or injury over a lifetime, by age group, 2011-2017*



*Estimates for those aged 15-19 years have a relative standard error of 25% to 50% in some years and should be used with caution

Source: South Australian Health Omnibus Survey, 2011-2017

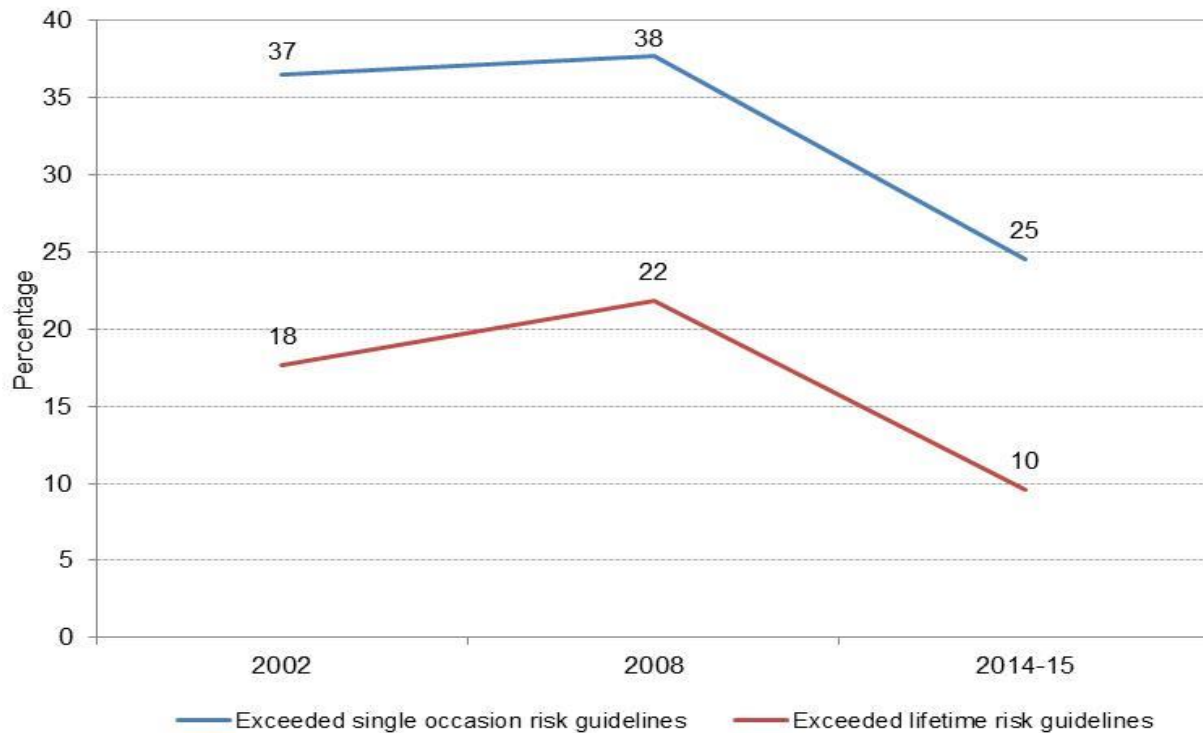
Aboriginal Australians²²

Population data on risky drinking among Aboriginal South Australians are limited to two triennial surveys: the NATSISS and the AATSIHS. Comparisons with the NDSHS and HOS are problematic due to differences in survey methodologies and in how risk is calculated. More detailed information is provided in Appendix 1. However, it is still possible to monitor trends over time between Aboriginal and non-Aboriginal Australians using these surveys.

Risky drinking over time among Aboriginal respondents is presented in Figures 19 and 20 for South Australia and Australia, respectively. There were significant decreases in single occasion (at least once in the last two weeks) and lifetime risk among both South Australians and Australians between 2008 and 2014-15. Moreover, the magnitude of the change was greater in South Australia, with a decrease of 13 percentage points in single occasion risk (eight in Australia) and 12 percentage points for lifetime risk (four in Australia). Nationally, these changes were largely due to decreases in non-remote areas; this information was not available for South Australia.

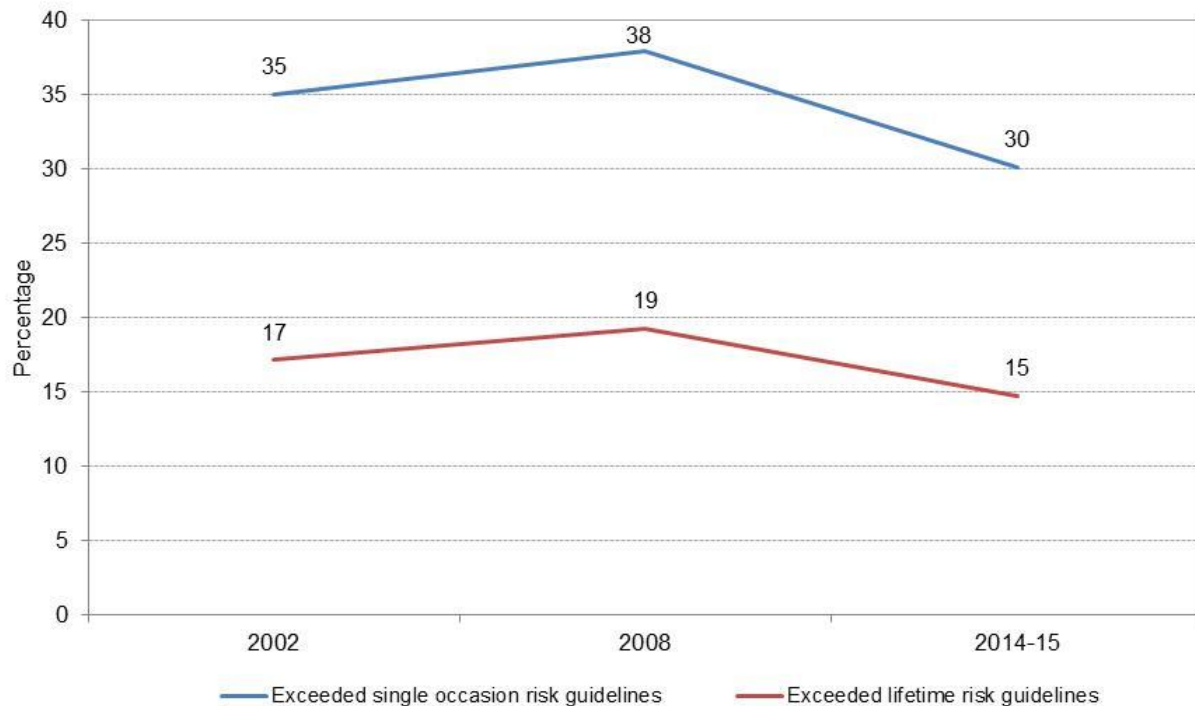
²² NATSISS lifetime risk: based on respondents' reported usual daily consumption of alcohol and the frequency of consumption in the last 12 months. NATSISS single occasion risk: assessed based on the largest quantity of alcohol consumed in a single day during the two weeks prior to interview. All information obtained from the users' guides that can be found at www.abs.gov.au

Figure 19: Percentage of Aboriginal South Australians aged 15 years and over who consumed alcohol at levels that increased their risk of injury or disease, 2002 to 2014-15



Source: National Aboriginal and Torres Strait Islander Social Survey, Australian Bureau of Statistics

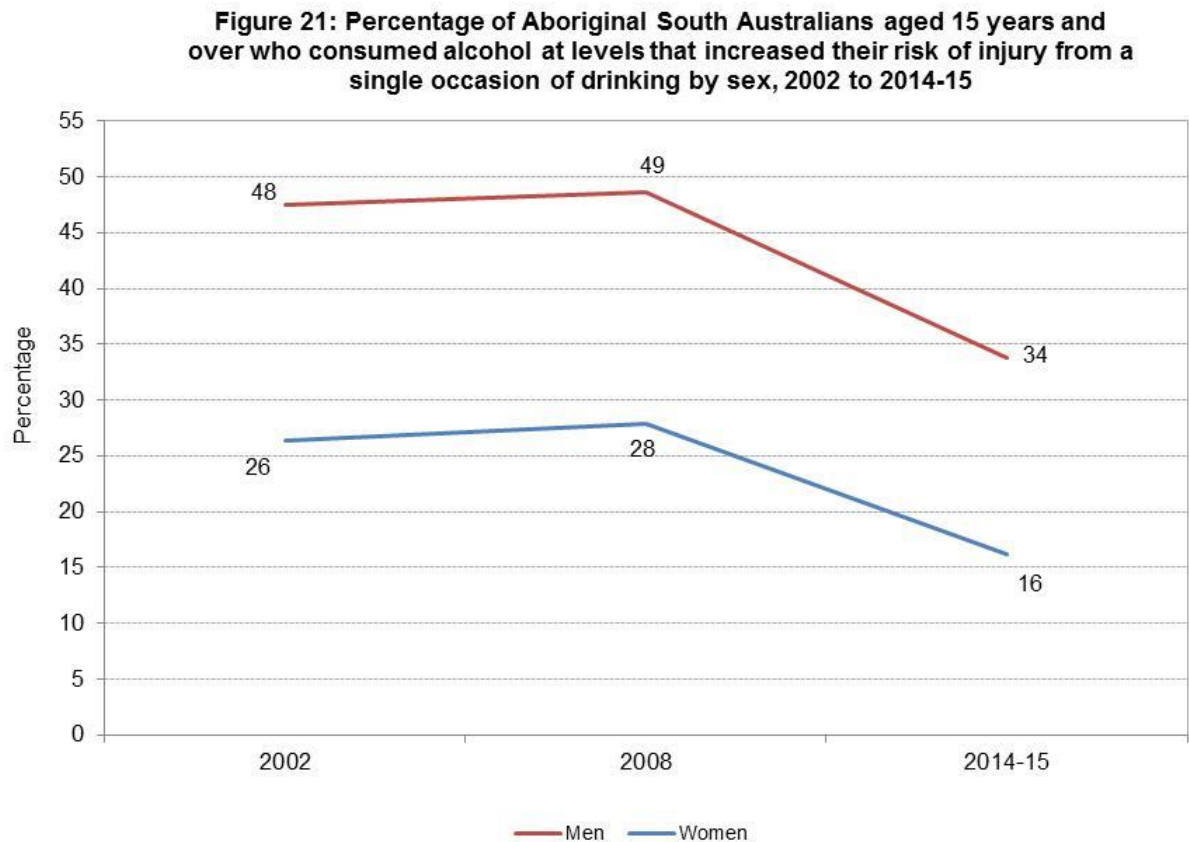
Figure 20: Percentage of Aboriginal Australians aged 15 years and over who consumed alcohol at levels that increased their risk of injury or disease, 2002 to 2014-15



Source: National Aboriginal and Torres Strait Islander Social Survey, Australian Bureau of Statistics

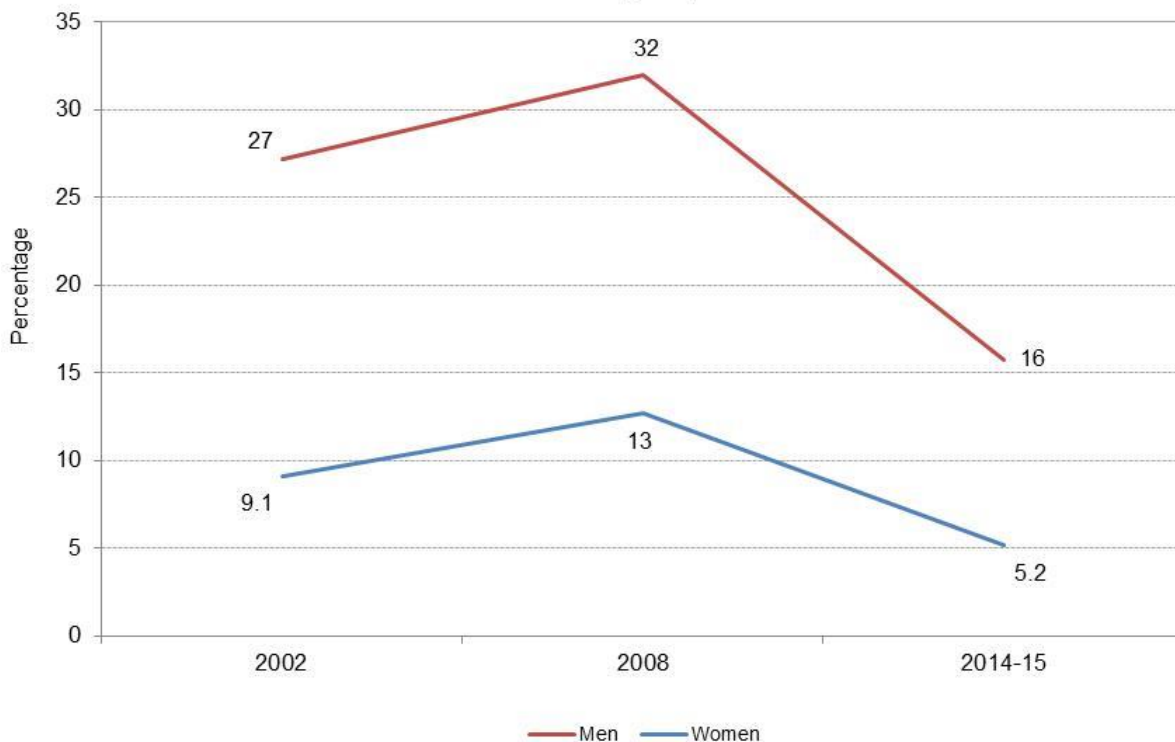
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Figures 21 and 22 present risky drinking data over time for South Australian Aboriginal men and women. A similar pattern was evident for both types of risky consumption, with small increases between 2002 and 2008 followed by substantial decreases between 2008 and 2014-15, which were of greater magnitude among men. Single occasion risk decreased from 49% in 2008 to 34% in 2014-15 among men, and from 28% to 16% among women. Lifetime risk decreased from 32% in 2008 to 16% in 2014-15 among men, and from 13% to 5.2% among women. The proportion of men who report drinking at risky levels is significantly higher than those of women in all years.



Source: National Aboriginal and Torres Strait Islander Social Survey, Australian Bureau of Statistics

Figure 22: Percentage of Aboriginal South Australians aged 15 years and over who consumed alcohol at levels that increased their risk of injury or disease over a lifetime by sex, 2002 to 2014-15



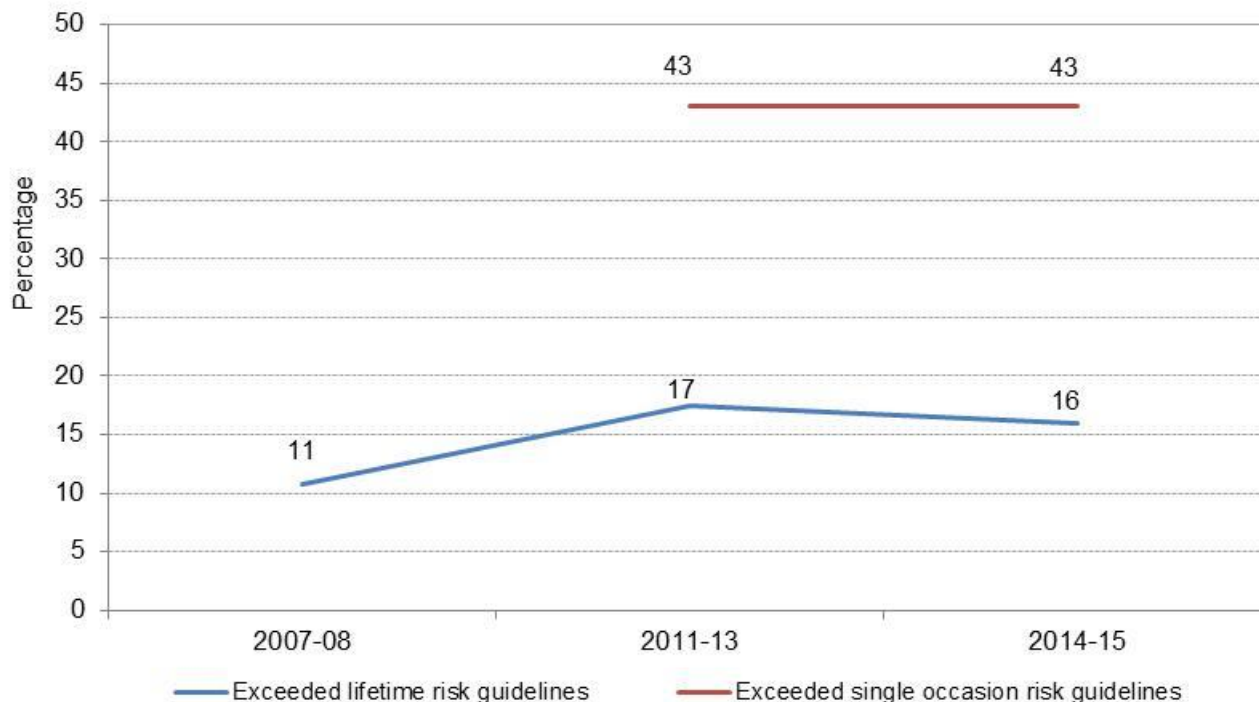
Source: National Aboriginal and Torres Strait Islander Social Survey, Australian Bureau of Statistics

Figure 23 shows risky alcohol consumption among non-Aboriginal South Australians over time. Lifetime risk increased from 11% in 2007-08 to 17% in 2011-13, and remained stable at 16% in 2014-15. Despite differences in how risky drinking was calculated, these data are similar to those reported in the NDSHS and the SA Health Omnibus Survey (HOS): in the 2013 NDSHS²³, 19% of South Australians drank alcohol at levels that increased their risk of injury or disease over a lifetime, with 17% in the 2016 HOS²⁴. Single occasion risk among non-Aboriginal South Australians remained stable between 2011-13 and 2014-15 (43%). Again, despite methodological differences, these data are similar to those reported in the 2013 NDSHS (40%) and the 2016 HOS (44%).

²³ http://www.aihw.gov.au/alcohol-and-other-drugs/data-sources/ndshs-2013/ch7/#t7_3

²⁴ <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/health+and+medical+research/dassa+research+publications>

Figure 23: Percentage of non-Aboriginal South Australians aged 15 years and over who consumed alcohol at levels that increased their risk of disease or injury, 2007-08* to 2014-15



Source: National Health Survey (2007-08, 2011-13 and 2014-15), Australian Bureau of Statistics. * Data for single occasion risk (at least once in the last 12 months) were not collected in 2007-08

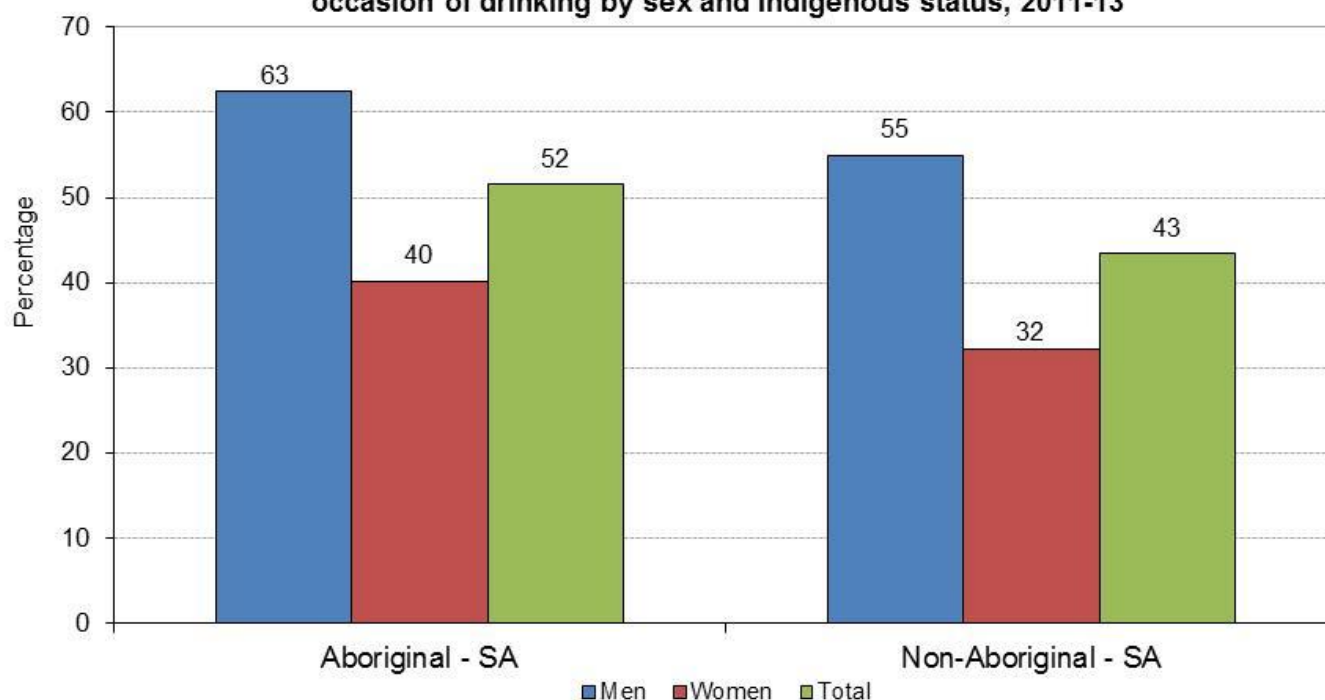
The proportion of Aboriginal and non-Aboriginal South Australian men and women drinking at levels that put them at risk of injury from a single occasion of drinking at least once in the last 12 months is presented in Figure 24. A higher proportion of Aboriginal South Australians drank at these levels (52% compared with 43% of non-Aboriginal South Australians); this pattern was seen for both men (63% compared with 55%) and women (40% compared with 32%). Men were much more likely to drink at these levels, as was found with lifetime risky drinking.

The proportion of Aboriginal and non-Aboriginal South Australian men and women drinking at levels that put them at risk of disease or injury over a lifetime from the 2011-13 NHS and the 2012-13 AATSIHS is presented in Figure 25²⁵. A slightly higher proportion of Aboriginal South Australians drank at levels that increased their risk over a lifetime (20% compared with 17%), but among both groups, men were significantly more likely to drink at these levels. Notably, Aboriginal women were almost twice as likely to drink at these levels as non-Aboriginal women (15% compared with 8.2%).

These data indicate that risky drinking is consistently higher among Aboriginal South Australians for both men and women, and as found with non-Aboriginal South Australians, rates are higher among men (1.6-1.7 times higher for lifetime risk and 1.3-1.4 times higher for single occasion risk).

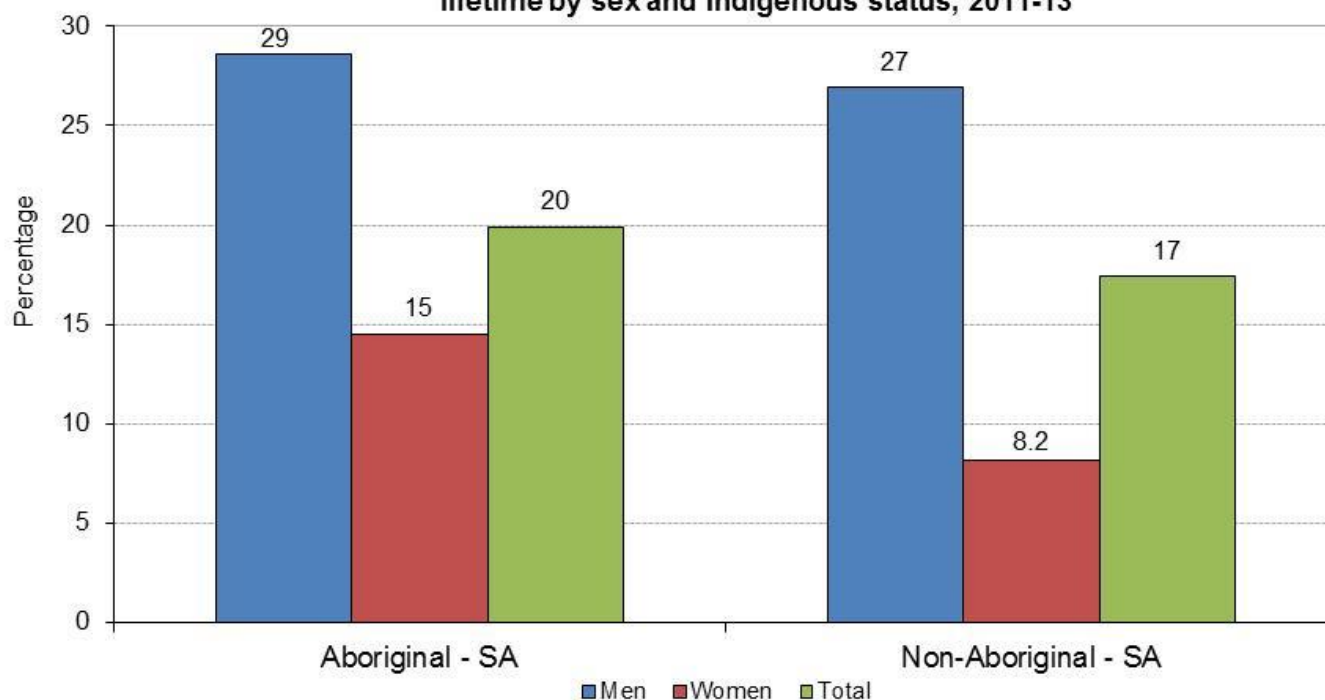
²⁵ Due to differences between the NATSISS and AATSIHS/NHS surveys in how risky drinking was calculated, comparisons by Indigenous status are made using the AATSIHS and NHS only. Risky drinking was higher in the AATSIHS than in the NATSISS, reflective of differences in how risk was calculated.

Figure 24: Percentage of South Australians aged 15 years and over who consumed alcohol at levels that increased their risk injury on a single occasion of drinking by sex and Indigenous status, 2011-13



Source: National Health Survey (2011-13), Australian Aboriginal and Torres Strait Islander Health Survey (2012-13), Australian Bureau of Statistics

Figure 25: Percentage of South Australians aged 15 years and over who consumed alcohol at levels that increased their risk of disease or injury over a lifetime by sex and Indigenous status, 2011-13



Source: National Health Survey (2011-13), Australian Aboriginal and Torres Strait Islander Health Survey (2012-13), Australian Bureau of Statistics

Alcohol Consumption – Drinking Behaviour and Source of Supply

Drink Preference

Figure 26 presents 2016 data for South Australia on the main drink usually consumed. More than one-third (36%) reported bottled wine as the drink consumed most often, followed by regular strength beer (18.3%) and bottled spirits/liqueurs (14.9%). This is consistent with national data, and similar to data from 2013, although there has been a small increase in the consumption of low/mid-strength beer, from 7.2% to 10.8%.

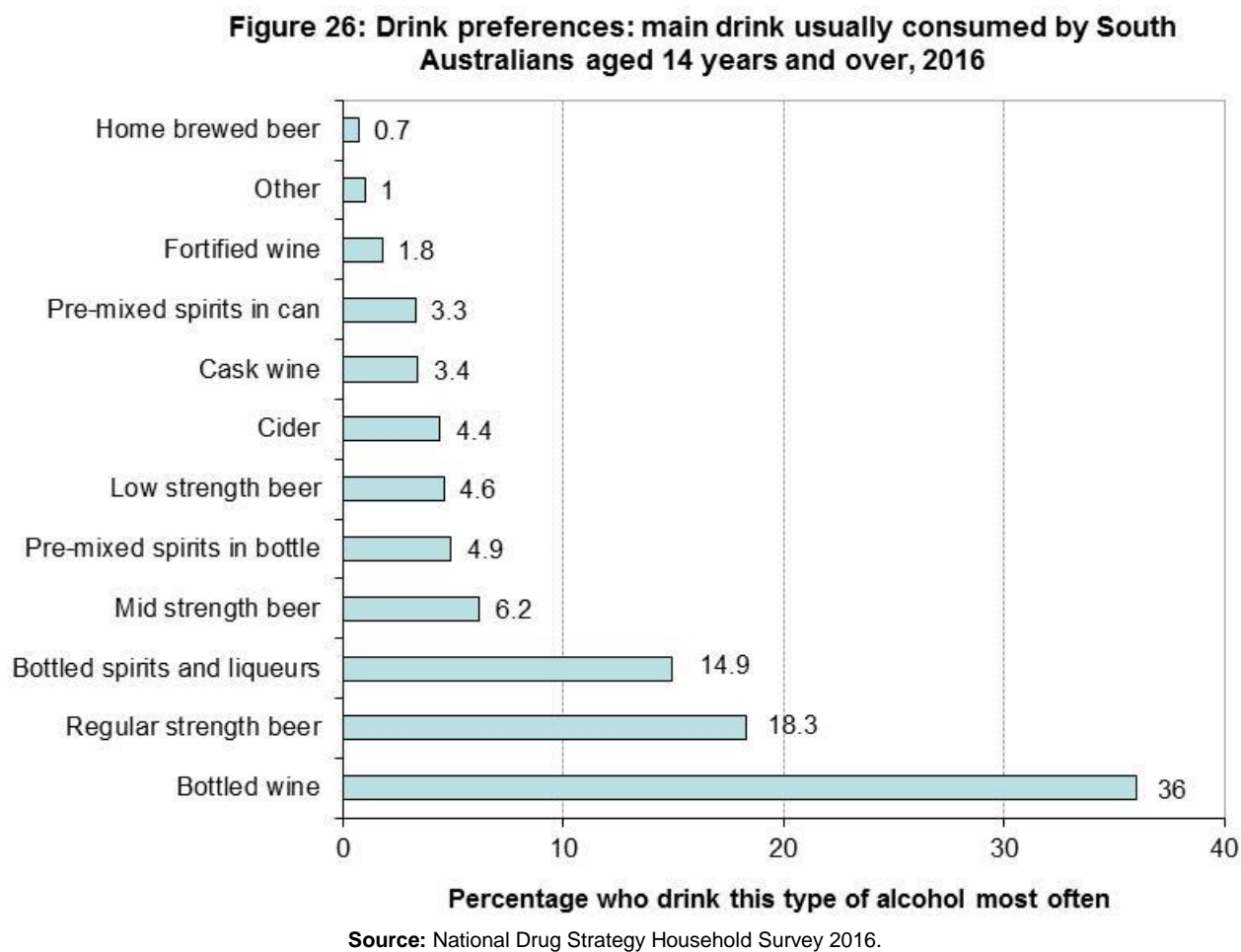
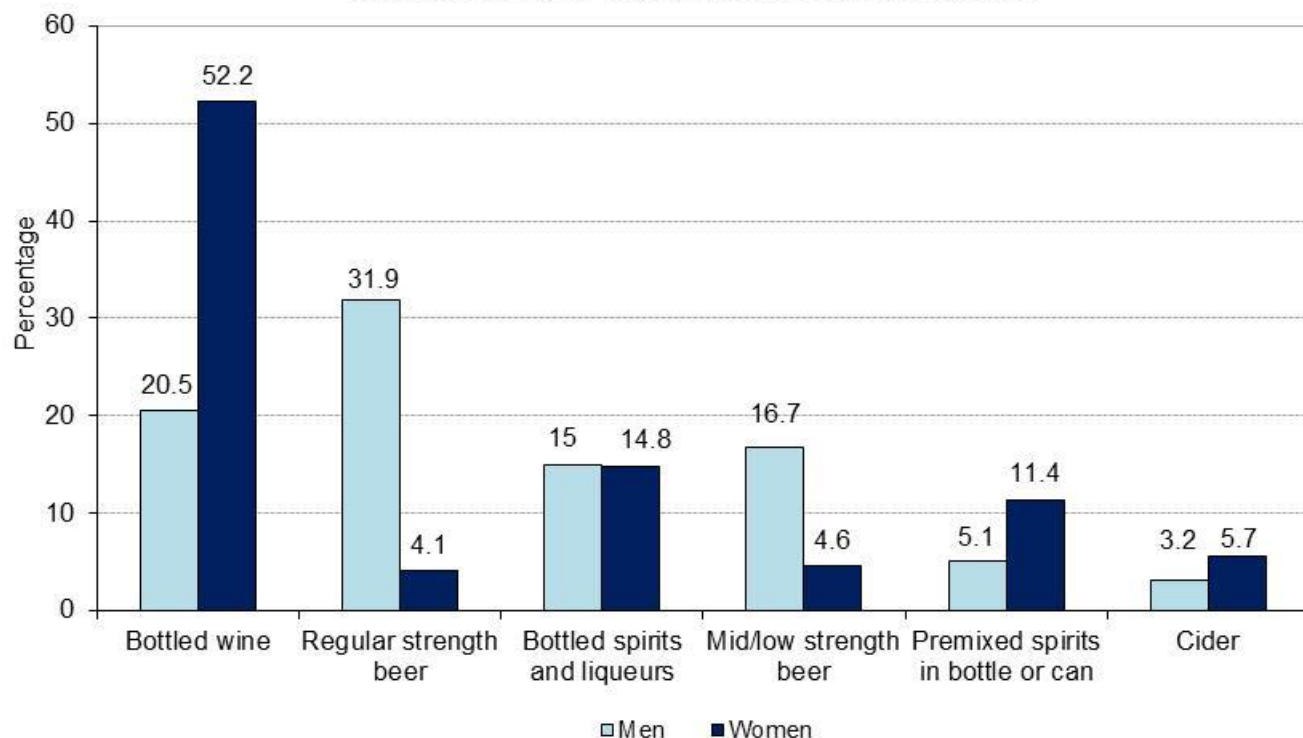


Figure 27 indicates that men and women have different drink preferences. A higher proportion of men ‘usually’ consumed regular strength beer (32% vs. 4.1% of women) whereas a higher proportion of women ‘usually’ consumed bottled wine (52% vs. 21%) and premixed spirits (11% vs. 5.1%). This was broadly consistent with 2013 data, although the proportion of men usually consuming regular strength beer decreased in 2016 (from 36.3% in 2013) and the proportion usually consuming mid/low-strength beer increased (11.9% in 2013). The proportion of women usually consuming premixed spirits increased (8.7% in 2013), as did the consumption of all strength beer (from 5.9% in 2013 to 8.7% in 2016).

Figure 27: Drink preferences: main drink usually consumed by South Australians aged 14 years and over, by sex, 2016*

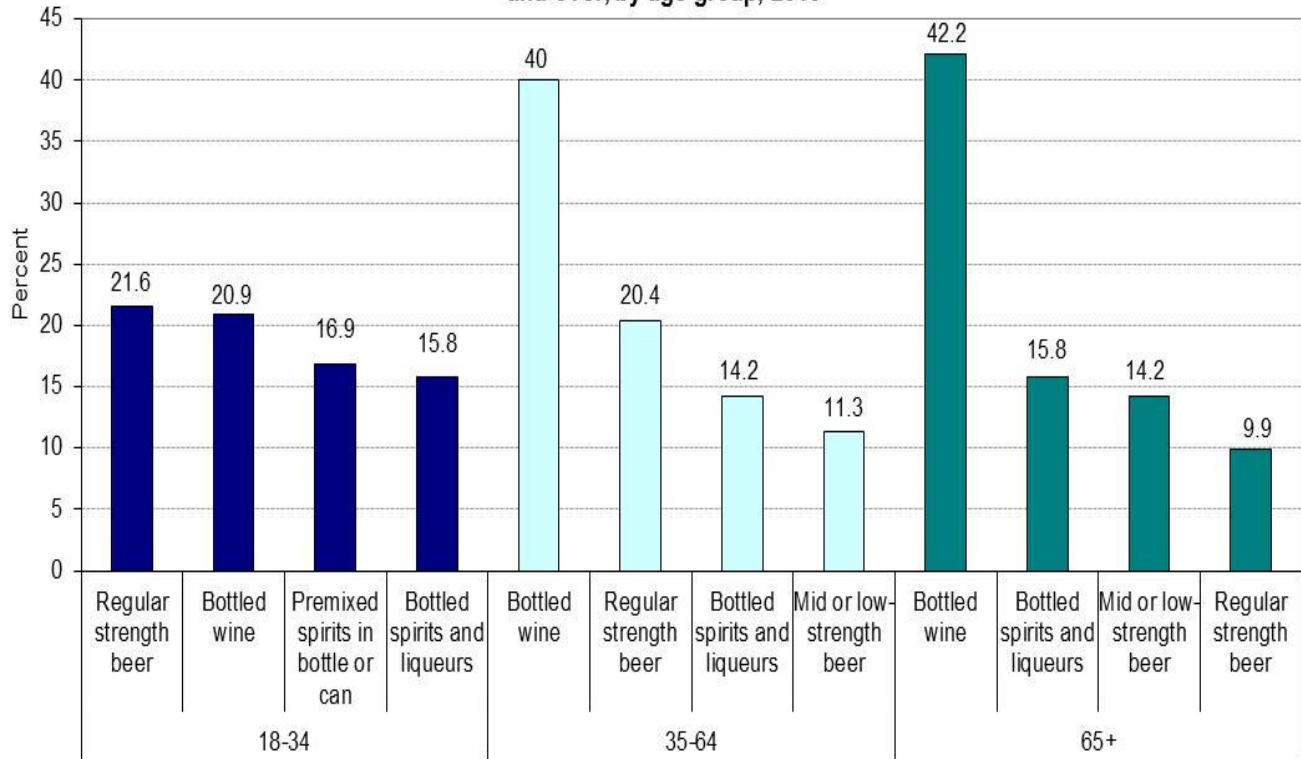


* Only the top six drink preferences are included in the figure.
Source: National Drug Strategy Household Survey 2016.

Figure 28 shows that South Australians aged 18-34 years 'usually' consumed regular strength beer (21.6%) or bottled wine (20.9%), whereas the majority aged 35 years and over 'usually' consumed bottled wine (40-42%). Only 9.9% of those aged 65 years and over 'usually' consumed regular strength beer, compared with 20.4% of those aged 35-64 years and 21.6% of those aged 18-34 years. Bottled spirits were 'usually' consumed by similar proportions in each age group, 14-16%. These data are similar to that of 2013.

A different pattern emerges with the drink preferences of those aged 12-17 years (Figure 29). Underage South Australian drinkers 'usually' consumed premixed spirits in a bottle or can (46.1%), cider (19.6%) and bottled spirits and liqueurs (12.5%). Note a change from 2013, where 20% 'usually' consumed bottled wine and 12% regular strength beer. In 2016, cider emerged as the second most common alcoholic drink 'usually' consumed, and no 12-17 year old reported 'usually' consuming bottled wine. This is consistent with national data, where 40.6% 'usually' consumed premixed spirits in a bottle or can, followed by bottle spirits and liqueurs (14.9%). However, only 9.5% of Australians aged 12-17 years 'usually' drank cider, and 19.5% 'usually' drank any type of beer (15% of South Australians).

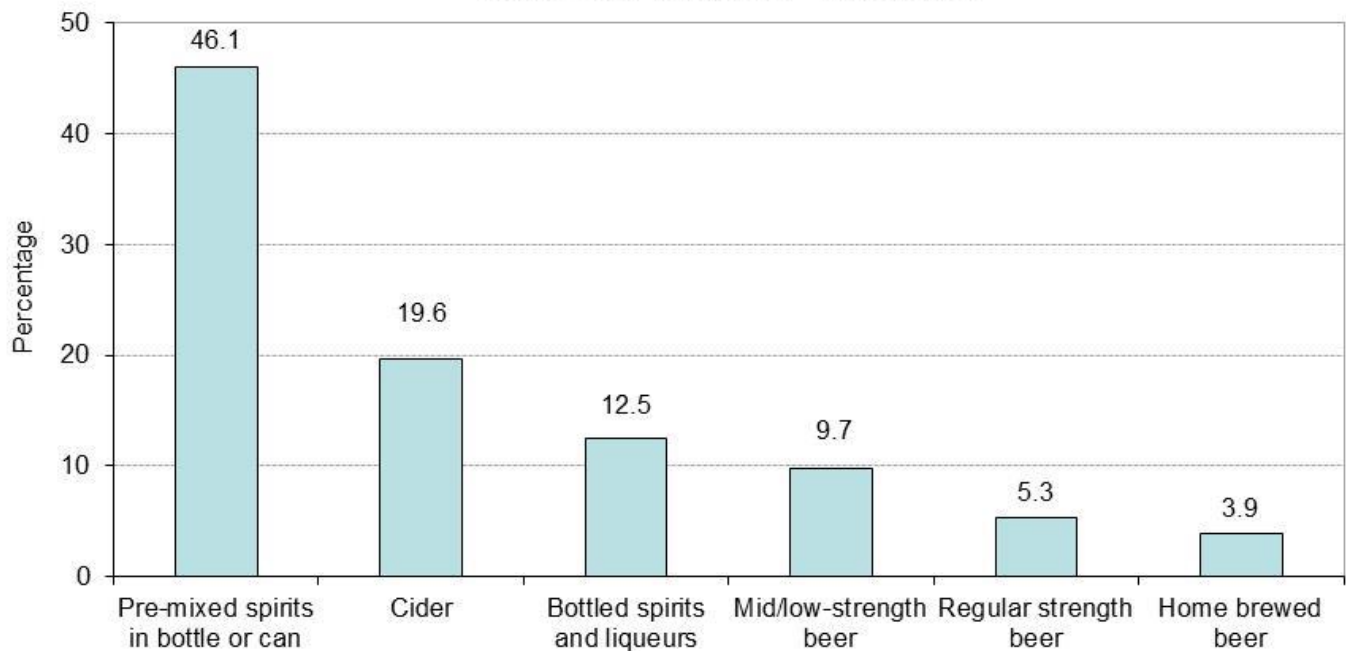
Figure 28: Drink preferences: main drink usually consumed by South Australians aged 18 years and over, by age group, 2016*



*Only the top four drink preferences are included in the figure.

Source: National Drug Strategy Household Survey 2016.

Figure 29: Drink preferences: main drink usually consumed by South Australians aged 12-17* years, 2016



*

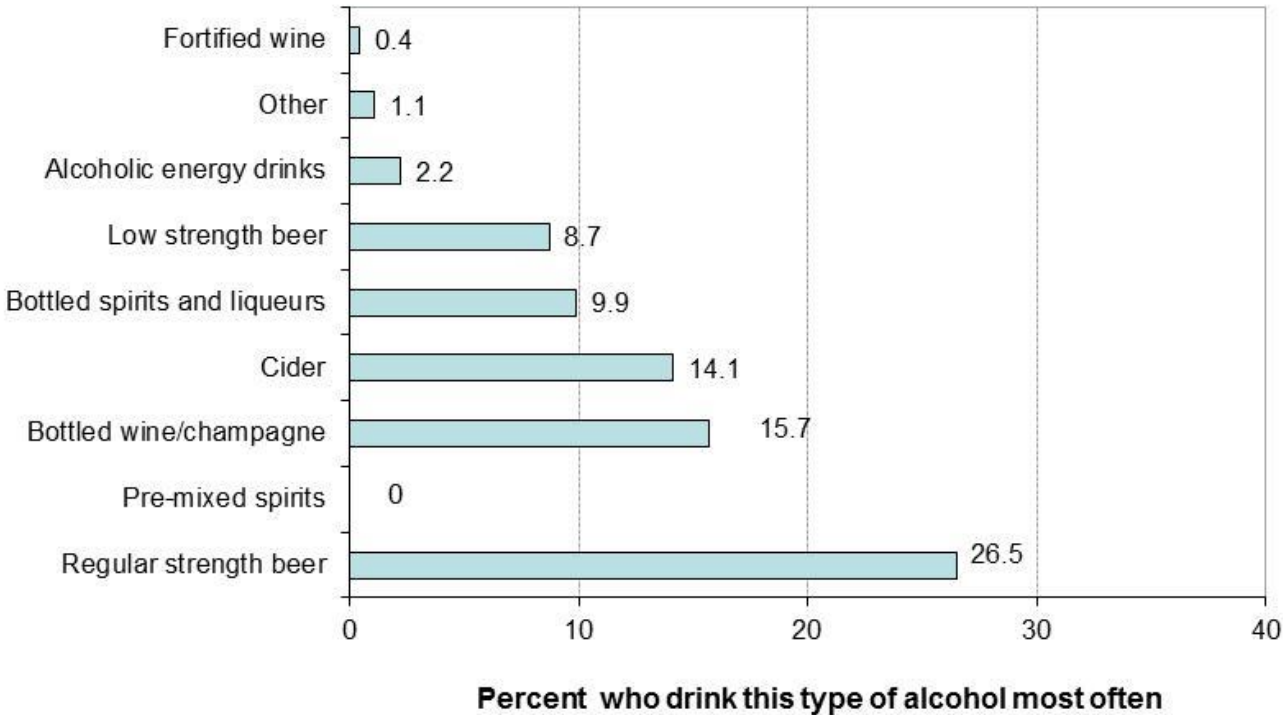
Only the top four drink preferences are included in the figure. Estimates for all types of beer for those aged 12-17 years have a relative standard error of 25% to 50% and should be used with caution.

Source: National Drug Strategy Household Survey 2016.

Figure 30 shows the main drink usually consumed by South Australian secondary school students in 2014. Around 27% usually drank beer, followed by pre-mixed spirits (21.4%). A further 15.7% usually drank bottled wine or champagne and 14.1% drank cider. Alcoholic energy drinks were included for the first time in 2014; and were the main drink consumed by only 2.2% of students. In 2011, 30% usually drank pre-mixed spirits and 20% bottled spirits and liqueurs. Similar proportions reported that their main drink was regular strength beer (23.3%) or bottled wine (16%). Note that comparisons between 2011 and 2014 should be interpreted with caution due to a methodological change in 2014 in how consent to participate in the ASSADS was obtained.

These results are strikingly different from those reported in the NDSHS (see Figure 29), where more than twice as many young South Australians gave pre-mixed spirits as their most commonly consumed alcoholic drink (46.1% compared with 21.4% in the ASSADS). This may be due to methodological differences between surveys (see Appendix 1), as well as behavioural differences between secondary school students and 12-17 year olds in the general population..

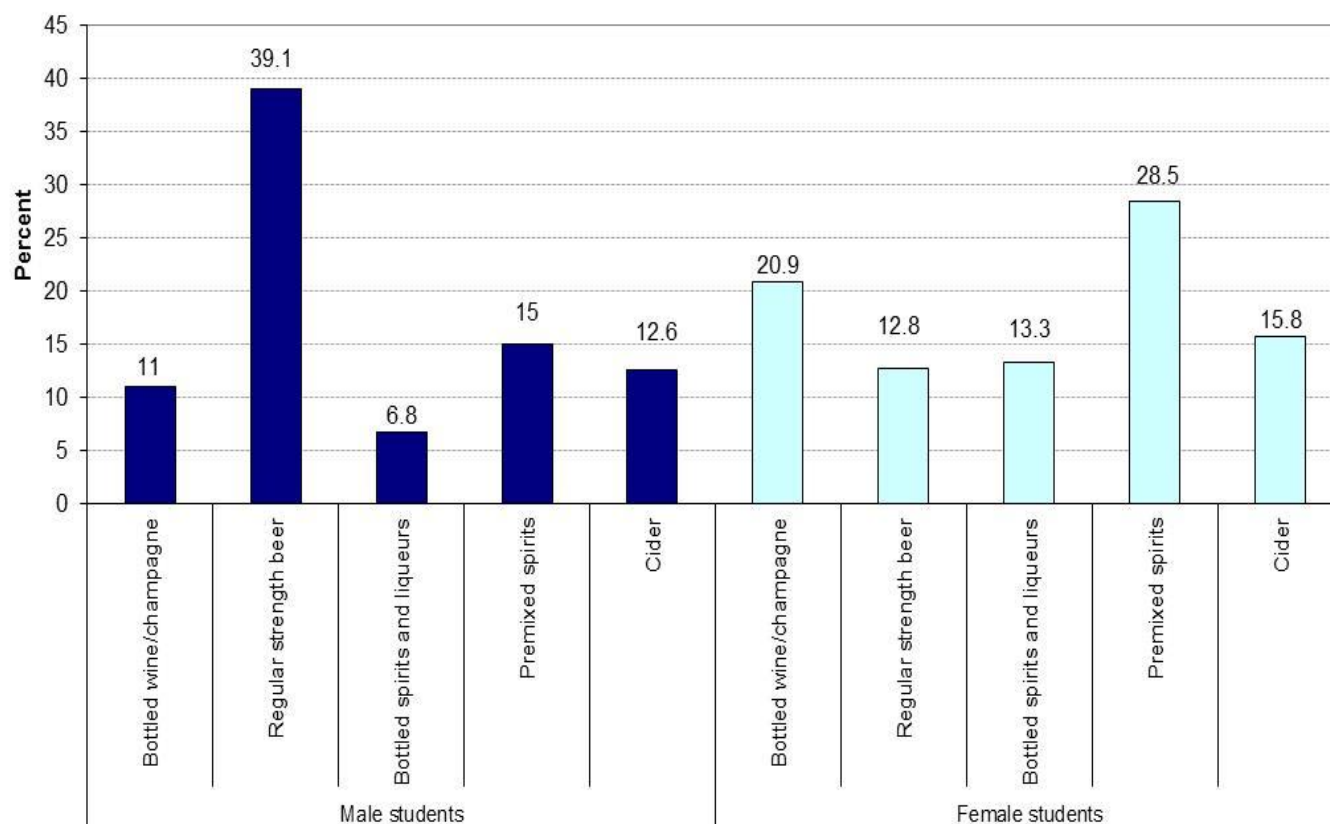
Figure 30: Drink preferences: main drink usually consumed by South Australian secondary school students aged 12-17 years, 2014



Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014.

Figure 31 shows that male secondary school students were significantly more likely to usually drink regular strength beer than their female counterparts (39.1% vs. 12.8%) and almost double the proportion of female students reported that they usually drank bottled wine/champagne (20.9% vs. 11%). Female students’ drink preferences were most commonly premixed spirits (28.5%); only 15% of male students usually consumed these drinks. In 2014, cider was usually consumed by 12.6% of male students and 15.8% of female students.

Figure 31: Drink preferences: main drink usually consumed by South Australians aged 12-17 years, by sex, 2014*



*Only the top five drink preferences are included in the figure.

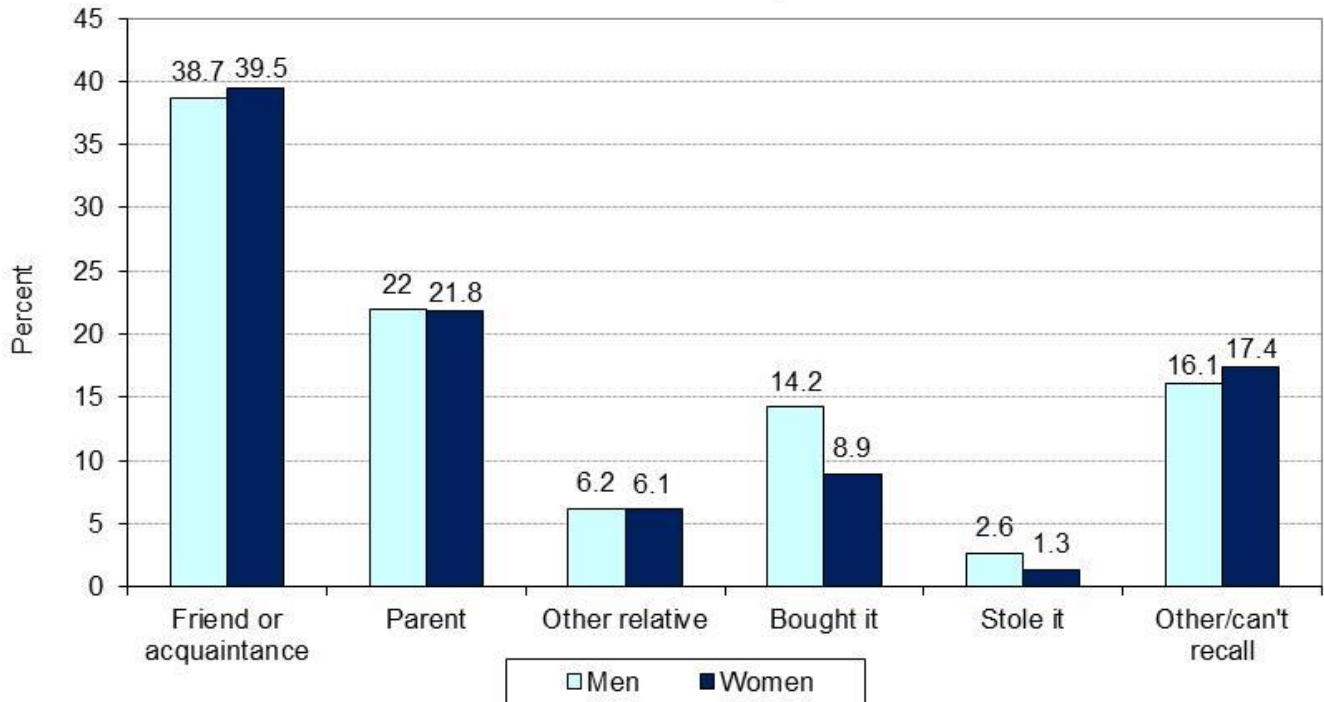
Source: Australian Secondary Students Alcohol and Drug Survey 1996-2014.

Source of alcohol supply

Figure 32 shows the source of supply for South Australians' **first** alcoholic drink, for men and women. The majority were supplied by a friend or acquaintance (around 40%), followed by a parent (22%). A further 11.5% purchased it themselves (14.2% of males and 8.9% of females). These proportions were similar to those in 2013.

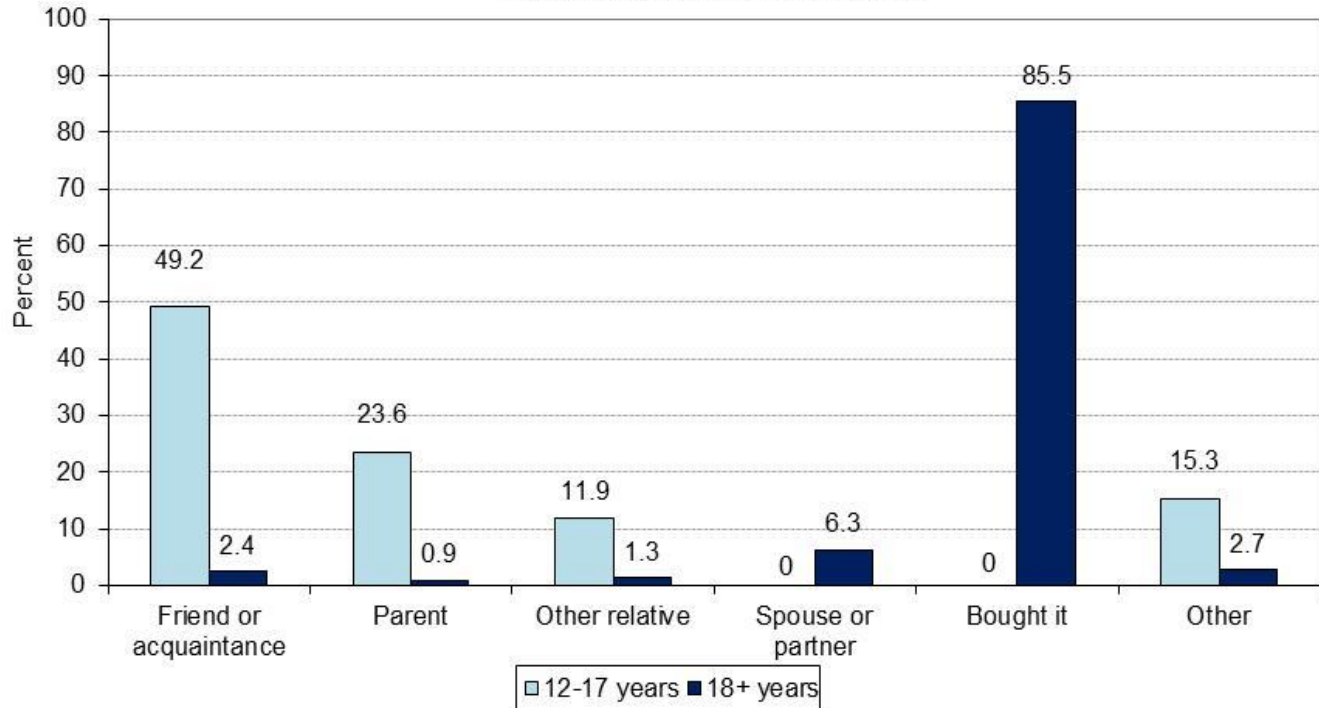
Figure 33 shows the **usual** source of supply for South Australians by age. Unsurprisingly, those aged 12-17 years were more likely to 'usually' obtain alcohol from friends or acquaintances than those over the age of 18 (49.2% vs. 2.4%) and this was a substantial increase from 2013, where 34.2% reported 'usually' obtaining alcohol from friends. In addition, no 12-17 years olds in 2016 reported buying alcohol themselves, compared with 88.1% of those aged 18 years and over. Almost one-quarter (23.6%) of underage drinkers 'usually' obtained alcohol from their parents; this is much lower than in 2013 (36.7%). National data indicate that 31.9% of underage drinkers in 2016 reported usually obtaining alcohol from their parents, and 42.3% from friends or acquaintances.

Figure 32: Source of first alcoholic drink for those aged 14 years and over, by sex, South Australia, 2016



Source: National Drug Strategy Household Survey 2016.

Figure 33: Usual source of alcohol for those aged 12-17 years and 18 years and over, South Australia, 2016



Source: National Drug Strategy Household Survey 2016.

Figure 34 shows that the usual sources of the most recent alcoholic drink consumed by South Australian secondary school students aged 12 to 17 years were parents and friends. There was a significant increase in the proportion of students obtaining alcohol from their parents from 2011 to 2014 (40.5% to 51.1%).

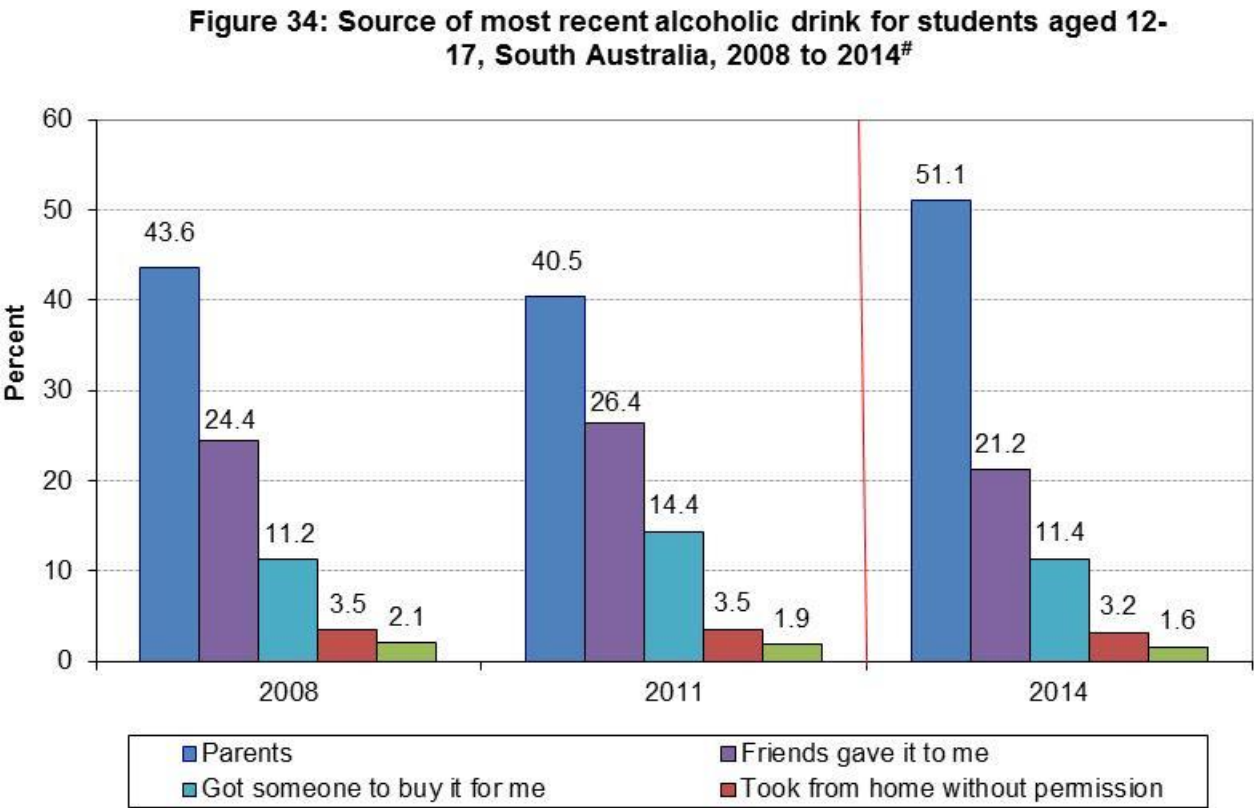
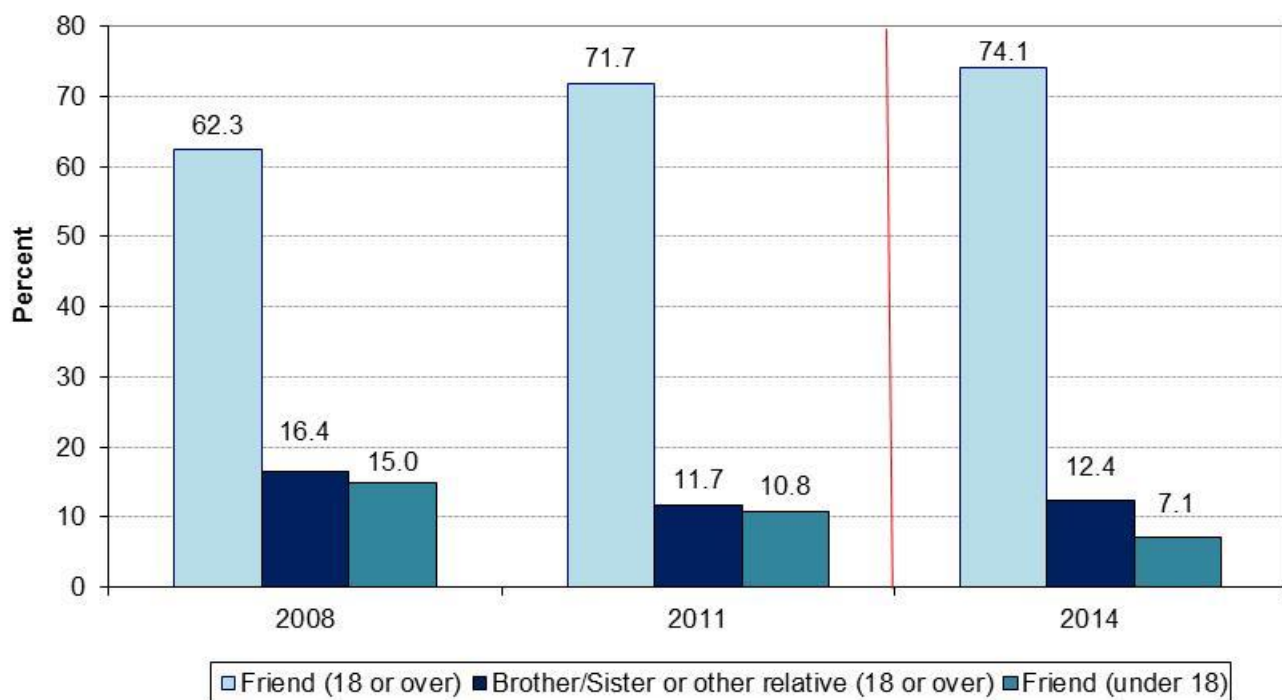


Figure 35 shows the proportion of students aged 12 to 17 years who got someone else to buy their most recent alcoholic drink. The majority in all three surveys got a friend (aged 18 or over) to do so, followed by a relative aged 18 years or over, and a friend aged less than 18 years.

Figure 35: Purchaser of most recent alcoholic drink for students aged 12-17 years, 2008-2014*#



* For display purposes, only the top three sources are included in the figure.

Comparisons between 2011 and 2014 should be interpreted with caution due to a methodological change in 2014 in how consent was obtained from students to participate in the survey.

Source: Australian Secondary Students Alcohol and Drug Survey 2005-2014.

Alcohol-Related Incidents and Activities

Table 3 shows that in 2016, 23.1% of South Australians aged 14 years and over reported that they had been the victim of an alcohol-related incident in the previous 12 months (predominantly verbal abuse), a significant decrease from 26.4% in 2013. This change over time was seen among men and women, for both physical and verbal abuse. In contrast, there was an increase in women reporting being put in fear, from 12.1% to 13.3%. These data are consistent with national data, with a significant decrease between 2013 (26%) and 2016 (22.2%) in the proportion of Australians reporting that they were victims of any alcohol-related incident. There were also significant decreases among men for all types of incidents, and significant decreases among women for verbal abuse and for any incident.

Table 3: Victims of alcohol-related incidents in the previous 12 months: proportion of South Australians aged 14 years and over, by sex, 2013 & 2016

Incident	Men		Women		Persons	
	2013	2016	2013	2016	2013	2016
Verbal abuse	25.7	21.1	21.1	17.6	23.4	19.3
Physical abuse	10.2	7.4	7.0	6.4	8.6	6.9
Put in fear	11.0	9.0	12.1	13.3	11.5	11.1
Any incident	28.7	23.9	24.1	22.2	26.4	23.1

Source: National Drug Strategy Household Survey 2013 & 2016.

South Australian men were more likely than women to have been victims of alcohol-related incidents (28.7% vs. 24.1% were the victim of at least one incident in 2013 and 23.9% vs. 22.2% in 2016). This was the case for both physical and verbal abuse, but women were more likely to report that they had experienced being put in fear (13.3% vs. 9% of men). Findings are consistent with those reported nationally.

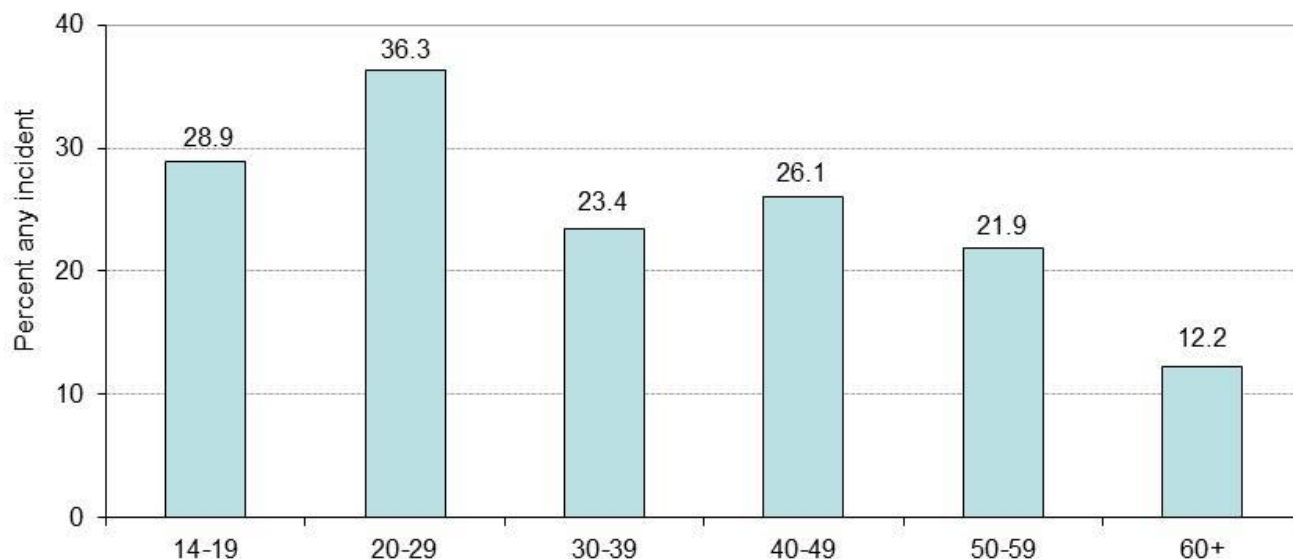
In the majority of cases of alcohol-related verbal abuse, victims of both sexes reported that the person responsible was a stranger (56.1% of men and 41.4% of women). Around one-fifth (21.1%) of women who had experienced verbal abuse stated that the person responsible was a current or ex-partner, compared with 9% of men. A further 17.5% reported that the person was a friend or acquaintance known to the victim (26.4% of men) and 20% a relative (8.5% of men).

For South Australians who had experienced alcohol-related physical abuse, 22.9% of women stated that the person responsible was a current or ex-partner (8.2% of men). There were 16.7% of women who reported that the person was a friend or acquaintance (31.6% of men) and 37.4% a relative (0% of men). The remaining 23% of women and 60.2% of men stated that the person responsible for their physical abuse was a stranger.

For those who reported being put in fear, 18.6% of women reported that the person was a current or ex-partner (4.9% of men), 19.8% a friend or acquaintance (20.8% of men) and 13.1% a relative (6.2% of men). In almost half (48.5%) of cases, women reported that the person responsible was a stranger (68.1% of men).

Figure 36 shows that South Australians aged 20-29 years had the highest proportion who reported being the victim of an alcohol-related incident (36.3%), followed by those aged 14-19 years (28.9%). This is consistent with national data, where 34.6% of those aged 20-29 years had been the victim of any alcohol-related incident. This was followed by those aged 30-39 years (25.3%).

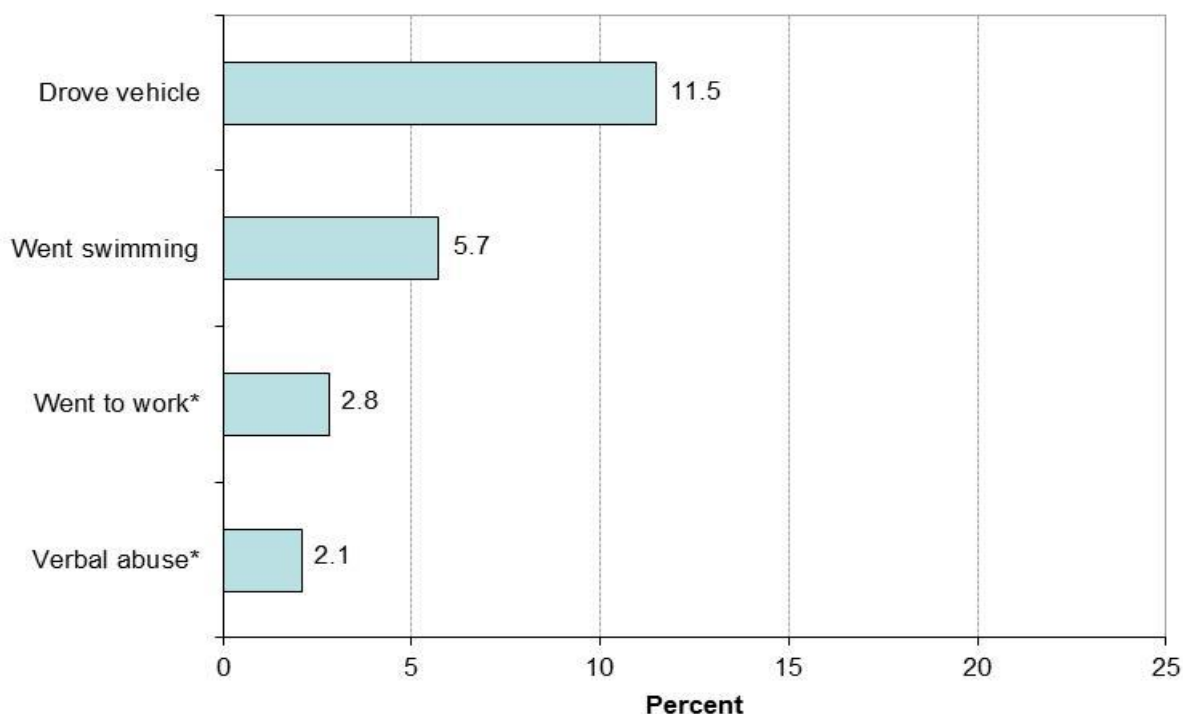
Figure 36: Victims of alcohol-related incidents in the previous 12 months: proportion of South Australians aged 14 years and over, by age group, 2016



Source: National Drug Strategy Household Survey 2016.

Figure 37 shows the activities that South Australians reported engaging in under the influence of alcohol that could potentially cause harm, either to themselves or to others. The most common was driving a vehicle (11.5%, a decrease from 15% in 2013) followed by swimming (5.7%), verbally abusing someone (2.8%) and going to work (2.1%).

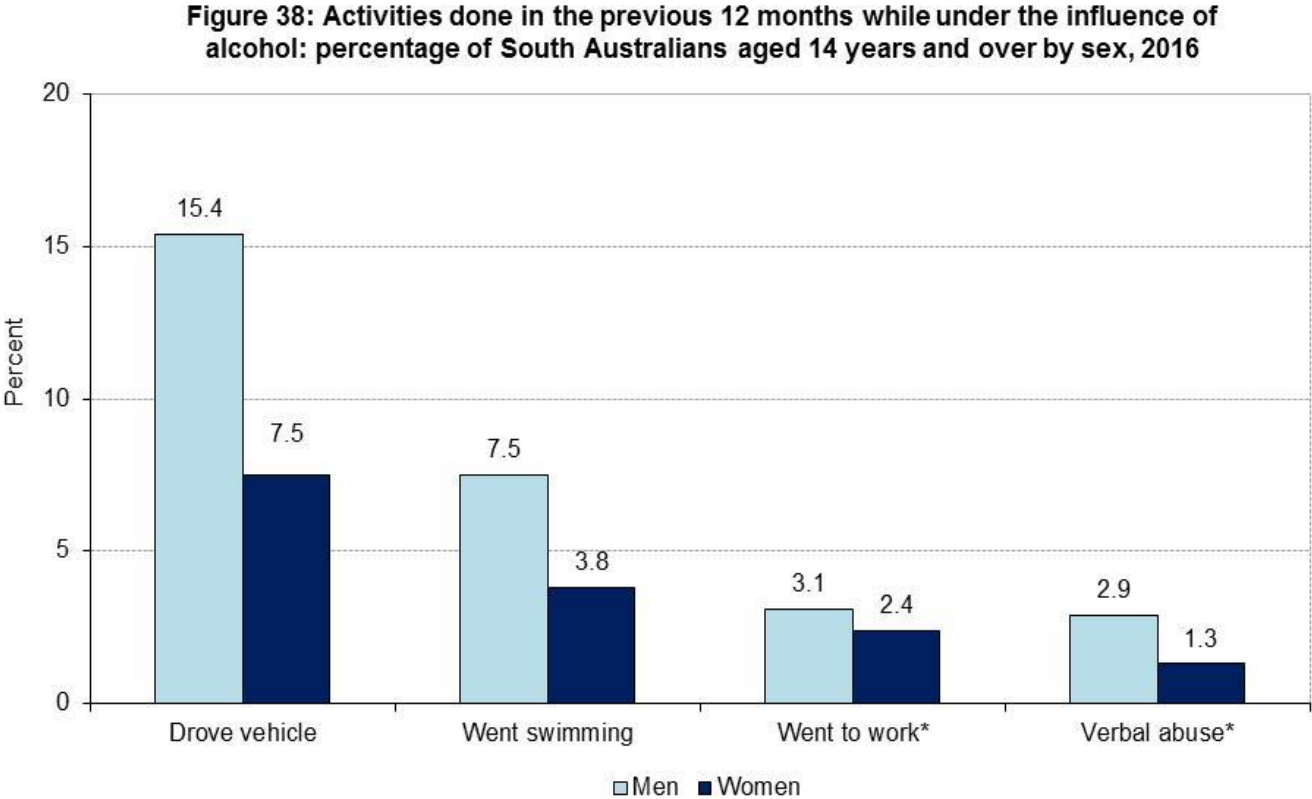
Figure 37: Activities done in the previous 12 months while under the influence of alcohol: percentage of South Australians aged 14 years and over, 2016



Source: National Drug Strategy Household Survey 2016. Only the top four activities are included due to small numbers in the other categories

*Estimates have a relative standard error of 25% to 50% and should be used with caution.

In 2016, just over 15% of men had driven a vehicle (a decrease from 22.6% in 2013), 7.5% went swimming (8.4% in 2013), 3.1% went to work (6.9% in 2013) and 2.9% had verbally abused someone (5.9% in 2013). The pattern for women was similar but the proportions were lower: 7.5% had driven a vehicle (unchanged from 2013), 3.8% had gone swimming (5% in 2013), 2.4% went to work (0.9% in 2013) and 1.3% had verbally abused someone (2.2% in 2013); see Figure 38.

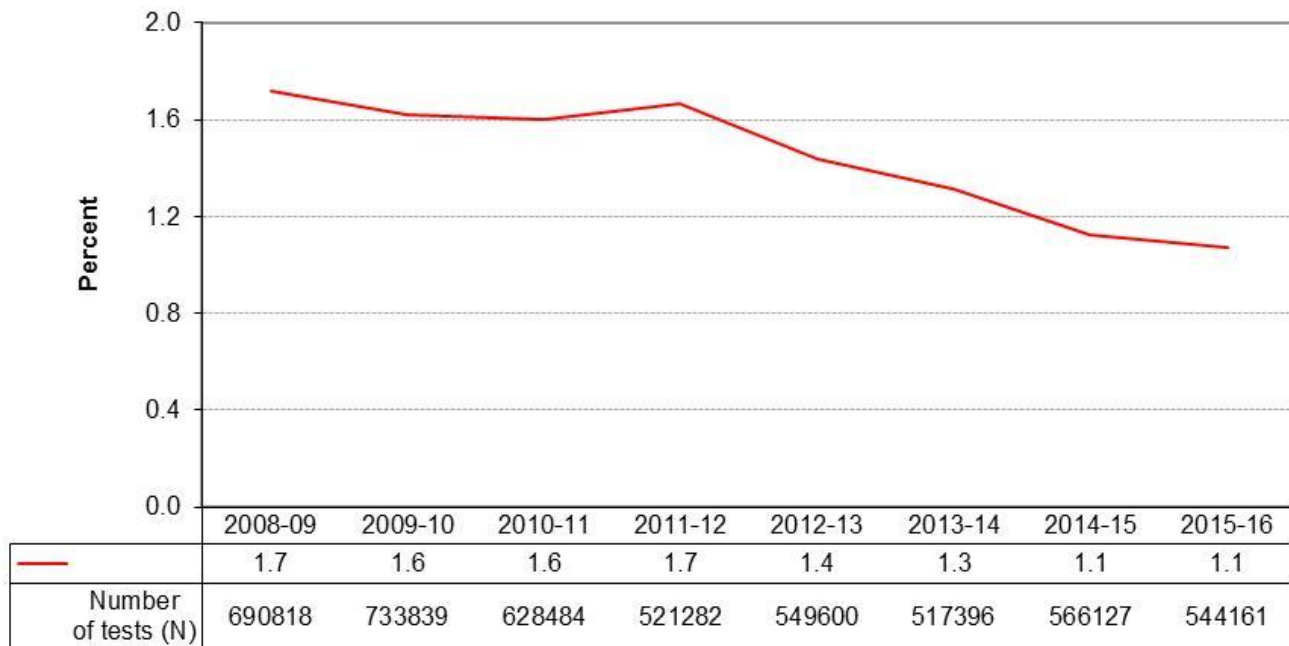


Source: National Drug Strategy Household Survey 2016.
Only the top four activities are included due to small numbers in the other categories.
*Estimates have a relative standard error of 25% to 50% and should be used with caution.

Alcohol-Related Offences

Figure 39 shows that drink driving offences as a proportion of the number of drink driving tests conducted changed little between 2008-09 and 2011-12, with a steady decrease from 2012-13. Data for both indicators were not available in 2016-17.

Figure 39: Percentage of drink driving related offences recorded as positive on Expiation Notices and Apprehension Reports, 2008-09 to 2015-16



Source: SAPOL Annual Reports, 2008-09 to 2015-16. http://www.SAPOLice.sa.gov.au/SAPOL/about_us/publications.jsp

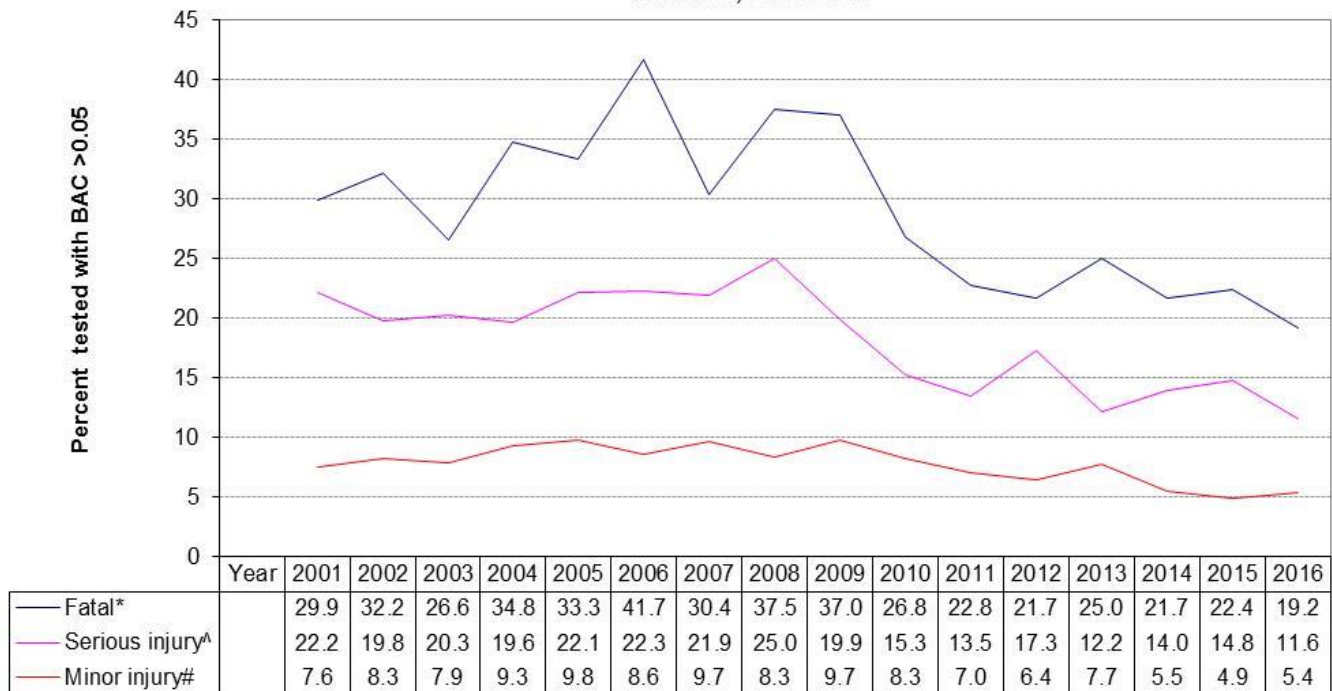
Alcohol-Related Road Crashes

Figure 40 shows the proportion of police reported road crash fatalities, serious injuries and minor injuries in South Australia where the driver/rider of the vehicle had an illegal BAC of >0.05g/100ml between 2001 and 2016. Not all crash drivers/riders are tested for blood alcohol content, but the proportion tested increases with crash severity (see Appendix 1 for more information). Between 2001 and 2016, 82% to 99% of fatality victims, 58% to 74% of serious injury victims and 34% to 54% of minor injury victims were blood alcohol tested.

In all years, a larger proportion of road fatality cases involved victims with an illegal BAC than road crash injury cases, in particular minor injuries. From 2001 to 2009, the proportion of road fatality cases with an illegal BAC fluctuated but has declined since then. However, numbers are small and it is therefore difficult to determine if this decline is of significance. The proportion of serious injury cases with an illegal BAC has also declined since 2009 after showing little variation since 2001. Decreases are likely due to many factors, but may include the following: in July 2008 the expiation fee for Category 1 drink driving offence increased to \$420 and 4 demerit points, previously \$164 and 3 demerit points (this has since increased); and on 1 May 2009 the Mandatory Alcohol Interlock Scheme commenced, where drivers have to sit out a 12 month disqualification before regaining their licences. Full-time mobile Random Breath Testing also began in June 2005 and has an increasing presence on the roads²⁶. The proportion of minor injury cases with an illegal BAC is low and has decreased by four percentage points since 2009.

²⁶ Personal communication Department of Planning, Transport and Infrastructure, August 2017

Figure 40: Percentage of drivers/riders killed and injured with an illegal BAC, South Australia, 2001-2016



*A person who dies within 30 days of a crash as a result of injuries sustained in that crash. ^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. #A person who sustains injuries requiring medical treatment, either by a doctor or in a hospital, as a result of a road crash and does not die as a result of those injuries within 30 days of the crash. **Source:** Department of Planning, Transport and Infrastructure Road Crash Database.

Alcohol-Related Drug Treatment Service Data

The following section presents data on the utilisation of alcohol and other drug treatment services by those who present with alcohol as their principal drug of concern (see Appendix 1 for more information).

Figure 41 shows the proportion of closed treatment episodes²⁷ where alcohol was the principal drug of concern for South Australia and for Australia. Episodes where alcohol was the principal drug of concern made up the majority of treatment episodes between 2006-07 and 2014-15. In South Australia, there was a substantial decrease between 2011-12 (50%) and 2016-17 (27%) in the proportion of episodes where alcohol was the principal drug of concern; in 2016-17, amphetamines were the most common principal drugs of concern, with alcohol second²⁸. Nationally, there was also a decrease between 2011-12 and 2016-17 (from 46% to 32%). Until

²⁷ A closed treatment episode refers to a contact period between a client and a service provider that has a defined start and end date. A client may be involved in more than one type of treatment episode at any one time (or may have more than one treatment episode of the same treatment type within the counting period) therefore the number of closed treatment episodes counted by the Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS) does not equate to the number of individuals who have received treatment in any one year

²⁸ An important reason why South Australia has a high proportion of episodes of treatment where amphetamines are the principal drug of concern and assessment only is the main treatment type is that data include assessment under the Police Drug Diversion Initiative. This program is legislated in South Australia, unlike other jurisdictions, and therefore results in a much higher percentage of assessment only services and a very high rate of engagement with amphetamine users. In addition, due to the Cannabis Expiation Notice legislation in South Australia, adult simple cannabis offences are not diverted to treatment and so are excluded from the data.

2012-13, South Australia had a greater proportion of treatment episodes where alcohol was the principal drug of concern compared with Australia as a whole.

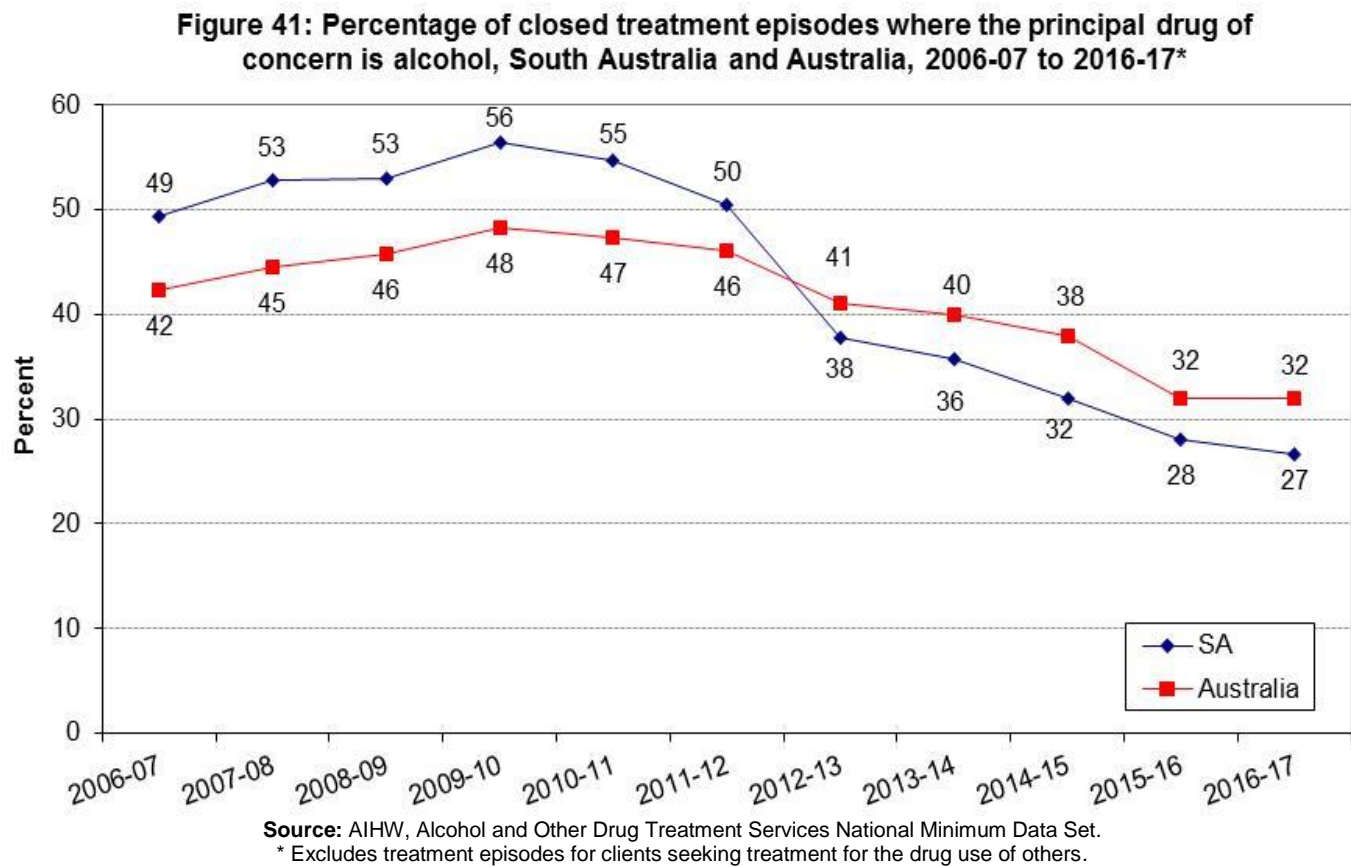
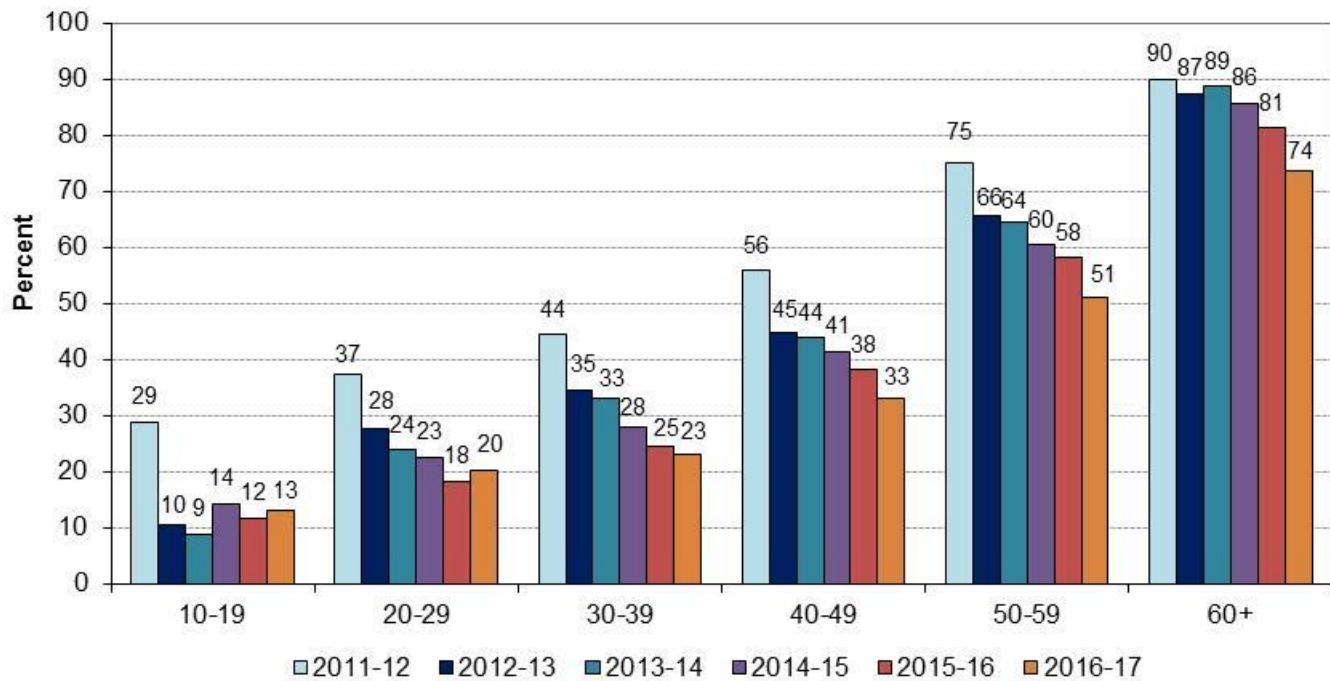


Figure 42 shows the proportion of closed treatment episodes with alcohol as the principal drug of concern by age group, from 2011-12 to 2016-17. In all years the proportion of closed treatment episodes where alcohol was the principal drug of concern increased with age. However, from 2012-13 there has been a decrease in the proportion of episodes where alcohol was the principal drug of concern among all age groups, which was most apparent among those aged less than 40 years. Men comprised the majority of treatment episodes where alcohol was the principal drug of concern (64% in 2016-17), but also comprised the majority for all principal drugs of concern (66% in 2016-17).

Figure 42: Percentage of closed treatment episodes where the principal drug of concern is alcohol, by age group, South Australia, 2011-12 to 2016-17*



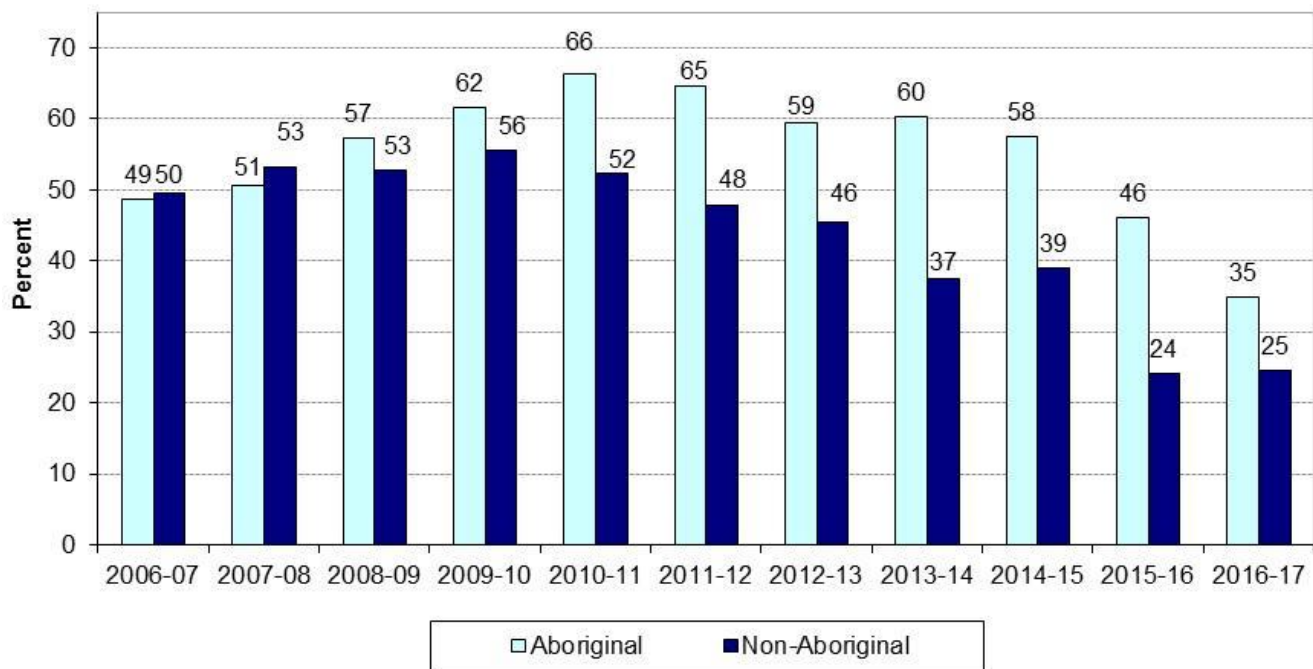
Source: AIHW, Alcohol and Other Drug Treatment Services National Minimum Data Set²⁹
 * Excludes treatment episodes for clients seeking treatment for the drug use of others

Figure 43 shows the proportion of closed treatment episodes for Aboriginal³⁰ and non-Aboriginal clients where alcohol was the principal drug of concern, from 2006-07 to 2016-17. For Aboriginal clients, this proportion increased from 49% in 2006-07 to 66% in 2010-11, followed by a decrease to 35% by 2016-17. For non-Aboriginal clients, there was an increase in the proportion of closed treatment episodes for which alcohol was the principal drug of concern between 2006-07 and 2009-10, after which time it decreased, falling to 25% by 2016-17.

²⁹ Percentage calculations for each age group equals the number of alcohol episodes over the number of all episodes

³⁰ The AODTS data collection codes these data as: 1. Aboriginal but not Torres Strait Islander origin; 2. Torres Strait Islander but not Aboriginal origin; 3. Both Aboriginal and Torres Strait Islander origin; 4. Neither Aboriginal and Torres Strait Islander origin; 5. Not stated/inadequately described. In this document, Aboriginal includes #1-3 and non-Aboriginal #4.

Figure 43: Percentage of closed treatment episodes among Aboriginal and non-Aboriginal clients where the principal drug of concern was alcohol, South Australia, 2006-07 to 2016-17



Source: AIHW, Alcohol and Other Drug Treatment Services National Minimum Data Set.

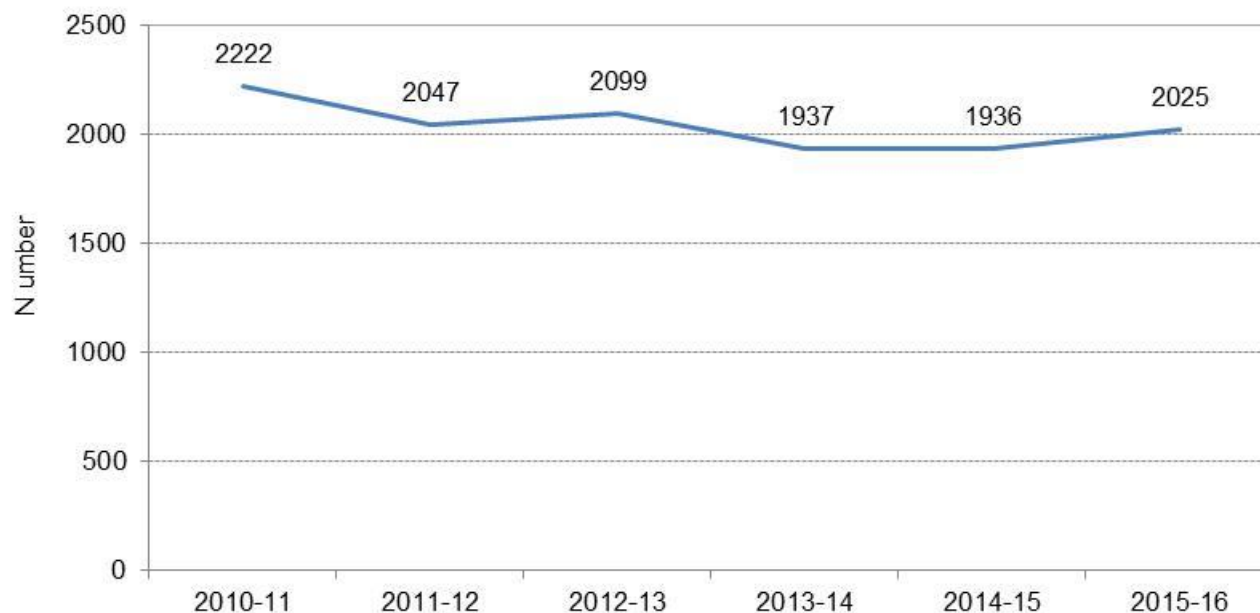
Ambulance Attendances

The South Australian Ambulance Service (SAAS) collects data on ambulance attendances (where the patient was transported to hospital) involving alcohol. These identify the total number of incidents that SAAS attended and the number where the patient was identified as having overdosed on alcohol.

Alcohol overdose made up 1% of all SAAS transports between 2010-11 and 2015-16. Figure 44 shows that there was a small decrease over time, from 2222 in 2010-11 to 2025 in 2015-16. Although alcohol overdose was only involved in a small proportion of all ambulance attendances (0.8%-1.3%), the majority of all overdose cases were related to alcohol. Between July 2010 and June 2016, alcohol was involved in 49% of all overdose cases; 53% in 2010-11, 49% in 2011-12 and 2012-13 and 51% in 2013-14. In 2014-15 and 2015-16 there were small decreases to 46% and 45%, respectively³¹. Data were not available in 2016-17.

³¹ Note that in 2014-15, additional overdose categories were added: 'amphetamine overdose', and 'other overdose'

Figure 44: SA Ambulance Service (SAAS) transports for alcohol overdoses, 2010-11 to 2015-16



Source: South Australian Ambulance Data, South Australian Health Department

Alcohol-Related Emergency Department (ED) Presentations³²

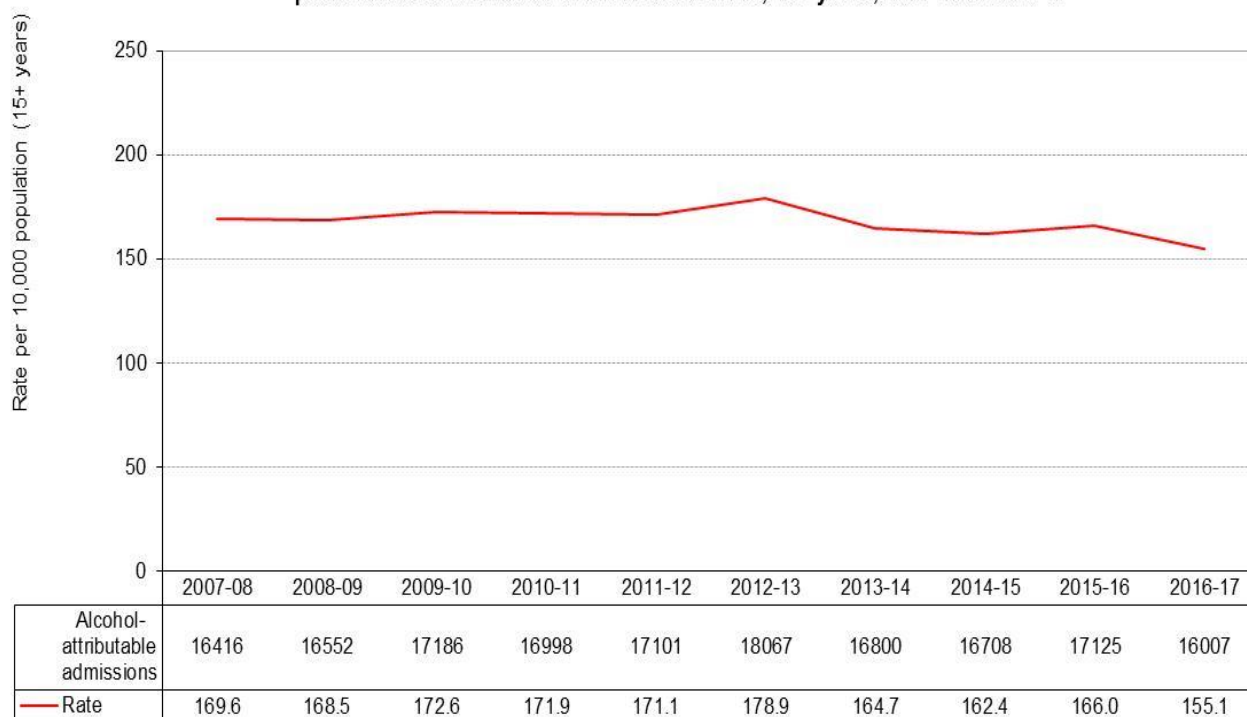
Alcohol related injury cases have been calculated using population specific alcohol-related aetiological fractions (PAAFs) developed by the National Drug Research Institute (NDRI)³³. These fractions calculate the proportion of presentations that can be attributed to alcohol consumption. Note that in 2017, the PAAFs were updated by applying revised alcohol prevalence estimates from the NDSHS. The old PAAFs were based on estimates from the 2007 survey; these remained the same for the period 2007-08 to 2009-10, after which time estimates were used from 2010 (for 2010-11 to 2012-13), 2013 (2013-14 to 2015-16) and 2016 (2016-17). These revisions have led to changes in the estimated number and rate per 10,000 population of metropolitan ED injury presentations attributable to the use of alcohol.

Figure 45 shows that the estimated number and rate of metropolitan ED (ED) injury presentations for persons aged 15 years and older attributable to the use of alcohol increased between 2007-08 and 2012-13, with decreases thereafter. Although there was a slight increase in 2015-16, the trend over this period has been a decrease in both number and rate.

³² Modbury Hospital began collecting reliable diagnosis data in 2009; therefore data prior to 2009-10 do not include ED presentations from this hospital.

³³[http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/EDE09C1C4B94F4AECA25796E0003C6C2/\\$File/AAAFED%20Final%20Report_Nov%202011.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/EDE09C1C4B94F4AECA25796E0003C6C2/$File/AAAFED%20Final%20Report_Nov%202011.pdf).

Figure 45: Estimated number and rate per 10,000 population of metropolitan emergency department injury presentations attributable to the use of alcohol, 15+ years, 2007-08 to 2016-17



Population estimates for 2016-17 are based on the most recent ABS data (30 June 2016). Previous years' estimates are taken from ABS data as at 30 June in that year: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3235.0>

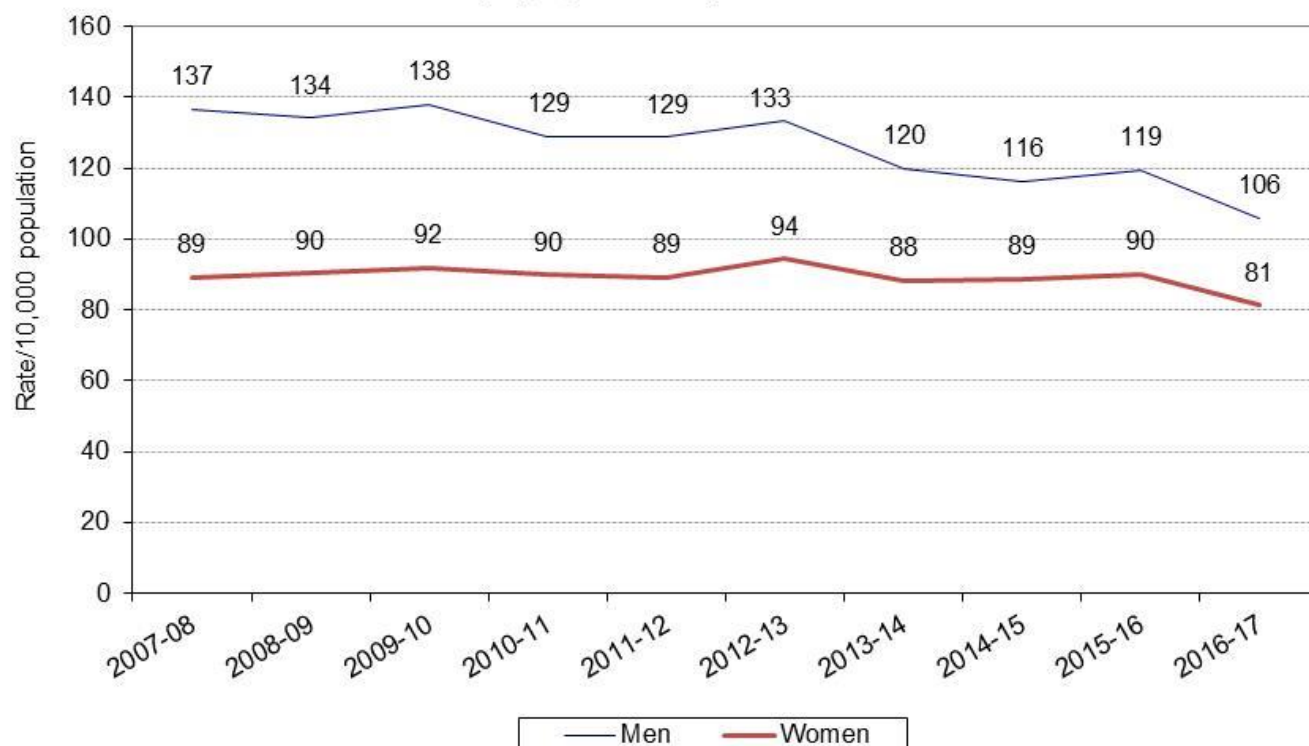
Source: Emergency Department Data Collection (EDDC), South Australian Health Department.

Figure 46 presents the rate of ED injury presentations by sex for those *where it was estimated³⁴ that more than four standard drinks were consumed in the six hours prior to injury*. The rate among men was around 1.5 times higher than women in 2007-08, but decreased slightly, to 1.3 times higher by 2016-17. Among both men and women, there were decreases over this period in the rate of injury presentations where patients reported having consumed more than four standard drinks in the six hours prior to injury.

In each year, the highest rate of presentations was among those aged 15-19 years (155.6 per 10,000 population in 2016-17), followed by those aged 20-29 years (110.4 per 10,000 population in 2016-17). Interestingly, those aged 60 years and over had the next highest rate (92.1 per 10,000 population in 2016-17).

³⁴ Estimates were based on alcohol consumption levels derived from the National Drug Strategy Household Survey, as well as relative risk estimates associated with these levels. More information can be found in the NDRI report linked to in footnote #30, page 92.

Figure 46: Estimated rate per 10,000 population of metropolitan emergency department injury presentations attributable to the use of alcohol where more than four standard drinks were consumed in the six hours prior to injury by sex, 15+ years, 2007-08 to



Population estimates for 2016-17 are based on the most recent ABS data (30 June 2016). Previous years' estimates are taken from ABS data as at 30 June in that year: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3235.0>

Source: Emergency Department Data Collection (EDDC), South Australian Health Department.

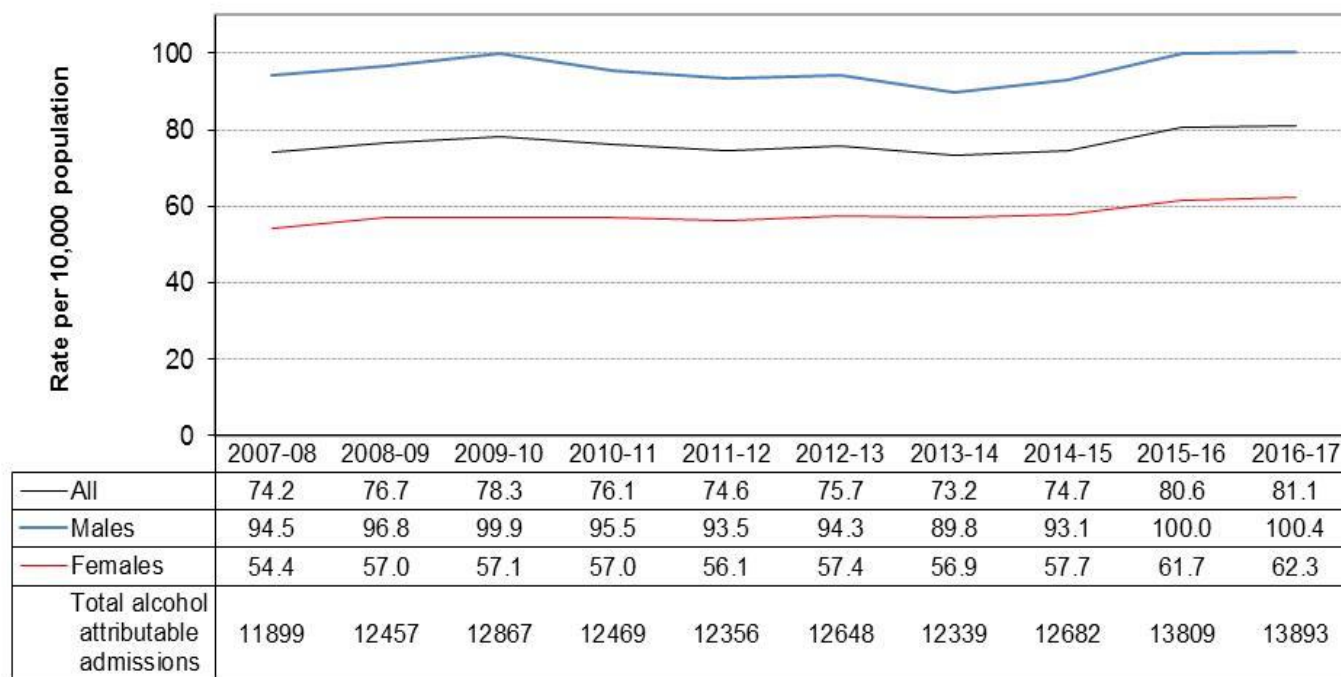
Alcohol-Related Hospitalisations

The number of alcohol-related hospitalisations is composed of the sum of all alcohol-related conditions calculated using aetiological fractions developed by the National Drug Research Institute (NDRI) (see Appendix 1 for more information)³⁵.

Figure 47 shows that the number and rate (per 10,000 population) of estimated hospitalisations attributable to the use of alcohol has increased over the 10 years that estimations have been made; and in 2016-17 was 81 persons per 10,000 population. This pattern was the same for both men and women, but rates of alcohol-related hospitalisations were 1.6 to 1.7 times higher among men in each year.

³⁵ Evans, M., Pascal, R., and Chikritzhs, T. (2010). Development of South Australian Specific Aetiologic Fractions and Estimates of Alcohol-Attributable Morbidity and Mortalities. Stage 1: Final report. Perth, National Drug Research Institute, Curtin University. Note that alcohol prevalence estimates have not yet been updated; results may be different from those published in the future.

Figure 47: Total numbers and rates of estimated hospitalisations attributable to the use of alcohol, by sex, 2007-08 to 2016-17

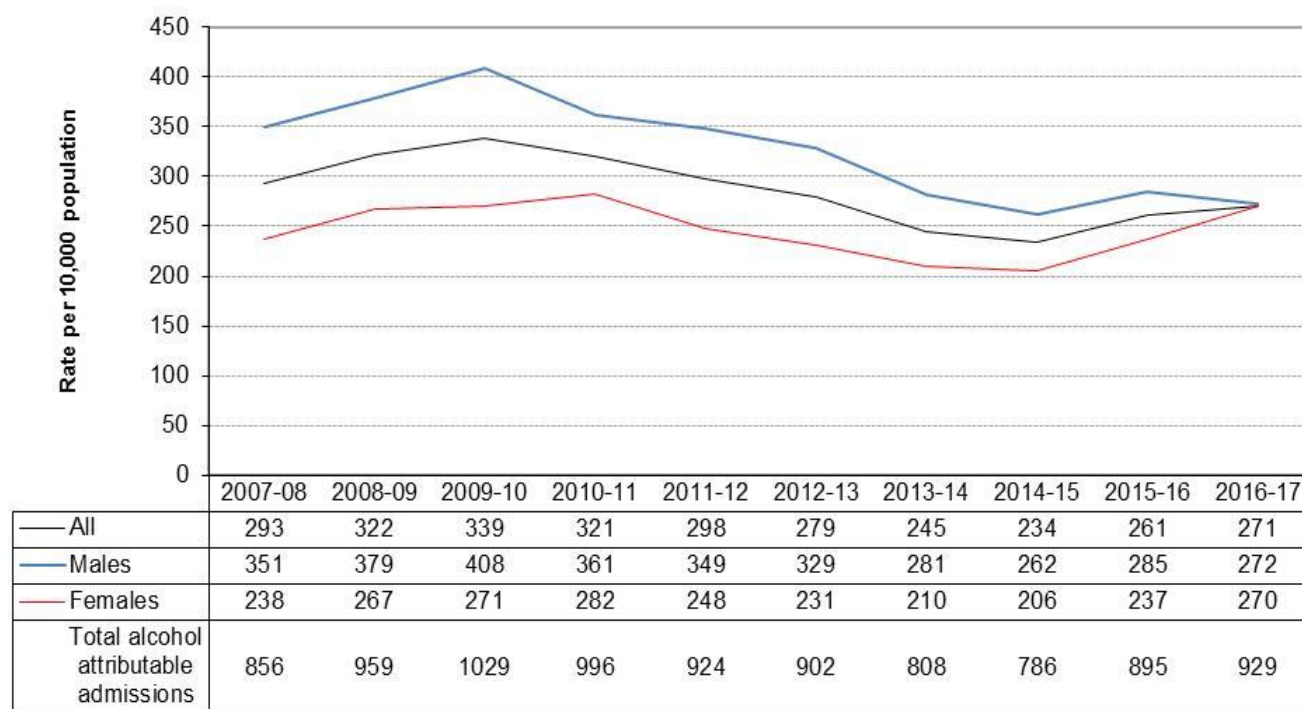


Population estimates for 2016-17 are based on the most recent ABS data (30 June 2016). Previous years' estimates are taken from ABS data as at 30 June in that year: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3235.0>

Source: Integrated South Australian Activity Collection (ISAAC), South Australian Health Department.

The estimated number and rate of alcohol-related hospitalisations among the South Australian Aboriginal population increased between 2007-08 and 2009-10, then decreased from 2009-10 to 2014-15, followed by an increase in the last two years of data collection (Figure 48). The rate among Aboriginal South Australians was almost four times higher than the overall South Australian population. Note that while Aboriginal men had a much higher rate of alcohol-related hospitalisations in the first seven years (1.3 to 1.5 times higher than women), the gap has narrowed in the last three years, and in 2016-17 the rate was almost identical.

Figure 48: Total numbers and rates of estimated hospitalisations attributable to the use of alcohol among Indigenous South Australians, by sex, 2007-08 to 2016-17



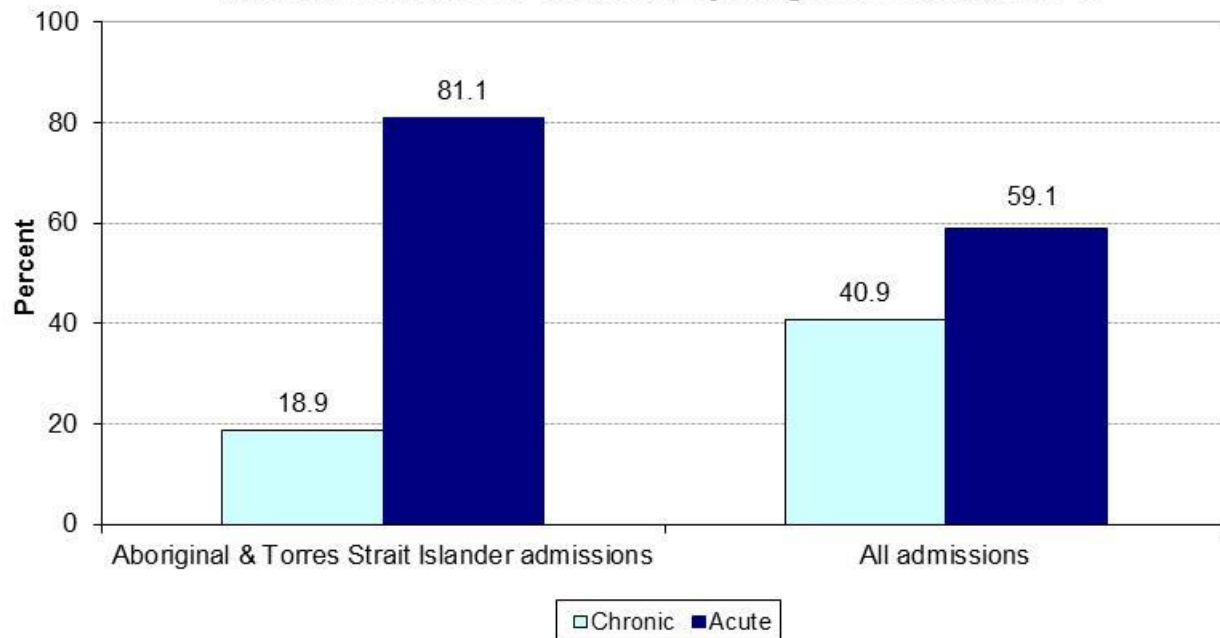
Population estimates for 2016-17 are based on the most recent ABS data (30 June 2016). Previous years' estimates are taken from ABS data as at 30 June in that year: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3235.0>

Source: Integrated South Australian Activity Collection (ISAAC), South Australian Health Department.

Figure 49 shows the proportion of chronic and acute alcohol-attributable hospitalisations for Aboriginal and non-Aboriginal patients in 2016-17³⁶. There is a striking difference between groups: among Aboriginal patients, 81% of alcohol-attributable hospitalisations were due to acute conditions (a total of 754 hospitalisations) and the remaining 19% for chronic conditions (a total of 175). In contrast, for all patients, 59% of all alcohol-attributable hospitalisations were due to acute conditions (a total of 8208) and 41% due to chronic conditions (a total of 5685).

³⁶ Chronic conditions include: chronic pancreatitis; psoriasis; ischaemic stroke; foetal alcohol syndrome; colon cancer; rectal cancer; oropharyngeal cancer; oesophageal cancer; liver cancer; laryngeal cancer; female breast cancer; alcohol dependence; epilepsy; alcoholic polyneuropathy; hypertension; alcoholic cardiomyopathy; supraventricular cardiac dysrhythmias; oesophageal varices; alcoholic liver cirrhosis; unspecified liver cirrhosis; cholelithiasis; haemorrhagic stroke; alcoholic pancreatitis; gastro-oesophageal haemorrhage. Acute conditions include: suicide; alcoholic psychosis; alcohol abuse; alcoholic gastritis; all alcohol poisoning; aspiration; acute pancreatitis; falls; fire injuries; drowning; injuries; assault; child abuse; hospitalisations pedestrian; hospitalisations non-pedestrian

Figure 49: Percentage of estimated chronic and acute hospitalisations attributable to the use of alcohol, by Indigenous status, 2016-17



Source: Integrated South Australian Activity Collection (ISAAC), South Australian Health Department.

Alcohol-Related Deaths

The number of alcohol-related deaths was calculated using aetiological fractions developed by the National Drug Research Institute (NDRI) (see Appendix 1 for more information)³⁷; data are available from 2005-2011. This report only includes summary data on sex, age and Indigenous status; more detailed analyses are available in a statistical bulletin published in 2016³⁸.

Sex

Figure 50 shows that the estimated rate of alcohol-related deaths from 2005-2011 by sex, as well as the total number for each year, has decreased slightly over time. While the rate of non-alcohol-related deaths is similar between men and women³⁹, estimates indicate that 68% of all alcohol-related deaths from 2005 to 2011 were men. In addition, alcohol-related mortality rates among men were more than double that of women. This finding reflects alcohol consumption data from the SA Health Omnibus Survey⁴⁰, where men are significantly more likely than women to consume alcohol at levels that increase their risk of injury or disease over a lifetime (28% of men reported drinking an average of three or more drinks every day over the last 12 months, compared with 12% of women).

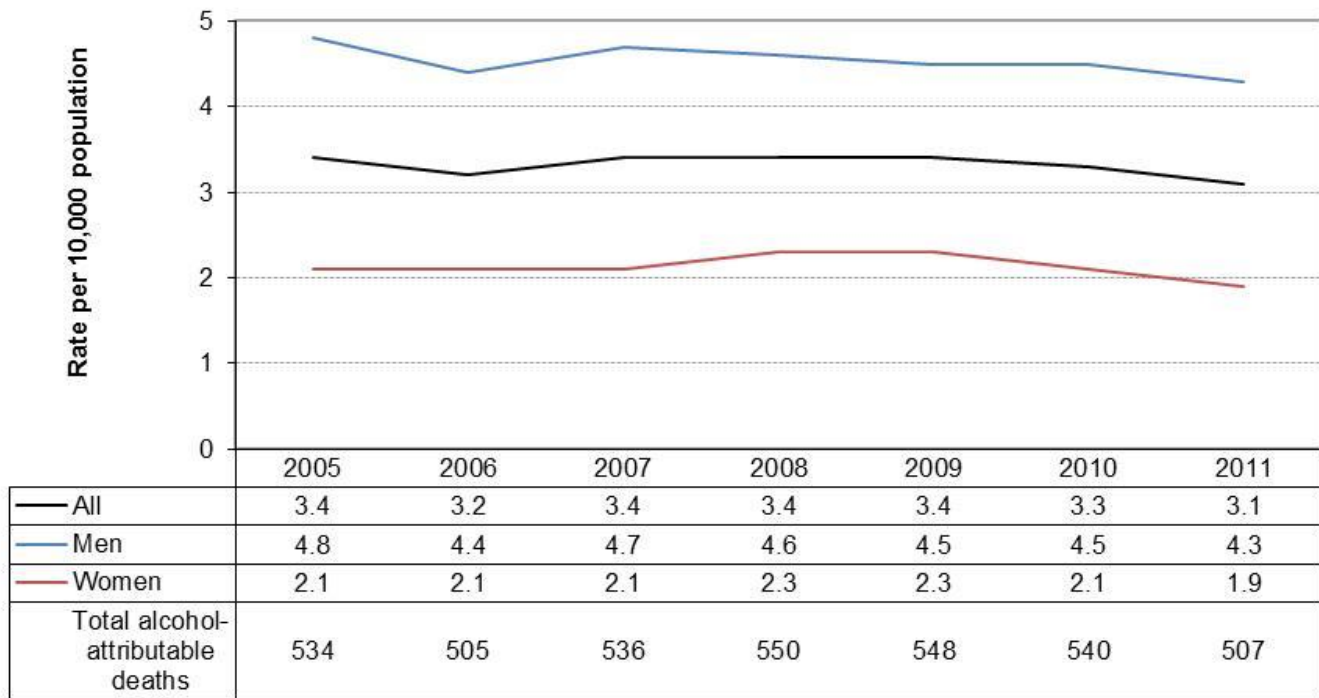
37 Evans, M., Pascal, R., and Chikritzhs, T. (2010). Development of South Australian Specific Aetiological Fractions and Estimates of Alcohol-Attributable Morbidity and Mortalities. Stage 1: Final report. Perth, National Drug Research Institute, Curtin University.

38 <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/resources/dassa+statistical+bulletion+number+10+-+may+2016>

39 See footnote 34.

40 <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/resources/statistical+bulletin+number+8+july+2015>

Figure 50: Total number and rate of estimated deaths attributable to the use of alcohol, by sex, SA, 2005-2011

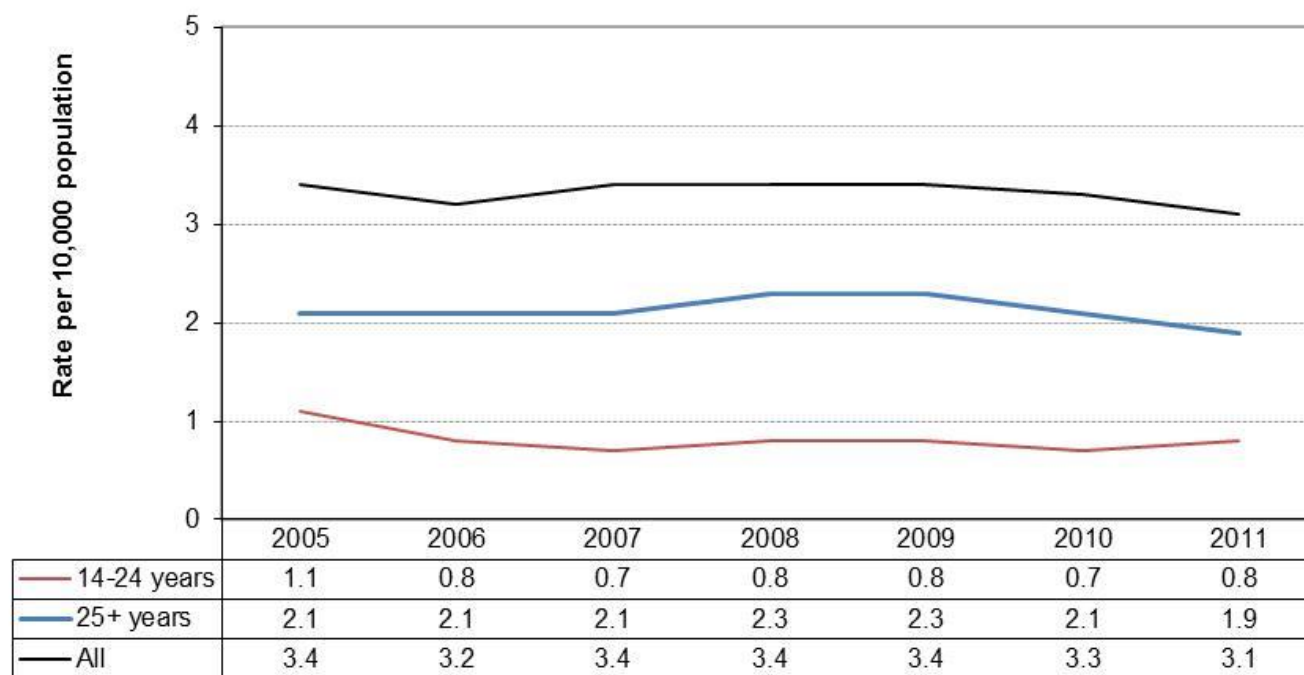


CR = Crude rates per 10,000 population as at 30 June for each year.

Age

Figure 51 shows the estimated rate and total number of alcohol-related deaths from 2005-2011 for 14 to 24 year olds and those 25 years and over. The rate was higher among those aged 25 years and over; this group accounted for around 96% of deaths. Once again, little variance is observed between the years.

Figure 51: Rate of estimated deaths attributable to the use of alcohol, by age group, SA, 2005-2011



CR = Crude rates per 10,000 population based on age-specific estimates as at 30 June for each year.

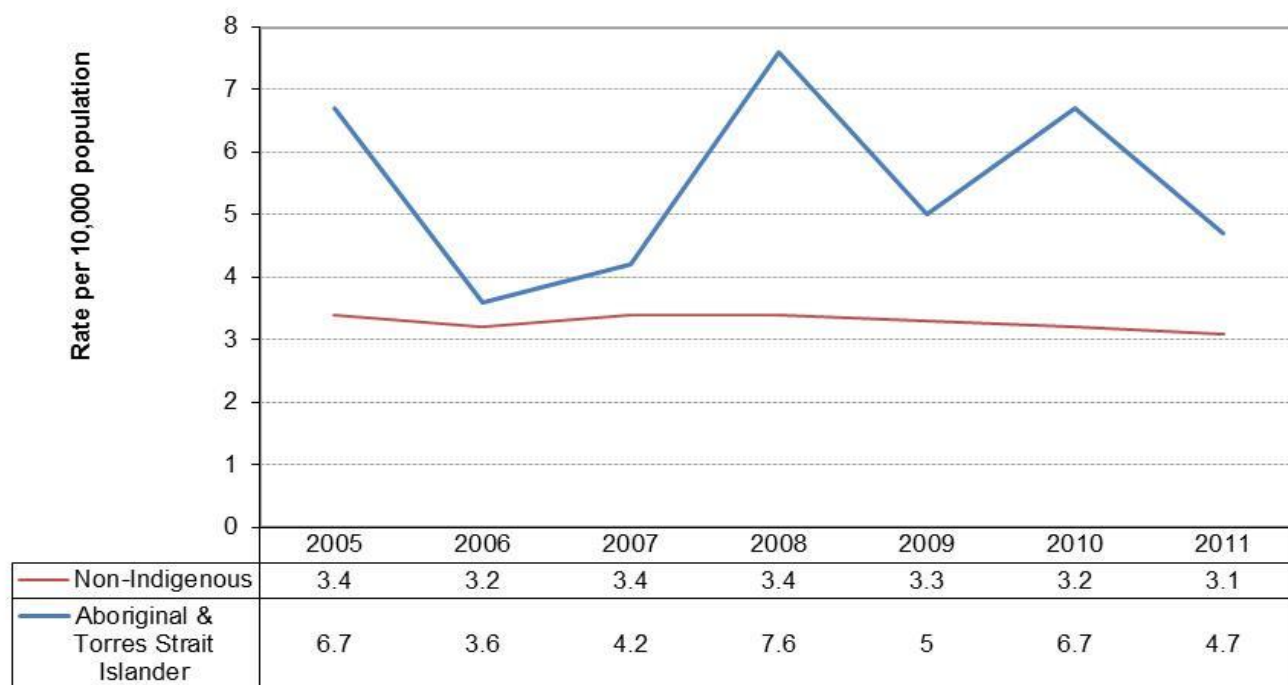
Aboriginal South Australians

Figure 52 presents the alcohol-related death rates for Aboriginal South Australians. Although in all seven years the number of Aboriginal deaths that were attributable to alcohol was much higher than that of other South Australians⁴¹, the alcohol-related death rate varied. In 2005, 2008 and 2010 the rate was double that of other South Australians, primarily due to the higher number of deaths among Aboriginal & Torres Strait Islander men. The rate in 2006 and 2007 was comparable, and was 1.5 times higher in 2009 and 2011. It is important to note, however, that numbers are small and population rates can vary considerably from year to year.⁴²

⁴¹ Calculated by subtracting the estimates for Aboriginal South Australians from those for all South Australians

⁴² Evans M. Pascal R. Chikritzhs T. *Development of South Australian Specific Aetiological Fractions and Estimates of Alcohol Attributable Morbidity and Mortalities*. Western Australia: National Drug Research Institute, Curtin University, 2010, page 38.

Figure 52: Rate of estimated deaths attributable to the use of alcohol, by Indigenous status, SA, 2005-2011



CR = Crude rates per 10,000 population based on age-specific estimates as at 30 June for each year.

Appendix 1: Descriptions of available data sources

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
POPULATION SURVEYS						
<p>National Drug Strategy Household Survey (NDSHS)¹</p> <p>National survey that provides information on drug use patterns, attitudes and behaviours</p>	<p>2010: 26,648 (2,069 SA)</p> <p>2013: 23,855 (1,930 SA)</p> <p>2016: 23,772 (SA 2,251)</p> <p>12 years and over</p> <p>Collected over 4-5 months</p> <p>Sample weighted by geographical stratification, household size, age and sex; population estimates based on most recent Census</p>	Australian Institute of Health & Welfare (AIHW)	Triennially since 1985	<p>Sample stratified by region (capital city/rest of state); divided into geographic areas called strata</p> <p>In capital cities, Census Collection districts (CDs) were selected with probability proportional to number of households in the relevant Census</p> <p>In country areas, the statistical local area (SLA) was selected for the first stage; number used varied according to population size. Within each SLA, CDs were selected with probability proportional to number of households in the relevant Census</p> <p>Interviewers then followed a comprehensive set of procedures to select households, including skip intervals and dealing with blocks of flats and units.</p> <p>All drop-and-collect in 2010 and 2013; in 2016, surveys could be completed via paper, online or telephone. Demographics may affect choice and are known to affect reporting of drug use</p>	<ul style="list-style-type: none"> • Large sample that is reasonably representative of the Australian population aged 12 years and over • Comprehensive prevalence and attitudinal data collected • Measures both risk of injury from a single occasion of drinking and risk of injury or disease over a lifetime using a long reference point; enables a comprehensive measurement of consumption patterns • Simpler methods of measuring consumption provide little to no information on patterns, and may miss infrequent and/or episodic drinkers 	<ul style="list-style-type: none"> • Self-completion: may misunderstand questions • Every three years • Changes to Alcohol Guidelines² in 2009; need to recalculate levels of risky drinking prior to the 2010 survey; standard drinks guide was also updated in line with the new Guidelines • Over sampling of less populated states and territories to return reliable estimates and reasonable sampling variations produced a sample that was not proportional to that of the Australian population • Response rate: 51% (2010); 49% (2013). • Excluded non-private dwellings, institutions and homeless persons • Prior to 2004, interviewed 14 years and over • Data on Aboriginal s limited to national comparisons due to small sample sizes • High Relative Standard Errors for some sex and age comparisons

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
<p>Australian Secondary Students Alcohol & Drug Survey (ASSADS)³</p> <p>National survey that investigates the use of licit and illicit substances among Australian school students</p>	<p>2008: 24,408 (2,870 SA)</p> <p>2011: 24,854 (2,875 SA)</p> <p>2014: Australia TBA (1,856 SA)</p> <p>12-17 years</p> <p>Government, Catholic and Independent schools</p> <p>Data weighted to bring sample in line with the distribution of the three sectors</p>	Cancer Council of Victoria	Triennially since 1984	<p>Schools stratified by the three education sectors and randomly selected from each sector</p> <p>Schools selected at the first stage and students selected within each school at the second stage</p> <p>Self-completion</p> <p>The sample size in 2014 is lower than in previous years. One likely cause of this is that for the first time, an active consent procedure was a condition of ethics approval; i.e. only children with a signed parental consent form could participate in the survey, as opposed to previous years where passive consent was allowed to be used; i.e. all parents were notified of the survey and could opt-out if they did not want their child to participate</p> <p>Furthermore, this meant that instead of the usual random selection student sampling procedure that was used in previous years, all students in the sampled year levels typically had to be invited to participate in order to achieve adequate student numbers (e.g. usually about 200 students would have to be invited to get 40 completed surveys)</p>	<ul style="list-style-type: none"> • Large sample size • Good source of information on drug use among those aged less than 18 years • Includes all education sectors • In 2008, data collection was extended to 19 Australian schools in rural areas and a sub-analysis was carried out on respondents who identified as Aboriginal (12-15 years; 1,317)⁴ 	<ul style="list-style-type: none"> • Self-completion: may misunderstand questions • Every three years • Limited to 12-17 year old students; those who left school excluded from study • Estimates for 16-17 year olds only generalisable to population of students not all aged 16-17 years • Those who do not complete school are more likely to use AOD, study may underestimate prevalence of use among the general population 16-17 years • Some younger students may exaggerate use • Excludes 18 year olds • Change in consent procedure in 2014 leading to reduced sample size and non-random selection of students within each school (see method of collection). • Recruitment of schools also proved more difficult than in previous years due to competing priorities and increased demands on schools and students

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
<p>Health Omnibus Survey (HOS)⁵</p> <p>Survey of a sample of South Australians that examines their lives and attitudes about health and wellbeing</p>	<p>Around 3,000 each year; note decreases in sample size in 2013 and 2014</p> <p>15 years and over</p> <p>Sample weighted to reflect SA population using sex, age and geographic area</p>	Harrison Research	Annually since 1990	<p>Metropolitan sample: 400 CDs selected based on most recent Census: probability of selection proportional to size. Within each CD a starting point was randomly selected; using a 'skip pattern' of every fourth household, 10 were chosen</p> <p>One interview per household</p> <p>Regional sample: towns with population of 10,000+ selected. Remainder chosen from centres with a population of 1,000+; probability proportional to size; selected as for metro</p> <p>Face-to-face interviews</p>	<ul style="list-style-type: none"> Conducted annually Representative of South Australians In 2011, question on alcohol modified to report consumption within the last 12 months Additional questions on consumption have been included that are in line with the NDSHS 	<ul style="list-style-type: none"> Data on consumption prior to 2011 do not allow for calculation of risky drinking using 2009 NH&MRC Guidelines. Questions do not specify a time-frame for consumption. Proportion of Aboriginal & Torres Strait Islanders is representative of the South Australian population but small numbers mean further comparisons are not possible Response rate declining (70% in 2004; 57% in 2017) No remote communities Potential underreporting of use due to face-to-face interviews Only interviewed respondents aged 15 years and over Call backs harder to achieve compared with phone surveys Less control over interviewers with face to face surveys Access difficulties (e.g. locked gates, apartments, safety)
<p>National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)⁶</p> <p>Now known as the Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS)</p> <p>Survey of health-related issues and actions, health status and health risk factors, socioeconomic status, and women's health</p>	<p>2004-05: 10,439 (1,106 SA)</p> <p>2012-13: 9,300 nationally (979 SA)</p> <p>18 years and over in 2004-05; 15 years and over in 2012-13</p> <p>Those aged 0-17 years were also interviewed, but not about alcohol consumption</p> <p>Collected over a 12-month period</p> <p>Sample weighted so survey estimates conformed to benchmarks at age, sex, and geographic levels</p>	Australian Bureau of Statistics (ABS)	<p>First one 2004-05; second iteration occurred in 2012-13</p> <p>Next iteration in approx. 2018-19</p>	<p>Stratified multistage sampling method used</p> <p>Non-community frame: CDs formed first stage selection units: stratified by state, remoteness classification and number of Aboriginal households in the CD. Sample of CDs then selected from each stratum with probability proportional to size, and a random selection of households within these CDs screened. In households with one or more usual residents, up to two adults (18 years and over) and up to two children (0 to 17 years) were randomly selected</p>	<ul style="list-style-type: none"> Data collected on drinking, smoking and substance use among a large and representative sample of Aboriginal Australians Good response rate (80% nationally in 2012-13; 76% in SA) Latest survey assesses risk according to the 2009 Guidelines but comparison not possible with earlier data 	<ul style="list-style-type: none"> Potential under-reporting of alcohol consumption due to face-to-face interviewing Every six years: limits comparisons with other surveys Excludes non-private dwellings (e.g. motels), and institutions (e.g. hospitals and prisons) Long data collection period Different selection and data collection methods for the community and non-community frames Information on consumption only collected on those aged 18 years and over; 15 years and over in the AATSIHS Alcohol risk measures: questions on consumption less comprehensive than NDSHS

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) (continued)				<p>Indigenous Community Frame (ICF): list of discrete communities in remote areas of QLD, SA, WA and NT. The ICF constructed using Census counts and information from the 2001 Community Housing and Infrastructure Needs Survey (CHINS). Communities selected with probability proportional to size. Within these, a random selection of households and one adult and up to one child were randomly selected</p> <p>Face-to-face interviews: Computer Assisted Interviewing (CAI) in non-community frame and pen and paper (PAPI) in community frame</p>		<ul style="list-style-type: none"> For the AATSIHS: lifetime risk was measured by asking those who drank in the previous two weeks about the day on which they consumed the most alcohol, followed by the last three drinking days in that week. Types and quantities were recorded, and average consumption (mL) over the seven days was calculated. For the AATSIHS: single occasion risk was measured on consumption of 5+ more standard drinks. Respondents were asked the number of times they had 11+, 7+, 5+ or 3+ standard drinks per day in the last 12 months. The number of standard drinks per day is then used to calculate whether a respondent had consumed alcohol at a 'risky' level in the last 12 months according to the NHMRC short term/single occasion risk guidelines
<p>National Aboriginal and Torres Strait Islander Social Survey (NATSISS)⁷</p> <p>Survey of family and culture, health, education, income, financial stress, housing, and law and justice</p>	<p>2002: 9359 (1,010 SA)</p> <p>2008: 13,307 (1,291 SA)</p> <p>2014-15: 11,178 (1,077 SA)</p> <p>15 years and over</p> <p>Collected over a 12-month period</p> <p>Sample weighted so that survey estimates conformed to benchmarks at age, sex, State/Territory and geographic levels</p>	Australian Bureau of Statistics (ABS)	<p>Every six years since 2002</p> <p>Next iteration in approx. 2020-21</p>	<p>Stratified multistage sampling method used (see NATSIHS)</p> <p>Face-to-face interviews: all CAI in 2008</p> <p>Differences between the 2002 and 2008 surveys:</p> <ul style="list-style-type: none"> In 2002, some PAPI interviews used in remote areas. In 2008, CAI used in all areas In 2002, up to three Indigenous persons 15 years and over were interviewed per household. In 2008, one Indigenous person 15 years and over and one child 0-14 years was interviewed in remote communities ; in non-remote and remote non-community areas, up to two Indigenous persons 15 years and over and up to two children 0-14 years were interviewed 	<ul style="list-style-type: none"> Data collected on drinking, smoking and substance use among a large and representative sample of Aboriginal Australians Good response rate: 80% in 2002 and 82% in 2008 	<ul style="list-style-type: none"> Potential under-reporting of alcohol consumption due to face-to-face interviewing Every six years: limits comparisons with other surveys Excludes non-private dwellings (e.g. motels), and institutions (e.g. hospitals and prisons) Long data collection period Different selection and collection methods for the community and non-community frames Alcohol risk measures: 2001 Guidelines and questions on consumption less comprehensive than NDSHS Data were revised using the 2009 Guidelines but only national data were available. Risk of long-term harm: assessed using average daily consumption using number of standard drinks consumed on the three most recent days prior to interview, as well as the total number of days alcohol was consumed in the week prior to interview

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
National Aboriginal and Torres Strait Islander Social Survey (NATSISS) (continued)				<ul style="list-style-type: none"> In 2002, CDs used for selection/screening; in 2008, Mesh Block information also used Greater sample size in 2008 and persons 0-14 years also included Slightly higher response rate in 2008 (82% vs. 80%) 		<ul style="list-style-type: none"> Risk of short-term harm: assessed using questions on the number of times in the last 12 months a person's consumption exceeded specified levels Given differences between the 2008 NATSISS and the 2004-05 NATISHS in how risk was measured (particularly short-term), results cannot be directly compared. However, both produced very similar estimates of the proportion of Aboriginal adults who drink at risky/high risk levels in the long-term⁸
<p>National Health Survey (NHS)⁹</p> <p>Now called the Australian Health Survey (AHS)</p> <p>Survey of health status, health related behaviours and use of health services</p>	<p>2004-05: 25,906 (4,520 SA)</p> <p>2007-08: 20,788 (3,171 SA)</p> <p>2011-13: 20,500 (2,508 SA)</p> <p>2014-15: 19,259 (2,434 SA)</p> <p>15 years and over</p> <p>Collected over a 10-month period in 2004-05, over 11 months in 2007-08 and over 12 months in 2011-13</p> <p>Sample weighted so that survey estimates conformed to benchmarks at age, sex and geographic levels</p>	Australian Bureau of Statistics (ABS)	<p>Approximately every three years since 2004-05</p> <p>Early surveys in 1989-90, 1995 and 2001</p>	<p>Stratified multistage sampling method used</p> <p>Each State/Territory divided into strata; each stratum contained a number of CDs</p> <p>In high population areas, households selected in three stages: systematic sample of CDs selected from each stratum with probability proportional to number of households in each CD; each selected CD divided into groups of households or blocks, and one block selected from each CD, with probability proportional to the number of households in the block; within each selected block a list of all households is prepared and a systematic random sample selected</p> <p>In low population areas: each stratum divided into towns or SLAs, and 1-2 units selected from each. Within selected units, sample of households were derived as above</p> <p>General characteristics of household obtained, and those in scope of the survey identified. One adult and one child randomly selected for interview (face-to-face using CAI)</p>	<ul style="list-style-type: none"> Large sample size Data on risky drinking Timing allows useful comparisons between Aboriginal Australians (NATSIHS and NATSISS) and other Australians Good response rate Latest (2011-13) survey assesses risk according to the 2009 Guidelines but comparison not possible with earlier data Alcohol data in 2011-13 available for those aged 15 years and over 	<ul style="list-style-type: none"> Conducted every three years Excludes non-private dwellings (e.g. motels), and institutions (e.g. hospitals and prisons) Long data collection period Potential underreporting of AOD use due to face to face aspect of interviews Alcohol risk measures: questions on consumption less comprehensive than NDSHS For the AHS: lifetime risk was measured by asking those who drank in the previous two weeks about the day on which they consumed the most alcohol, followed by the last three drinking days in that week. Types and quantities were recorded, and average consumption (mL) over the seven days was calculated. For the AHS: single occasion risk was measured on consumption of 5+ more standard drinks. Respondents were asked the number of times they had 11+, 7+, 5+ or 3+ standard drinks per day in the last 12 months. The number of standard drinks per day is then used to calculate whether a respondent had consumed alcohol at a 'risky' level in the last 12 months according to the NHMRC short term/single occasion risk guidelines

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
ADMINISTRATIVE DATA SETS						
<p>SA Ambulance Service (SAAS)</p> <p>Data on the total number of incidents that SAAS attended where the patient was carried to hospital and identified as being affected by alcohol</p>	<p>Average of 16,500 carry cases per month</p>	<p>SAAS</p>	<p>Monthly</p> <p>Data available from January 2010 – present</p> <p>Note that due to quality checks and revisions, reliable data are three months behind</p>	<p>Data are collected by ambulance officers on [paper] case cards and entered electronically by operations staff</p> <p>Two sections: clinical and non-clinical. Clinical section is based on a diagnosis by the ambulance officer based on clinical criteria. There are four overdose categories (alcohol, narcotic, non-narcotic and prescription)</p> <p>Non-clinical section has a check-box called 'Drugs / Alcohol', which is ticked if drugs and/or alcohol are deemed to be involved but it was not an overdose</p>	<ul style="list-style-type: none"> ▪ Timely data on carries for alcohol overdoses and alcohol-related cases ▪ Captures seasonal and temporal variations ▪ Some information on Aboriginal status 	<ul style="list-style-type: none"> • Poly drug use not identified • Non-clinical section is not mandatory and no definitive guidelines around how it should be used. Alcohol not usually the primary diagnosis in these cases • If alcohol is involved, paramedics can tick the non-clinical section, the clinical section (if overdose), or both. Efforts made to ensure that if both sections are ticked, are only counted as one occurrence, but may be some double-counting • All overdose and non-clinical 'cases involved 'carries'; that is, the patient was transported to hospital. Therefore, non-carry cases where the ambulance attended but the patient was not taken to hospital have been excluded from all analyses • Identification of Aboriginal patients is primarily by appearance. On the patient forms there is a tick box for this; however it is not part of the clinical section, and it is not uncommon for paramedics to leave this part of the form blank
<p>Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS)¹⁰</p> <p>Includes all clients assessed and/or accepted for one or more types of treatment for their own, or another person's, alcohol and other drug problem from an AOD treatment service</p>	<p>Sample size varies from year to year: unit of measurement is 'closed treatment episode', which refers to a contact period between a client and a service provider that has a defined start and end date</p>	<p>Australian Institute of Health & Welfare (AIHW)</p>	<p>Annual (financial year)</p> <p>Collected since 1 July 2000</p>	<p>The collation involves five stages:</p> <ul style="list-style-type: none"> • Collection of agreed data elements by service providers for each eligible client. Service providers forward information to the designated health authority for collation • Data are collated, and undergo a validation process. Unit record data forwarded to the AIHW with frequency tables. 	<ul style="list-style-type: none"> • Standard / uniform definitions used • Consistency of data reported across all states and territories, as well as over time • Provides information about clients accessing alcohol and other drug treatment, service usage and treatment programs • Data are available on Aboriginal South Australians 	<ul style="list-style-type: none"> • Base of counting is closed treatment episodes only: the number of closed treatment episodes counted does not equate to the number of <i>individuals</i> who have received treatment in any one year • A client may be involved in more than one type of treatment episode at any one time or have more than one episode of the same treatment type within the counting period

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS) (continued)	Publicly funded government and non-government agencies that provide one or more specialist alcohol and/or other drug treatment services 2016-17: 836 agencies (70 SA) All clients who completed one or more treatment episodes at an in scope alcohol and other drug treatment service during each reporting period 2016-17: 193,031 closed treatment episodes for own drug use (11,502 SA)			<ul style="list-style-type: none"> The AIHW carries out another validation process, after which a validation report is sent to the health authority with any queries and problems Health authorities make relevant changes, which are added to the validation report and returned to AIHW with revised data file and frequency tables The AIHW checks that changes have been made correctly. Health authorities then approve their final data set and data are loaded to the national database ready for analysis and reporting 		<ul style="list-style-type: none"> Excludes these agencies: opioid pharmacotherapy treatment; those that provide accommodation or overnight stays; those that provide primarily health promotion services (e.g. needle and syringe programs); services in correctional facilities; services that only provide treatment to admitted patients Clients receiving services funded by the Office for Aboriginal Health (OATSIH) are not included
<p>Mortality and morbidity data</p> <p>Calculate alcohol-attributable and non-alcohol-attributable mortality and morbidity rates in South Australia¹¹</p> <p>Morbidity includes hospital separations and emergency department (ED) presentations^{12,13}</p>	Annual	<p>Mortality: National Coroners Information System (NCIS)</p> <p>Morbidity: SA Health</p>	<p>Mortality: 2005 - 2011</p> <p>Hospital Separations: 2007-08 to 2016-17; provided on an annual basis</p> <p>Emergency Department presentations: 2007-08 to 2016-17; provided on an annual basis</p>	<p>NCIS Causes of Death Unit Record File Data, including primary diagnosis and external cause of death, date of death, age, sex, Indigenous status and region</p> <p>Integrated South Australian Activity Collection (ISAAC). Data items include date of admission and separation; hospital; sex; age; Indigenous status; length of stay; admission mode; ICD-10 Principal diagnosis; ICD-10 Primary external cause</p> <p>Emergency Department Data Collection (EDCC) compiles data from all nine major metropolitan public hospitals. In all except for Flinders Medical Centre and Modbury, electronic system HASS-ED is used to record presentation details. Data items include hospital; sex; age; Indigenous status; diagnosis; arrival mode; presenting problem; date/time</p>	<ul style="list-style-type: none"> The PAAF method is an important tool for estimating the burden of alcohol-attributable mortality and morbidity in a population. Enables reliable monitoring of trends over time and identification of changes in alcohol-attributable rates of deaths / hospitalisations within a chosen population Monitoring such trends can inform public health decisions, economic forecasting and analysis, and assess the impact of policy changes and intervention programs The PAAF method is currently the most accurate means of estimating the total number of alcohol-attributable illnesses or injuries in a population by multiplying the number of people with each particular condition by the PAAF specific to that condition, and then sum the results 	<ul style="list-style-type: none"> The PAAFs are based on 2004 self-reported drinking prevalence estimates in South Australia; may under-estimate true consumption Due to the lack of representative and reliable data on drinking among Aboriginal South Australians, Indigenous-specific PAAFs could not be estimated Mortality data are a few years old (2005 and 2006) Caution needed in interpreting estimates of mortality/morbidity 'prevented' as the magnitude of potential protective effects is still being debated; caution especially needed in relation to 'protective' effects of alcohol in Aboriginal populations, which are based data obtained from predominantly 'white', developed nations

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
<p>Mortality and morbidity data</p> <p>(continued)</p>	-	-	-	<p>Population alcohol-aetiologic fractions (PAAFs) specific to the South Australian population are applied to produce reliable alcohol-attributable morbidity and mortality rates</p> <p>PAAFs monitor prevalence and trends in conditions or injuries caused by acute and chronic alcohol consumption over time. Most indicate that the underlying relationship between alcohol and the specific condition is one of <i>causation</i>: that alcohol consumption increases the likelihood of illness or injury.</p> <p>PAAFs are developed using two key methods: 'direct' and 'indirect'. The indirect derivation involves producing relative risk estimates and age/sex specific drinking prevalence. The indirect method is largely for chronic conditions (e.g. hypertension, heart disease and cancers). This is the preferred method of developing PAAFs as the estimates produced reflect drinking levels and patterns specific to the population being investigated</p>	<ul style="list-style-type: none"> The PAAF method relies on systematic and standardised recording procedures regarding reasons for hospital admission or death, i.e. the <i>International Classification of Diseases</i> (ICD). One of the major strengths is that judgments about the role of alcohol in each individual case are not required. Advantage of ED data is that presenting cases are broader demographically as well as in terms of the range and severity of conditions/injuries that are treated, and offer a better indication of trends in high-risk drinking and risk of acute harm 	<ul style="list-style-type: none"> ED data are from metropolitan hospitals only; data collection varies considerably between hospitals. In addition, there are no mandatory requirements to collect information on the attendee's alcohol consumption status prior to presentation, or their lifetime drinking history. The recording of ED presentations in Australian hospitals does not follow a single standardised procedure and there is variability among hospitals as to the detail and quality of data recorded Most EDs do not record cause of injury in a reliably coded format (e.g. ICD-10). This ruled out the use of injury-specific estimates to determine the contribution of alcohol and the approach used to derive PAAFs combined all injuries A noted limitation of ED data is the reliable identification of Aboriginal status, although there has been an increase in data quality in recent years
Drink-driving offences ¹⁴	Drink driving-related offences	SAPol	Provided in SAPol annual report	<p>Expiation notices & apprehension reports generated following driver testing and detection of drink-driving</p> <p>Detailed information on how this indicator was measured and possible limitations of the dataset were not available from SAPOL</p>	<ul style="list-style-type: none"> Accuracy of data for those drivers that are tested Provides a snapshot of drink-driving behaviour at specific times and locations 	<ul style="list-style-type: none"> May not reflect the extent of drink driving in the community as data are limited by the resources available Only specific areas are tested so cannot comprehensively measure possible geographical patterns

Survey / Data Set	Sample details	Data custodians	Frequency of collection	Method of collection	Strengths	Weaknesses
Alcohol-related injuries and fatalities	<p>Blood alcohol content (BAC) data of drivers and motorcycle riders involved in road crashes in South Australia</p> <p>Note that bicycle riders are excluded</p>	SAPol	Reported annually	<ul style="list-style-type: none"> • All driver and rider fatalities are tested for alcohol • Blood samples must be taken from any person 10 years or over who attends or is admitted to hospital after a road crash • Police reports • Blood/breath tests taken at scene of crash or at hospital 	<ul style="list-style-type: none"> • Objective measure of alcohol involvement among drivers/riders killed or injured in road crashes • High rate of testing for fatalities 	<ul style="list-style-type: none"> • Not all driver/riders are tested: <ul style="list-style-type: none"> • Only crashes where police attend, and where driver attends/is admitted to hospital • Some crashes unreported or self-reported to police station • Some fatally injured drivers are not tested due to death occurring sometime after the crash • Data matching discrepancy between police and crash databases: results for ~ 60% of seriously injured drivers/riders are included in the database and < 40% for minor injuries • Potential time-delay between crash and blood collection could underestimate BACs

Appendix Notes

1 <http://www.aihw.gov.au/publications/index.cfm/title/10579> ; <http://www.aihw.gov.au/publication-detail/?id=32212254712&tab=2>; <http://www.aihw.gov.au/publication-detail/?id=6442467781>

2 http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ds10-alcohol.pdf; <http://www.aihw.gov.au/publication-detail/?id=10737420094&tab=2>

3 [http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/2C4E3D846787E47BCA2577E600173CBE/\\$File/school08.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/2C4E3D846787E47BCA2577E600173CBE/$File/school08.pdf)

4 <http://www.health.gov.au/internet/drugstrategy/publishing.nsf/Content/indig-stu-surv08>

5 http://health.adelaide.edu.au/pros/docs/reports/Prospectus_Spring_2010_FINAL.pdf

6 [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/B1BCF4E6DD320A0BCA25714C001822BC/\\$File/47150_2004-05.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/B1BCF4E6DD320A0BCA25714C001822BC/$File/47150_2004-05.pdf)

7 <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4714.02002>; <http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/4714.0/>

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