



centre for alcohol
policy research



Foundation for Alcohol
Research & Education

A large, artistic splash of golden-brown liquid, likely beer or wine, is the central visual element. It originates from the left side and splashes upwards and to the right, with many small droplets and bubbles. The bottom portion of the splash is obscured by a large, solid red curved shape that serves as a background for the title and authors.

Over the limit:
A profile of Australians who drink in excess of
the recommended guidelines

Rebecca Mathews
Sarah Callinan

August 2013



About the Centre for Alcohol Policy Research

The Foundation for Alcohol Research and Education (FARE) provides core funding to the Centre for Alcohol Policy Research (CAPR), a world-class alcohol policy research institute. Led by Professor Robin Room, the Centre examines alcohol-related harms and the effectiveness of alcohol-related policies. Housed within Turning Point Drug and Alcohol Centre in Melbourne, CAPR is a joint undertaking of the Victorian Government, the University of Melbourne and FARE.

CAPR not only contributes to policy discussions in Australia but also contributes to international studies of significance for the World Health Organization. An example of its international work is the [GENACIS project](#), which examines gender alcohol and culture internationally.

The Centre has also undertaken a pioneering study, The [Range and Magnitude of Alcohol's Harm to Others](#), that is the cost of alcohol-related harms on people other than the drinker, otherwise referred to as third party harms. Results from the study were also included in the World Health Organization's [Global Status Report on Alcohol and Health 2011](#), and WHO is using the study as a model for such studies globally.

About the Foundation for Alcohol Research and Education

FARE is an independent charitable organisation working to prevent the harmful use of alcohol in Australia. Our mission is to help Australia change the way it drinks by:

- helping communities to prevent and reduce alcohol-related harms;
- building the case for alcohol policy reform; and
- engaging Australians in conversations about our drinking culture.

Over the last 11 years FARE has have invested more than \$115 million, helped 800 organisations and funded over 1,500 projects addressing the harms caused by alcohol misuse.

FARE is guided by the World Health Organization's [Global Strategy to Reduce the Harmful Use of Alcohol](#) for addressing alcohol-related harms through population-based strategies, problem-directed policies, and direct interventions.

If you would like to contribute to FARE's important work, call us on (02) 6122 8600 or email fare@fare.org.au. All donations to FARE over \$2 are tax deductible.



Contents

Summary	4
Introduction	7
Methods	9
Survey and Sample	9
Measures	9
Consumption in excess of Alcohol Guidelines one and two	9
Demographic information	10
Main drink	10
Analysis	10
Results	11
Consumption in excess of Alcohol Guideline one: Lifetime risk of alcohol-related harm	11
Gender	11
Age	11
Indigenous status	12
Household income	13
Main drink	13
Alcohol consumption in excess of Alcohol Guideline two: Single occasion risk of alcohol-related harm	14
Consumption in excess of Alcohol Guideline two: demographic correlates	15
Discussion	21
Who drinks outside the Alcohol Guidelines?	21
Main beverage of people drinking outside the Alcohol Guidelines	22
References	24

List of Figures

Figure 1. The demographic profile of people who drink in excess of the Alcohol Guidelines	5
Figure 2. NHMRC 2009 Alcohol Guidelines	7

List of Tables

Table 1. Consumption in excess of Alcohol Guideline one among drinkers by age	11
Table 2. Consumption in excess of Alcohol Guideline one among drinkers by age and gender	12
Table 3. Consumption in excess of Alcohol Guideline one among drinkers by Indigenous status	12
Table 4. Consumption in excess of Alcohol Guideline one among drinkers by household income.....	13
Table 5. Consumption in excess of Alcohol Guideline one among drinkers by main drink	14
Table 6. Frequency of consuming in excess of Alcohol Guideline two among drinkers	15
Table 7. Frequency of consuming in excess of Alcohol Guideline two among drinkers by gender	15
Table 8. Frequency of consuming in excess of Alcohol Guideline two among drinkers by age.....	16
Table 9. Frequency of consuming in excess of Alcohol Guideline two among drinkers by age and gender	17
Table 10. Frequency of consuming in excess of Alcohol Guideline two among drinkers by Indigenous status	18
Table 11. Frequency of consuming in excess of Alcohol Guideline two among drinkers by household income.....	19
Table 12. Frequency of consuming in excess of Alcohol Guideline two among drinkers by main drink	20



Summary

The 2009 Australian National Health and Medical Research Council's Guidelines to Reduce the Health Risks from Drinking Alcohol (Alcohol Guidelines)¹ include two guidelines on alcohol consumption for healthy Australians aged 18 years and over. Guideline one recommends that: "For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury". Guideline two recommends that: "For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion".

This study analyses the 2010 National Drug Strategy Household Survey (NDSHS)² to provide a demographic profile of Australian drinkers who consume in excess of the Alcohol Guidelines including their main drink of preference. In doing so, it helps to highlight the groups that may be most in need of receiving promotion of these guidelines. All analyses are conducted only on those who drink. That is abstainers have been excluded from this all the results shown in this report.

The key findings of this study are summarised in Figure 1, below.

Figure 1. The demographic profile of people who drink in excess of the Alcohol Guidelines

- 51.6% of drinkers consumed in excess of either guideline one or two in the 12 months prior to 2010.
- 25.9% of drinkers consumed alcohol in excess of guideline one, consuming an average of more than two standard drinks daily.
- 49.0% of drinkers consumed alcohol in excess of guideline two, consuming more than four standard drinks on a single occasion at least once in the previous year.
- 40.2% of all drinkers consumed in excess of guideline two at least monthly.
- People aged 20 to 29 years are more likely than any other age group to exceed both guidelines.
- The prevalence of exceeding both guidelines in young men aged 20 to 29 years is high: 36.2% in this group exceed guideline two at least weekly and 40.1% exceed guideline one.
- Up until the age of 60 years, the majority of male drinkers exceeded guideline two at least monthly. Over one quarter of this group exceeded guideline two, weekly or more. By contrast, the majority of women aged 30 years and over did not exceed guideline two.
- People whose preferred drink is regular beer or home brew are over-represented among those who exceed both alcohol guidelines.
- Between 40% and 50% of drinkers whose preferred drink was either regular beer or home brew exceeded guideline one and the majority who favoured these drinks exceeded guideline two at least monthly.

In all age groups and overall, men who drink are more likely to exceed both guideline one (34.4%) and two (59.1%) than women (16.9% and 38.2%). Two thirds (62.3%) of male drinkers exceeded either guideline one or guideline two compared to only 40.3% of female drinkers. In all age groups, male drinkers exceed alcohol guideline two more often than women. Up until the age of 60 years, the majority of male drinkers exceeded guideline two at least monthly. Over one quarter of this group exceeded guideline two, weekly or more. This suggests that it is not only young men but also middle aged men who are drinking at risky levels. By contrast, the majority of women aged 30 years and over did not exceed guideline two.

People aged 20 to 29 years are more likely than any other age group to exceed both guidelines. The prevalence of exceeding both guidelines and the frequency of exceeding guideline two in men of this age is worryingly high: 36.2% exceed guideline two at least weekly and 40.1% exceed guideline one. After peaking at 20 to 29 years, the proportion of people exceeding each guideline tends to decrease with age.

Aboriginal and Torres Strait Islander drinkers are more likely to exceed guidelines one (38.5%) and two (67%) than non-Indigenous Australians (25.1% and 48.7% respectively). Aboriginal and Torres Strait Islander people who drink alcohol also exceeded guideline two more frequently than non-Indigenous Australians who drink alcohol with as many as 34.4% doing this weekly or more compared to 17.4% of non-Indigenous Australian drinkers. It is important to note that Aboriginal and Torres Strait Islander respondents are more likely to abstain from alcohol and that these responses were not included in this analysis.

The proportion of people exceeding both alcohol guidelines increases as household income increases. This trend was stronger for guideline two than guideline one.

People whose preferred drink is regular beer or home brew are over-represented among those who exceed both alcohol guidelines. This group also exceeded guideline two the most often. Between 40% and 50% of people whose favourite drink was either regular beer or home brew exceeded guideline one and the majority who favoured these drinks exceeded guideline two at least monthly. Exceeding both guidelines was least common among people who preferred bottled and fortified wine and light beer.



Introduction

The 2009 Australian National Health and Medical Research Council's Guidelines to Reduce the Health Risks from Drinking Alcohol (henceforth referred to as the "Alcohol Guidelines") are comprised of four guidelines aimed at advising Australians about how they can modify their alcohol consumption to reduce the health risks of drinking. The guidelines are presented in figure 1. Two of these guidelines focus on alcohol consumption for all Australians aged 18 years and over.¹ There are also guidelines specifically for children and young people under the age of 18 years and for women who are pregnant or planning a pregnancy, or breastfeeding. This study focuses only on guidelines one and two.

Figure 2. NHMRC 2009 Alcohol Guidelines¹

Guideline one: Reducing the risk of alcohol-related harm over a lifetime

The lifetime risk of harm from drinking alcohol increases with the amount consumed.

For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

Guideline two: Reducing the risk of injury on a single occasion of drinking

On a single occasion of drinking, the risk of alcohol-related injury increases with the amount consumed.

For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion.

Guideline three: Children and young people under 18 years of age

For children and young people under 18 years of age, not drinking alcohol is the safest option.

A Parents and carers should be advised that children under 15 years of age are at the greatest risk of harm from drinking and that for this age group, not drinking alcohol is especially important.

B For young people aged 15 to 17 years, the safest option is to delay the initiation of drinking for as long as possible.

Guideline four: Pregnancy and breastfeeding

Maternal alcohol consumption can harm the developing fetus or breastfeeding baby.

A For women who are pregnant or planning a pregnancy, not drinking is the safest option.

B For women who are breastfeeding, not drinking is the safest option.

Guideline one notes that the lifetime risk of harm from alcohol increases with the level of alcohol consumption. Accordingly, it recommends that men and women drink no more than two standard drinks daily to reduce the lifetime risk of harm from alcohol-related disease or injury.

Guideline two notes that on a single occasion of drinking, the risk of alcohol-related injury increases with the amount consumed. Accordingly, it recommends that men and women drink no more than four standard drinks in a session to reduce the risk of alcohol-related injury. Guideline two also notes that each drinking occasion also contributes to the lifetime risk of alcohol-related harms.

The revised Alcohol Guidelines made some quite substantial changes to the 2001 Alcohol Guidelines. For males, guideline one changed from no more than four drinks daily to no more than two drinks daily. In addition guideline two changed from no more than six drinks on a single occasion to no more than four drinks on a single occasion. Guidelines one and two stayed the same for females from 2001 to 2009.

In spite of these and other significant changes to the Alcohol Guidelines, there has been no public education campaign about the Alcohol Guidelines since they were revised in 2009. As a result, few Australians are aware of the Alcohol Guidelines. Recent research found that 95% of Australians do not know the number of standard drinks associated with reduced lifetime and short term harms in the Alcohol Guidelines as stated in guidelines one and two.³

Previous analyses of the National Drug Strategy Household Survey (NDSHS) have demonstrated that young people and young men in particular are the most likely to regularly consume in excess of four standard drinks on one occasion.² However, a detailed analysis of other demographic correlates (such as household income and Indigenous status) that are associated with consuming alcohol in excess of the Alcohol Guidelines has not been undertaken to date. Research on Alcohol Guidelines are usually focused on entire populations with the rate of abstainers in any given group confounding analyses on what proportion of those who do drink, drink outside the guidelines.

It is also unknown whether peoples' preference for certain beverages are likely to be associated with consuming alcohol in excess of the Alcohol Guidelines. This was studied internationally through the Gender, Alcohol and Culture International study (GENACIS). One study examined the trouble per litre of pure alcohol associated with different beverages in 19 countries and showed that there is no general pattern which holds across cultures of more or less trouble being associated with a particular beverage type. It concluded that the most troublesome beverage in a society, in terms of trouble per litre of pure alcohol, will be whichever beverage is most commonly consumed by young men.⁴ How such findings relate to the Australian Alcohol Guidelines in particular will be examined in this study.

This study uses the 2010 NDSHS data to examine the demographic factors and the preferred drinks that are more likely to be associated with consuming alcohol in excess of Alcohol Guidelines one and two amongst drinkers. This study will help to highlight the demographic groups that may be most in need of receiving promotion of these guidelines.



Methods

This study analysed data from the 2010 NDSHS to examine the profile of Australian drinkers who consume alcohol in excess of Alcohol Guidelines one (more than two standard drinks daily) and two (more than four standard drinks in a single occasion) in terms of their age, gender, Indigenous status, household income, and preferred drink. It also examined the frequency of consuming in excess of guideline two according to the above demographics and preferred drink.

Survey and Sample

Data collection for the 2010 NDSHS was carried out across Australia between April and September 2010. Surveys were collected using the drop-and-collect method in selected households. In total 26,645 respondents aged 12 years and older were asked a wide range of questions on alcohol, tobacco and illicit drug use. The 21,664 participants who had consumed alcohol in the previous 12 months are the focus of the current report (henceforth referred to as “drinkers”). Details on the data collection process and a copy of the survey can be found in the 2010 NDSHS report.²

Measures

Consumption in excess of Alcohol Guidelines one and two

All drinkers were asked a series of questions to determine the frequency of their alcohol consumption and the number of standard drinks consumed on a typical occasion over the past 12 months. These questions were preceded with diagrams describing what one standard drink equated to in volume or container size for each of the main beverage types including wine, regular, mid strength and light beer, spirits, and premixed spirits. These diagrams helped to ensure participants accurately conceptualised one standard drink when estimating their consumption.

To determine alcohol consumption in excess of alcohol guideline one, answers to the above questions on the quantity and frequency of alcohol consumption were used to calculate the total number of standard drinks consumed in the past year. Those who indicated they consumed alcohol daily and who consumed 730 or more standard drinks in a year were coded as consuming more than two standard drinks on average per day and therefore consuming in excess of guideline one.

To determine alcohol consumption in excess of alcohol guideline two, answers to the above questions on the quantity and frequency of consumption were used to calculate the frequency of consuming more than four standard drinks in a session in the previous 12 months and therefore consuming in excess of guideline two. For this measure, drinkers were classified as either never consuming more than four standard drinks consuming more than four standard drinks in a session less than once a month; consuming more than four standard drinks in a session at least monthly; or

consuming more than four standard drinks in a session at least weekly. This is in accordance with the classifications of frequency used in the 2010 National Drug Strategy Household Survey report.

Demographic information

Demographic information including age, gender, annual household income and Indigenous status was collected from all respondents.

Main drink

All drinkers were asked to identify “what type of alcohol is your main drink, the one you drink most often”. Response options included regular, mid strength or light beer; cider; cask wine; bottled wine; fortified wine; spirits; premix beverages; home brew; or other.

Analysis

Analysis was undertaken using Stata.⁵ Weights were applied to the data to better represent the Australian general population by taking into account the probability of being interviewed. All reported percentages are weighted using the population level weight calibrated by the Australian Institute of Health and Welfare (AIHW). For each table, we report the total number (N) in the sample who answered the questions analysed. Any differences between tables in the total N reported is due to missing data on one or more of the questions being analysed.



Results

Consumption in excess of Alcohol Guideline one: Lifetime risk of alcohol-related harm

Gender

One quarter (25.9%) of all drinkers consumed on average two or more standard drinks daily, thus drinking in excess of guideline one and placing themselves at increased lifetime risk of alcohol-related harm. A larger proportion of men (34.4% of drinkers) than women (16.9% of drinkers) drank on average in excess of guideline one.

Age

Table 1 outlines the proportion of drinkers who consumed an average of two or more standard drinks daily and thus exceeded guideline one, disaggregated by age group. As illustrated, drinkers aged 20 to 29 years are most likely to exceed guideline one with 30.6% of all drinkers in this age group doing so, followed by drinkers aged 40 to 59 years (26.1%) and 30 to 39 years (25.2%). Drinkers aged 14 to 19 years (24.4%) and 60 years or older (22.5%) are least likely to consume on average in excess of guideline one.

Table 1. Consumption in excess of Alcohol Guideline one among drinkers by age

Age	% of drinkers who consumed in excess of Alcohol Guideline one
14-19	24.4
20-29	30.6
30-39	25.2
40-59	26.1
60+	22.5

N=21,620

Table 2 illustrates that an interaction between age and gender predict an individual's likelihood of consuming, on average, in excess of guideline one. Male drinkers aged 20 to 29 years were most likely to consume in excess of guideline one (40%) and did so at a rate two times higher than in their female counterparts. By contrast among women drinkers, the highest prevalence of consumption in excess of guideline one was among 20 to 29 year olds (20.5%), followed closely by 14 to 19 year olds (18.4%) and 40 to 59 year olds (16.6%). Consumption in excess of guideline one was least prevalent among women aged 60 year and older (15.2%) and 30 to 39 year old women (14.9%).

Table 2. Consumption in excess of Alcohol Guideline one among drinkers by age and gender

Age	% of drinkers who consumed in excess of Alcohol Guideline one
Men	
14-19	30.0
20-29	40.1
30-39	35.0
40-59	35.2
60+	29.5
Women	
14-19	18.4
20-29	20.5
30-39	14.9
40-59	16.6
60+	15.2

N=21,620

Indigenous status

As shown in table 3 below, Aboriginal and Torres Strait Islander people who drink alcohol were more likely than non-Indigenous Australians who drink alcohol to consume on average, in excess of guideline one. Almost two-fifths (38.5%) of Aboriginal and Torres Strait Islander peoples who drank alcohol consumed an average of two or more standard drinks daily compared to only 25.1% of non-Indigenous Australian drinkers doing so. In interpreting these findings, it is important to recognise that a larger proportion of Aboriginal and Torres Strait Islander abstain from alcohol (24.5%) than do non-Indigenous Australians (19%).²

Table 3. Consumption in excess of Alcohol Guideline one among drinkers by Indigenous status

Indigenous status	% of drinkers who consumed in excess of Alcohol Guideline one
Aboriginal and Torres Strait Islander peoples	38.5
Non-Indigenous Australians	25.1

N=20,272

Household income

As shown in table 4 below, a greater proportion of drinkers from higher income households consumed in excess of guideline one than did drinkers from lower income households. In contrast to the analysis on Indigenous status, where high levels of risky drinking in Aboriginal and Torres Strait Islander respondents was somewhat mitigated by a higher rate of abstainers, the trend towards higher levels of drink is even stronger if abstainers were taken into account. Over a quarter of those in the lowest income bracket identified as abstainers while only 8.3% of those in the highest bracket did.

Table 4. Consumption in excess of Alcohol Guideline one among drinkers by household income

Household income	% of drinkers who consumed in excess of Alcohol Guideline one
< \$41,599	23.6
\$41,600 to \$67,599	25.6
\$67,600 to \$103,999	25.8
\$104,000 +	28.7

N=16,208

Main drink

As has been published in the 2010 NDSHS report, the main drink of choice for most drinkers is bottled wine (33%), followed by regular beer (20%), then spirits (15%) and premixed spirits (or ready to drink beverages) (12%). Relatively smaller proportions of people preferred light beer (5.5%), cask wine (4%), fortified wine (1.5%), cider (0.7%) and home brew (0.5%).²

Those drinkers who selected home brew as their main drink had the highest rates (49.8%) of consumption in excess of guideline one, despite making up a small proportion of all drinkers in absolute numbers. Those who selected regular beer as their main drink had the next highest rates of consumption in excess of guideline one (43.4%), and also accounted for the largest number of drinkers exceeding this guideline in absolute terms.

Those drinkers who prefer mid-strength beer, cask wine or cider were the next most likely to exceed Guideline one with 34.8%, 29.8% and 25% respectively in each group doing so. But in absolute numbers, mid-strength beer drinkers accounted for much more consumption in excess of guideline one than did cask wine and cider drinkers owing to the relatively greater popularity of mid-strength beer.

Table 5. Consumption in excess of Alcohol Guideline one among drinkers by main drink

Main drink	% of drinkers who consumed in excess of Alcohol Guideline one
Home Brew	49.8
Regular Beer	43.4
Mid-Strength Beer	34.8
Cask Wine	29.8
Cider	25.6
Spirits	21.4
Light Beer	18.7
Premix	18.3
Bottled Wine	17.5
Other	12.1
Fortified Wine	10.4

N=19,659

Proportionally fewer people who preferred spirits (21.4%) and premixed drinks (18.3%) exceeded guideline one. However, given the popularity of both drinks, this still represents a large number of people in absolute terms. People whose main drink of choice was light beer (18.7%), bottled wine (17.5%) and fortified wine (10.4%) had the lowest rates of consumption in excess of guideline one, despite the popularity of bottled wine overall (33%).

Alcohol consumption in excess of Alcohol Guideline two: Single occasion risk of alcohol-related harm

Almost half (49%) of drinkers surveyed consume more than four standard drinks in a session and therefore are consuming alcohol in excess of guideline two. Of those who exceed guideline two, higher proportions exceed it at least once a month but less than weekly (22.0%) or weekly or more often (18.2%) than less than once a month (8.9%). This seems to suggest that guideline two is typically exceeded at least monthly, or not at all.

Table 6. Frequency of consuming in excess of Alcohol Guideline two among drinkers

Consumption in excess of Alcohol Guideline two	% of all drinkers
Never consumed more than four drinks on a single occasion (in the past 12 months)	51.0
Consumed more than four drinks on a single occasion less than once a month (in the past 12 months)	8.9
Consumed more than four drinks on a single occasion at least once a month, but less than weekly (in the past 12 months).	22.0
Consumed more than four drinks on a single occasion weekly or more often (in the past 12 months).	18.2

N=20,844

Consumption in excess of Alcohol Guideline two: demographic correlates

Gender

As shown in table 7, male drinkers were far more likely to exceed guideline two than women with more than half of male drinkers (59.2%) doing so at least once in the past year, compared to only 37.6% of female drinkers. Men exceed guideline two far more regularly than women with half (51%) of all male drinkers exceeded guideline two at least once a month compared to only 28.0% of women drinkers. Among men and women, only a small minority of drinkers exceeded guideline two less than once a month (8.2% and 9.6% respectively).

Table 7. Frequency of consuming in excess of Alcohol Guideline two among drinkers by gender

	Never (%)	Less than once a month (%)	At least once a month, but less than weekly (%)	Weekly or more often (%)	Total % of drinkers in excess of guideline two
Men	40.8	8.2	24.8	26.2	59.2
Women	61.8	9.6	19.0	9.6	38.2

N=20,844

Age

Table 8 presents the frequency of exceeding guideline two disaggregated by age group. It illustrates that 20 to 29 year old drinkers exceed guideline two the most often with 34.1% doing so monthly to weekly and 27.2% doing so weekly or more often. The 14 to 19 year old drinkers were the next most likely to exceed guideline two with 30.6% reporting doing this monthly to weekly and 22.3% reporting that they do this at least weekly.

Table 8. Frequency of consuming in excess of Alcohol Guideline two among drinkers by age

	Never (%)	Less than once a month (%)	At least once a month, but less than weekly (%)	Weekly or more often (%)	Total % of drinkers in excess of guideline two
14-19	37.5	9.6	30.6	22.3	62.5
20-29	30.0	8.7	34.1	27.2	70.0
30-39	40.9	11.4	28.9	18.8	59.1
40-59	54.0	10.0	18.3	17.6	45.9
60+	78.8	4.8	7.7	8.6	21.1

N=20,844

Drinkers aged 30 to 39 years reported exceeding guideline two less regularly with the majority doing so either less than monthly (11.4%) or never (40.9%), compared to 18.8% of drinkers who did this weekly or more often, and 28.9% who did this monthly to weekly. Less than half (45.9%) of drinkers aged 40 to 59 years and only about one in five drinkers aged 60 years and over (21.1%) exceeded guideline two. However, even among drinkers aged 40 to 59 years, as many as 17.6% of drinkers exceeded guideline two weekly or more, and a further 18.3% did so monthly, but less than weekly.

Age and gender

Table 9 illustrates the frequency of exceeding guideline two disaggregated by age and gender. These data reinforce the higher levels of drinking in excess of guideline two weekly or more often in 20 to 29 year old drinkers and illustrate that men in this group are at over twice the risk of this (36.2%) compared to women (17.8%).

Table 9. Frequency of consuming in excess of Alcohol Guideline two among drinkers by age and gender

	Never (%)	Less than once a month (%)	At least once a month, but less than weekly (%)	Weekly or more often (%)	Total % of drinkers in excess of guideline two
Men					
14-19	34.2	9.1	29.0	27.7	65.8
20-29	24.2	5.6	34.0	36.2	75.8
30-39	28.9	10.0	33.2	27.9	71.1
40-59	40.8	9.7	22.7	26.7	59.1
60+	67.9	6.5	11.3	14.3	32.1
Women					
14-19	41.1	10.1	32.3	16.5	58.9
20-29	36.2	12.0	34.1	17.8	63.9
30-39	53.4	12.9	24.4	9.3	46.6
40-59	67.9	10.4	13.6	8.1	32.1
60+	90.7	3.0	3.9	2.4	9.3

N=20,844

After 20 to 29 year old drinkers, those aged 14 to 19 years are most likely to exceed guideline two, and again, men in this age group are more likely to do this weekly or more often (27.7%) than women (16.5%). For women, there is a dramatic decline in the proportion exceeding guideline two after the age of 40 years, with only 32.1% of women drinkers aged 40 to 59 years and 9.3% of women drinkers aged 60 years and over doing this. Even less than half (46.6%) of women drinkers aged 30 to 39 years exceed guideline two. By contrast, the majority of male drinkers aged 30 to 59 years exceed guideline two monthly or more often with over a quarter doing so weekly or more often. By the age of 60, only 32.1% of male drinkers exceed guideline two, and only one quarter (25.6%) do so monthly or more often.

Overall, male drinkers more frequently exceed guideline two than women, placing them at an elevated risk of alcohol-related injury. In all age groups, much higher proportions of men exceed guideline two at least weekly or monthly compared to women. There is an exception among drinkers aged 14 to 19 years however, where women are slightly more likely to exceed this guideline monthly to weekly (32.3%) than men (29.0%). If female drinkers do exceed alcohol guideline two, they are more likely than men to only do so less than once a month, across all age groups.

Indigenous status

Table 10 illustrates the frequency of exceeding guideline two by Indigenous status. It shows that two thirds of Aboriginal and Torres Strait Islander peoples who drink alcohol exceeded guideline two at least once in the past year, compared to approximately half of non-Indigenous Australian drinkers (48.8%).

Table 10. Frequency of consuming in excess of Alcohol Guideline two among drinkers by Indigenous status

	Never (%)	Less than once a month (%)	At least once a month, but less than weekly (%)	Weekly or more often (%)	Total % of drinkers in excess of guideline two
Aboriginal and Torres Strait Islander Australians	33.0	4.5	28.1	34.4	67.0
Non-Indigenous Australians	51.3	9.0	22.0	17.8	48.8

N=20,272

Aboriginal and Torres Strait Islander peoples who drink alcohol exceeded guideline two more frequently than non-Indigenous drinkers. In particular, one third of Aboriginal and Torres Strait Islander people who drink alcohol exceeded guideline two weekly or more often (34.4%) compared to 17.8% of non-Indigenous Australian drinkers. Similar proportions of Aboriginal and Torres Strait Islander peoples and non-Indigenous Australian drinkers exceeded guideline two at least once a month, but less than weekly (28.1% and 22% respectively). Only 4.5% of Aboriginal and Torres Strait Islander peoples who drink alcohol exceeded guideline two less often than monthly; the equivalent figure was 9% in non-Indigenous Australian drinkers.

Household income

Table 11 illustrates the frequency of exceeding guideline two disaggregated by household income. 60.4% of drinkers from the highest income households (\$104,000 or more) exceeded guideline two in the past year; a rate almost double that reported in drinkers from the lowest income households (36.4%). The frequency with which drinkers exceeded guideline two also increased with household income; those from higher income households exceeded guideline two more frequently (monthly or more often) than those from lower income households.

Table 11. Frequency of consuming in excess of Alcohol Guideline two among drinkers by household income

	Never (%)	Less than once a month (%)	At least once a month, but less than weekly (%)	Weekly or more often (%)	Total % of drinkers in excess of guideline two
<\$41,599	63.7	7.1	14.1	15.2	36.4
\$41,600-67,599	50.9	9.2	21.7	18.2	49.1
\$67,600-103,999	45.7	9.7	25.7	18.9	54.3
\$104,000+	39.7	11.2	27.6	21.6	60.4

N= 15,793.1

Main drink

Table 12 illustrates the frequency of exceeding guideline two disaggregated by main drink. It shows that more than half of all regular beer (75.2%), mid strength beer (59.6%) and home brew (63.1%) drinkers, cider drinkers (51.8%) and spirits (52.1%) and premix drinkers (54.1%) exceeded guideline two at least once in the past year. By contrast, the minority of those who mainly drink bottled wine (37.8%), cask wine (36.8%), light beer (28.5%), and fortified wine (15.3%) exceeded guideline two at least once in the past year.

Those who mainly drink beer, particularly regular or mid strength beer or home brew, exceeded guideline two the most frequently with more than half of the drinkers who mainly drink these beverages doing so at least monthly. In addition, as many as 37.6% of those who mainly drink regular beer and 35.0% who mainly drink home brew exceeded guideline two weekly or more often.

People who mainly drink premixed drinks, spirits or cider also reported exceeding guideline two relatively often with 44.5%, 42.9% and 42.5% respectively doing so at least monthly.

Although only around one third of bottled and cask wine and light beer drinkers exceeded guideline two in the past year, most of these (approximately one quarter in each) did so at least monthly. Fortified wine drinkers exceeded guideline two the least often with only 12.7% of these doing so at least monthly.

Table 12. Frequency of consuming in excess of Alcohol Guideline two among drinkers by main drink

	Never (%)	Less than once a month (%)	At least once a month, but less than weekly (%)	Weekly or more often (%)	Total % of drinkers in excess of guideline two
Regular Beer	24.8	7.8	29.8	37.6	75.2
Mid-Strength Beer	40.5	8.0	24.8	26.8	59.6
Light Beer	71.6	5.4	14.4	8.7	28.5
Home Brew	36.9	10.3	17.8	35.0	63.1
Cider	48.2	9.3	19.7	22.8	51.8
Cask Wine	63.7	7.9	14.8	13.6	36.3
Bottled Wine	62.2	10.9	17.5	9.4	37.8
Fortified Wine	84.8	2.6	6.8	5.9	15.3
Spirits	47.9	9.2	25.4	17.5	52.1
Premix	46.0	9.5	28.1	16.4	54.0
Other	71.5	6.1	18.0	4.4	28.5

N=19,975



Discussion

Who drinks outside the Alcohol Guidelines?

This study provides a demographic profile of Australian drinkers who consume in excess of the Alcohol Guidelines including an analysis of their main drink of preference.

Overall, the study found that 51.6% of all drinkers consumed in excess of either guideline one or guideline two in the twelve months prior the 2010 NDSHS. Approximately one quarter of all drinkers consumed on average two or more standard drinks daily, thus exceeding guideline one. Just under one half (49%) of all drinkers consumed more than four standard drinks on a single occasion at least once in 12 months thus exceeding guideline two. 18.2% of all drinkers exceeded guideline two weekly or more often, 22.0% did this monthly to weekly, and 8.9% did this less than once a month. This indicates that 40% of drinkers who exceed guideline two do so at least once a month.

Our findings show that drinkers who are male, aged 20 to 29 years, Aboriginal and Torres Strait Islander and from higher income households are the groups who are most likely to exceed both Alcohol Guidelines. As a consequence, these groups are likely to be at disproportionate risk of lifetime harms from alcohol consumption and are at elevated risk of short-term alcohol related injury from more frequently drinking to excess on a single occasion.

Twice as many men (34.4%) as women (16.9%) exceeded guideline one and around 1.5 times as many men (59.1%) exceeded guideline two at least once in a year compared to women (38.2%). Of more concern is that over one quarter (26.2%) of men exceeded guideline two weekly or more often; a rate 3 times higher than among women (9.0%). Young men show the highest rates of exceeding guideline two with over one third (36.2%) of 20 to 29 year old men exceeding guideline two weekly or more often, which is more than twice the rate in women of the same age (17.8%).

20 to 29 year olds are the age group most likely to exceed both Alcohol Guidelines with 30.6% exceeding guideline one and 70.0% exceeding guideline two at least once in the previous year. There was little difference between the other age groups in the proportion exceeding guideline one. However, there was more age variation in the proportion of people regularly drinking more than four drinks in a session (exceeding guideline two). After 20 to 29 year olds, 14 to 19 year olds exceed guideline two most regularly with over half (52.9%) doing so at least monthly, closely followed by 30 to 39 year olds with just under half (47.7%) in this group exceeding guideline two at least monthly.

Age appears to interact with gender in determining how frequently an individual exceeds guideline two. From 40 years onwards, the majority of women do not exceed guideline two. By contrast, men continue to regularly exceed guideline two up until the age of 60 with the majority (59.8%) of 40 to 59 year old men reporting exceeding guideline two at least monthly. This suggests that it is not only

the single occasion excessive drinking of young men, but also of more middle aged men that should be the focus of prevention and health promotion efforts.

Aboriginal and Torres Strait Islander people who drink alcohol were more likely to exceed both Alcohol Guidelines than their non-Indigenous counterparts. The prevalence of exceeding Alcohol Guideline two at least monthly was particularly high among Aboriginal and Torres Strait Islander people with almost two thirds doing so (62.2%) compared to 39.8% of non-Indigenous Australians. In addition, as many as 34.4% of Aboriginal and Torres Strait Islander people exceeded guideline two weekly or more often: almost double the rate in non-Indigenous Australians (17.8%). In interpreting these findings, it is important to recognise that a larger proportion of Aboriginal and Torres Strait Islander people abstain from alcohol (24.5%) than do non-Indigenous Australians (19%). This interaction between the rates of abstaining and the rates of risky drinking is an interesting one and warrants further work in the future. One limitation of this analysis is that Aboriginal and Torres Strait Islander respondents were underrepresented in this survey and therefore these results need to be interpreted with caution.

Higher household income was also associated with a greater likelihood of exceeding both Alcohol Guidelines. The most likely explanation for this trend is that persons from higher income households have more disposable income available for spending on alcohol whether on a daily basis or for regular (that is, at least monthly) single occasion excessive drinking. For this reason, the association between household income and drinking outside the Alcohol Guidelines is worthy of further investigation.

Main beverage of people drinking outside the Alcohol Guidelines

This study also aimed to investigate the main beverage preferences among people who drink outside the Alcohol Guidelines. The findings demonstrate that just under half of those who mainly drink regular beer or home brew exceed guideline one, and the majority exceed guideline two at least monthly, although the home brew drinkers account for a very small proportion of all drinkers. People who mainly drink mid strength beer were the next most likely to exceed both guidelines with the majority (more than 50%) in this group exceeding guideline two at least monthly and approximately one third exceeding guideline one. People who favoured spirits, premixed drinks and cider had similarly high levels of exceeding guideline two at least monthly (between 42 and 44%), but less than one third who favoured each of these drinks consumed more than two standard drinks daily.

It is difficult to determine the extent to which these findings illustrate an association between drinking outside the Alcohol Guidelines and attributes of the preferred drink (for example its alcohol content and its price per volume of alcohol), or of the typical consumer of a particular beverage (i.e. young men) and their typical drinking patterns. The different tax excise rates for home brew and regular and mid-strength beer in Australia compared to spirits and premixed drinks could be contributing to these findings. At the time of the survey (between April and September 2010),



packaged regular and mid-strength beer were taxed at \$40.46 per litre of alcohol, spirits and premixed drinks were taxed at \$68.54 per litre of alcohol, and home brew had no tax excise. Consequently, it was much cheaper to regularly consume more than four standard drinks in a session drinking home brew or regular or mid-strength beer than drinking spirits or pre-mixed drinks.

These findings could also reflect the fact that those who indicated a preference for regular beer or home brew as their main drink are predominantly young men who are also the most likely to drink outside both guidelines one and two. This is in line with the finding that the GENACIS study that the beverage associated with the most trouble is that favoured by young men.⁴ It concluded that the most troublesome beverage in a society, in terms of trouble per litre of pure alcohol, will be whichever beverage is most commonly consumed by young men.

Another possibility is that the most harmful drinkers have no strong preference for any particular beverage. Given the findings that young people drink more types of alcohol types, this may be confounding the results. For instance, recent analysis of the 2010 NDSHS illustrated that young people (14 to 29 years) who are the age group that tend to drink at risky levels, have many main or preferred drinks, on average as many as three.⁶ The possibility that the most troublesome drinkers have no preference for a particular beverage has also been suggested by the GENACIS study.⁴ We were unable to examine the association between having multiple main drinks and drinking outside the Alcohol Guidelines in this study.

Interestingly, similar proportions of cask wine drinkers exceed guideline one (29.8%) as do those who exceed guideline two at least monthly (28.4%). This suggests that cask wine, a relatively cheap drink, appears to be equally likely to increase the risk of life-long harms as well as alcohol-related injury in the short-term.

People whose main drink was light beer or wine (bottled or fortified) were the least likely to exceed each of the Alcohol Guidelines. The majority of those who favour these drinks did not exceed guideline two. Only 18%, 17.4% and 10.4% of those who favoured light beer, bottled wine and fortified wine respectively exceeded guideline one. The lower rates of exceeding guideline one among bottled wine drinkers may reflect the preference for this beverage among women aged 30 years and over, the majority of whom did not exceed guideline one in our analysis.

References

- 1 National Health and Medical Research Council (2009). *Australian guidelines to reduce health risks from drinking alcohol*. Canberra, NHMRC.
- 2 Australian Institute of Health and Welfare (2011). *2010 National drug strategy household survey*. Drug Statistic Series. Canberra, AIHW
- 3 Livingston, M. (2012). *Perceptions of Low-Risk Drinking Levels among Australians during a Period of Change in the Official Drinking Guidelines*. Canberra, Foundation for Alcohol Research and Education
- 4 Room, R., Ferris, J., Bond, J., Greenfield, T. & Graham, K. (2011). "Differences in trouble per litre of different alcoholic beverages – A global comparison with the GENACIS dataset." *Contemporary Drug Problems* 38(4): 493-516.
- 5 StataCorp (2011). *Stata Statistical Software: Release 12*. College Station, TX, StataCorp LP.
- 6 Callinan, S. and A. Ferris (2012). *Favourite and supplementary drink choices in 2010*. Canberra, FARE.



**Foundation for
Alcohol Research
& Education**

Level 1
40 Thesiger Court
Deakin ACT 2600

PO Box 19
Deakin West
ACT 2600

www.fare.org.au

**Centre for
Alcohol Policy Research**

54-62 Gertrude St
Fitzroy VIC 3065

www.capr.org.au

ISBN: 978-0-9875187-3-6