

4. Alcohol consumption

Alcohol is the most prevalent drug consumed across all age groups. Excessive alcohol consumption has been highlighted as a risk factor for morbidity and mortality in Australia. It is estimated that about 3,500 deaths each year are due to alcohol related disease (including injuries) (AIHW 2002a).

Alcohol consumption is a risk factor for certain medical conditions when consumed at high levels over a long period. Regular excessive consumption contributes to some cancers, liver disease, diabetes, and other conditions. Further, a single episode of heavy drinking increases the short-term risk of injury or death due to alcohol's acute intoxicating effects. Both types of risks, long and short term, have significant impact on the health of the population. However, there is evidence that low levels of consumption confer a health benefit for some people, particularly in relation to reducing the risk of heart disease from middle age onwards (NHMRC 2001).

The two national major surveys measuring alcohol consumption are the National Drug Strategy Household Surveys (NDSHS) and the National Health Surveys (NHS). A table showing other recent surveys which collect data about alcohol consumption is shown in Appendix 1.

Summary alcohol consumption status

According to the NHS in 2001, around 89% of the adult population had consumed alcohol at some time in their life, and 83% had consumed in the past 12 months (Table 4.1). These results are comparable to the NDSHS in the same year with 92% and 84% for lifetime and recent use respectively.

Table 4.1: Summary alcohol consumption status, persons aged 18 years and over: comparison of National Health Survey and National Drug Strategy Household Survey results, 2001

Survey and status	Men	Women	Persons
	per cent		
National Health Survey			
Consumed in the past 12 months	88.2	78.4	83.2
Not consumed in the past 12 months	4.9	7.0	6.0
Never consumed alcohol	6.8	14.6	10.8
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
National Drug Strategy Household Survey			
Consumed in the past 12 months	87.6	79.8	83.6
Not consumed in the past 12 months	6.8	9.5	8.2
Never consumed alcohol	5.6	10.6	8.2
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Sources: ABS, 2002; National Drug Strategy Household Survey, 2001.

Alcohol risk

Risks of harm in the long term are assessed in terms of average weekly consumption, whereas short-term harm is assessed in terms of number of drinks in a single drinking episode or day. These risks have been quantified in the *Australian Alcohol Guidelines* released by the National Health and Medical Research Council in October 2001 (NHMRC 2001).

Risk of harm in the long term

In 2001, both the NHS and the NDSHS showed that just under 17% of the adult population had not consumed alcohol in the past 12 months, that is, were abstainers (Table 4.2). Similar results were also apparent for those who consumed alcohol at levels considered to be low risk; the NHS data showing 71.7% and the NDSHS showing 73.7%.

Both surveys reported that approximately 7% of the adult population were drinking at levels that are risky for long-term harm, although there is a small difference in the estimates for high risk in the long term: 4.4% for the NHS and 2.9% for the NDSHS.

Table 4.2: Risk of alcohol-related harm in the long term, persons aged 18 years and over: comparison of National Health Survey and National Drug Strategy Household Survey results, 2001

Survey and status	Men	Women	Persons
		per cent	
National Health Survey			
Abstainers ^(a)	11.8	21.6	16.8
Low risk	58.1	43.9	50.9
Risky	6.9	6.6	6.7
High risk	6.4	1.9	4.1
Risk not assessed ^(b)	16.8	26.1	21.5
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
National Health Survey reworked^(c)			
Abstainers ^(a)	11.8	21.6	16.8
Low risk	74.6	68.9	71.7
Risky	7.0	7.4	7.1
High risk	6.6	2.1	4.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
National Drug Strategy Household Survey			
Abstainers ^(a)	12.4	20.0	16.3
Low risk	76.8	70.7	73.7
Risky	7.1	7.1	7.1
High risk	3.7	2.2	2.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

(a) Includes never consumed alcohol and not consumed in the last 12 months.

(b) Persons who last consumed alcohol between one week and 12 months ago.

(c) The ABS analysis of the NHS categorised all non-recent drinkers (see note (b) above) as low risk. Detailed analysis of the NDSHS suggests that a small proportion of current drinkers that did not consume in the past week nevertheless would exceed the risk thresholds and would have been assessed if the reference period was longer; the NDSHS method for alcohol risk use a 12-month reference period. For the reworked results the AIHW proportionately allocated drinkers not assessed by the ABS into the three risk categories.

Sources: ABS, 2002; AIHW analysis of NHS results; National Drug Strategy Household Survey, 2001.

Risk of harm in the short term

The NHS alcohol module is not suitable for assessing short-term risk, so only results from the NDSHS are presented here.

In 2001, 2.7% of the adult population had drinking episodes at least once per week that were high risk for short-term alcohol-related harm (Table 4.3). A further 4.2% consumed alcohol at levels defined as risky for short-term harm on at least a weekly basis.

Table 4.3: Risk of alcohol-related harm in the short term on a weekly basis, persons aged 18 years and over, 2001

Survey and status	Men	Women	Persons
		per cent	
National Drug Strategy Household Survey			
Abstainers ^(a)	12.4	20.0	16.3
Low risk	78.8	74.9	76.8
Risky	5.5	3.0	4.2
High risk	3.4	2.1	2.7
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

(a) Includes never consumed alcohol and not consumed in the last 12 months.
Source: National Drug Strategy Household Survey, 2001.

Comparison of surveys

Measures of alcohol consumption

As indicated above, both the NHS and the NDSHS produce results for alcohol consumption status and risk of harm in the long term. Risk of harm in the short term is not able to be assessed from NHS data because this requires a more comprehensive quantification of peak consumption episodes, which cannot be expected of a seven day recall type approach.

The NDSHS also collects data on age of initiation to alcohol consumption (and age of cessation if not consumed in the past 12 months); typical frequency, quantity and location(s) of drinking; preferred types of drink; and alcohol-related behaviours (such as reduction and moderation behaviours).

The NDSHS requires respondents to report consumption in terms of an Australian standard drink. This is the equivalent of 10 grams or 12.5 millilitres of pure alcohol. As an example, a nip of spirits is one standard drink, whereas a 375 millilitres bottle of regular-strength beer is 1.5 standard drinks.

In contrast, NHS respondents were asked to report the number, type and quantity of alcoholic drinks consumed. Quantity of the drink was collected in terms of standard containers or measures such as a stubbie and nip. Where respondents were unable to provide this information, interviewers were asked to record as much information as necessary to clearly indicate quantity. NHS respondents were also asked to report the types of drink consumed. Despite this difference, the NHS and NDSHS estimates of long-term risk are very similar.

Recall period

The recall period is an important difference in the measurement approaches of the NHS and the NDSHS. In the 2001 NHS, respondents who had consumed alcohol in the past 12 months are asked to report detailed type and volume of drinks for the last three drinking occasions in the past seven days. This is used to calculate an average daily consumption and from that the risk category is derived. In earlier implementations of the NHS respondents reported detailed consumption (or none) for each of the past seven days.

The NDSHS uses an approach called Graduated Quantity Frequency (GQF), or sometimes just called Graduated Frequency (see Glossary). In the NDSHS this is a series of six questions for which the reference period is the last 12 months. For each question, the respondent reports the number of times in the reference period that they had consumed a specified number of standard drinks. This approach is designed to get a better measure of peak episodes of drinking, which may only happen once or twice a year, but are likely not captured by other methods.

Again, despite these differences in methodology, the similarity of estimates of long-term risk from the two surveys is noteworthy.

Sample and other methodology

Both surveys are national surveys that used random sampling methodologies to select respondents. One adult from each selected household was chosen as the respondent. The NHS surveyed people in all age groups from 18 years and over; 17,918 persons were asked about their alcohol consumption. In comparison, the 2001 NDSHS surveyed 26,744 persons aged 14 years and over (25,267 of these were aged 18 years and over).

Enumeration periods for both surveys differ. The NHS was enumerated over a 10 month period from February to November 2001 and the NDSHS was enumerated between July and November 2001. Both surveys were not enumerated during a six-week period around the national Census on 7 August 2001.

The NHS achieved a response rate of around 92%, while the NDSHS had a response rate of around 50%. The contribution of non-response bias on alcohol consumption estimates is unknown.

The NHS was a face to face interview, whereby respondents were asked questions by a trained ABS interviewer and responses coded on a paper questionnaire. The 2001 NDSHS employed three data collection modes, each with trained fieldworkers:

- (i) A drop-and-collect mode similar to the Census, in which the fieldworker made contact with the household, selected the respondent and left a self-complete questionnaire. After at least two days the fieldworker returned to collect the completed questionnaire in a sealed envelope. If the questionnaire was not yet completed the fieldworker left a replied-paid envelope addressed to the survey manager, by which the respondent could return the questionnaire when completed.
- (ii) A personal (face to face) interview mode, incorporating a 'sealed' questionnaire for the sensitive questions (personal health, drug use history, drug-related behaviours).
- (iii) A CATI survey with slightly reduced content.

As far as practical, each question was worded identically across all three survey modes.

To be classified as 'ever having consumed alcohol' in the NDSHS, a respondent would have had consumed at least one full glass of alcohol, whereas the NHS does not request this type of information during the interview.

Conclusion

The surveys are not directly comparable as they measure alcohol consumption using different methodologies.

The existence of an alcohol module in the NHS is important because it enables analyses of drinking behaviours against the health status of respondents (e.g. types of long-term conditions experienced), and of the relationship with other risk factors such as smoking, body mass and physical activity. For these purposes, and particularly at the population level, the current alcohol module may be adequate, although the limitation with respect to short-term risk is significant.

On the other hand, the NDSHS module is designed to provide more comprehensive descriptions of drinking patterns and related behaviours, with links to alcohol and other substance use, but misses out on the link with any health conditions and other risk factors.

The NHS is not suitable for assessing risk of harm in the short term, because this requires a more comprehensive quantification of peak consumption episodes, which cannot be expected of a seven day recall-type approach.

Choosing headline indicators

Age considerations

The 2001 NDSHS reveals that the median age at which lifetime drinkers first had a full serve of alcohol was 16 years. Among lifetime drinkers, only 20.4% had initiated drinking by the age of 14, but 50.1% had done so by the age of 16. In 2001, the prevalence of drinking in the age group 14–17 years (that is, those under the legal age for being supplied alcohol) was 66.3%.

Given these results, it seems appropriate to interview and report on drinking for persons younger than 18 years. Survey practices vary around the world, with people as young as 12 years interviewed in the United States, and other countries adopting 15 years and 16 years as the minimum age in general population surveys.

Inclusion of under-age drinkers in the headline indicators appears to lower the prevalence and risk estimates by no more than 1.2 percentage points (Table 4.4) across all three key measures.

Table 4.4: Prevalence of current^(a) drinking, long-term risk and short-term risk, persons aged 14 years and over: comparisons for selected minimum ages

Prevalence measure and age group	Men	Women	Persons
		per cent	
Current drinker			
14 years and over	85.8	79.1	82.4
15 years and over	86.6	79.5	83.0
16 years and over	87.1	79.8	83.4
17 years and over	87.4	79.9	83.6
14–17 years	64.1	68.7	66.4
18 years and over	87.6	79.8	83.6
Risky or high risk for harm in the long term			
14 years and over	10.2	9.4	9.8
15 years and over	10.4	9.5	9.9
16 years and over	10.6	9.4	10.0
17 years and over	10.8	9.4	10.1
14–17 years	3.9	10.9	7.3
18 years and over	10.8	9.3	10.0
Risky or high risk for harm in the short term at least weekly			
14 years and over	8.5	5.3	6.9
15 years and over	8.7	5.3	7.0
16 years and over	8.8	5.3	7.0
17 years and over	8.9	5.2	7.0
14–17 years	4.9	8.5	6.6
18 years and over	8.8	5.1	6.9

(a) Includes any consumption of alcohol in the past 12 months.

Source: 2001 National Drug Strategy Household Survey.

In Australia there is a strong policy interest in young drinkers, so their inclusion in headline indicators is essential. This could be done using the lowest minimum age in the indicator, and/or as a separate age group with the age group 18 years and over shown as well.

Key measures to report

The second issue is which key measures to report from population surveys. The WHO, in their *International Guide for Monitoring Alcohol Consumption and Related Harm* (WHO 2000), recommend a number of measures in countries with optimal health information systems. Interestingly, prevalence of current consumption is not included in the set of measures. Rather, they recommend:

- self-reported rates of personal and social problems related to alcohol use
- GQF to estimate volumes of consumption
- proportion of total alcohol consumed in the form of high risk drinks of any kind (e.g. cheap fortified wine or cask wine)
- frequencies and per cent of all alcohol drunk on days where the risk thresholds are exceeded
- population rates of risky and high risk drinking for episodic drinking on a weekly basis.

Most of these measures can be derived from the GQF approach, and some are derivable from a recent recall approach.

Despite the absence from this list of a general summary alcohol status measure, the AIHW recommends retaining such a measure both to maintain a sensible time series in Australia, and also to provide contextual information for the risk indicators.

Another principle that should apply in indicator selection is parsimony: readers will note that some of the indicators listed above are different 'views' of the same data, adding to the emphasis on alcohol-related risk.

Table 4.5: Headline alcohol indicators, persons aged 14 years and over, Australia, 2001

Age group	Men	Women	Persons
		per cent	
Currently consume alcohol^(a)			
14–17 years	64.1	68.7	66.4
18 years and over	87.6	79.8	83.6
<i>Total 14 years and over</i>	<i>85.8</i>	<i>79.1</i>	<i>82.4</i>
Risky or high risk for harm in the long term			
14–17 years	3.9	10.9	7.3
18 years and over	10.8	9.3	10.0
<i>Total 14 years and over</i>	<i>10.2</i>	<i>9.4</i>	<i>9.8</i>
Risky or high risk for harm in the short term on a weekly basis			
14–17 years	4.9	8.5	6.6
18 years and over	8.8	5.1	6.9
<i>Total 14 years and over</i>	<i>8.5</i>	<i>5.3</i>	<i>6.9</i>

(a) Includes any consumption of alcohol in the past 12 months.
Source: 2001 National Drug Strategy Household Survey.

Recommendations

The AIHW recommends that the estimates from the NHSDS be used as the headline indicator for alcohol consumption. AIHW recommends three headline indicators for alcohol consumption in Australia presented as 14–17 years, 18 years and over, and the aggregate for 14 years and over. These are:

- proportion of the population that are current drinkers
- proportion of the population that consume at risky or high-risk levels for long-term alcohol-related harm
- proportion of the population who consume at risky or high-risk levels for short-term alcohol-related harm on a weekly basis.

Due to strong policy interest in young drinkers, AIHW recommends the continued surveillance of alcohol consumption in those aged less than 18 years, however noting that the indicators shown above may not be appropriate to younger age groups.

AIHW recommends that further development of indicators for alcohol consumption, particularly in relation to risk of harm or impact on health be undertaken and be included in the National Health Data Dictionary (NHDD).