ALCOHOL CONSUMPTION IN QUEENSLAND 2009

Results from the Queensland Household Survey

A survey commissioned by Queensland Health and conducted by the Office of Economic and Statistical Research.

Report prepared by Population Epidemiology Section, Queensland Health, 2010.[1]

In Brief

In Queensland in 2009 a telephone interview survey of people aged 18 years and older was conducted to determine rates of alcohol consumption. The survey found that:[2]

- 10.6% of persons, 11.9% of males and 9.2% of females, reported consuming alcohol in quantities that placed them in risky or high risk categories for harm in the long term.
- 7.5% of persons, 9.2 % of males and 5.9% of females, reported consuming alcohol at least weekly in quantities that placed them in risky or high risk categories for harm in the short term.
- 15.5% of persons, 20.3% of males and 11.0% of females, reported consuming alcohol at least monthly in quantities that placed them in risky or high risk categories for harm in the short term.

In this survey the National Drug Strategy Household Survey (NDSHS) alcohol consumption questions were delivered to Queensland residents by telephone survey alone. This resulted in estimates that conform to observed trends in Queensland estimates derived from the NDSHS national survey which uses a different methodology. The result supports the ongoing use of this questioning method in Queensland Health's own health surveillance operations for the measurement of alcohol consumption in the Queensland population.

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[1] Suggested citation: Queensland Health: White D, Harper C. Alcohol Consumption in Queensland 2009. Queensland Health. Brisbane 2009

[2] Based on the NHMRC 2001 Alcohol Consumption Guidelines.

SECTION 1: SHORT REPORT

This section has three components:

- Presentation of estimates for risky and high risk alcohol consumption from the Queensland Household Survey (QHS) which were collected using the NDSHS question methodology and classified using the National Health and Medical Research Council (NHMRC) 2001 guidelines for alcohol consumption.
- Presentation of estimates derived from the Queensland computer assisted telephone interview (CATI) alcohol consumption question method and comparison of these estimates with those derived from the NDSHS question methodology.
- Validity comparison of the QHS using NDSHS alcohol question estimates with the previous Australian Institute of Health and Welfare (AIHW) NDSHS alcohol consumption estimates as well as previous Queensland CATI alcohol estimates.

Introduction

Estimates of alcohol consumption in the Queensland population have been obtained over the past six years by two different survey tools using differing questioning methods.

The first method, used for high level reporting, derives estimates from the AIHW commissioned NDSHS. This survey uses a mixed methodology with self completed questionnaires (drop and collect), CATI and, in earlier collections, face to face interviews. The questions used attempt to measure both regular and periodic alcohol consumption and are quite detailed.

The second method, used for 'Top of the Line'[3] reporting only, derives estimates from Queensland Health CATI surveys[4] which collect data on alcohol consumption using CATI alone. The Queensland Health CATI survey questions (in this report called 'short alcohol') are identical to a sub-set of alcohol consumption questions used in the NDSHS survey (in this report called 'long alcohol').

In 2009, for the first time, the QHS used the exact NDSHS alcohol questions and analysis methodology to estimate alcohol consumption by CATI survey exclusively. This report presents the estimates from this new method of collection of alcohol consumption data for the Queensland population.

Differences between the NDSHS and QHS methodologies raise questions of comparability and validity which this report investigates. It also details differences between estimates derived from the NDSHS long alcohol and Queensland CATI short alcohol questions.

Methods

The QHS is a biannual collection conducted by the Queensland Government Office of Economic and Statistical Research (OESR). Survey questions from different areas of the state are incorporated based on agency need.

The QHS used a sampling frame based on stratified, statistical division quotas which provided a broadly representative sample by education, income, sex and age when compared to the Queensland population overall. Most CATI surveys under represent younger age groups and this survey showed characteristic low response rates for the 18–24 age groups. Over-sampling of non-metropolitan statistical divisions resulted in a large proportion of responders from these areas. These and other sampling biases were adjusted by weighting and resulted in an effective base for the Queensland weighted data of 1,467 persons (see section 2). For full details of weighting and representativeness of the sample refer to section 4.4 of this report.

Alcohol consumption questions identical to NDSHS questions were provided by Queensland Health for inclusion in the survey. Weighted, unit record, alcohol question response variables for the question series were extracted from the complete survey dataset and provided to the

[3] So called Top of the Line reports contain basic information about the conducted survey, questionnaires and question level response statistics as well as some derived variables.
[4] These CATI based surveys have various survey specific names such as the 'Omnibus' surveys.

Queensland Health Population Epidemiology Section for analysis after the survey was completed.

Calculation of estimates of risky and high risk alcohol consumption for short and long term harm using the NDSHS questions series (long alcohol) was undertaken using the identical coding and syntax of the AIHW NDSHS survey. This code was kindly provided by the AIHW. The questions used are detailed in section 5.

For long term harm, the method generates an average weekly alcohol consumption measure for individuals. This estimate is then used to allocate individuals to a consumption risk category as detailed in Table 1.

For short term harm, the method calculates consumption thresholds which enable allocation of individuals to at least weekly, at least monthly or at least yearly alcohol consumption risk categories. In this way an individual who has very low average consumption calculated for long term harm can still be allocated to the category for risky/high risk drinking for short term harm. Please see the notes at the end of section 5 for more detail of the calculation methodology.

For long term harm estimated using the Queensland CATI (short alcohol) questions, the method calculates average consumption using two questions (E7 and E13) only. The average weekly consumption estimate is then used for classification into the consumption risk categories detailed in Table 1. For short term harm, although the short alcohol responses could be used to allocate individuals to short term harm alcohol consumption risk categories, this estimate is not generated or compared in this report.

The NHMRC has developed the 2009 Australian Guidelines to Reduce Health Risks from Drinking Alcohol.[5] The 2009 alcohol guidelines take on a different approach to the previous 2001 guidelines[6] as they consider the cumulative lifetime risk of alcohol related harm and provide guidance on how to lower the risk of harm (Table 1). The 2001 guidelines have been used to define risky drinking in this report and to provide continuity with previous reports as well as consistency with national and state targets. Reporting against the 2009 guidelines will occur in subsequent reports.

[5] NHMRC. Australian guidelines to reduce risks from drink alcohol. Canberra: NHMRC; 2009
[6] NHMRC. Australian Alcohol guidelines health risks and benefits. Canberra: NHMRC; 2001.

Table 1: NHMRC Australian guidelines to reduce the health risks from drinking alcohol 2001 and 2009

Risk of harm in the long term		2001 NHMRC Guidelines	2009 NHMRC Guidelines
Males	Low Risk	≤4 Std drinks/day	≤2 drinks per day
	Risky	>4 ≤ 6 std drinks/day	
	High Risk	>6 std drinks/day	
Females	Low Risk	≤2 std drinks/ day	≤2 drinks/ day
	Risky	>2 ≤4 std drinks per day	
	High Risk	>4 std drinks per day	
Risk of harm in the short term			
Males	Low Risk	≤ 6.0 drinks per episode	≤4 drinks per episode
	Risky	>6.0<11.0 drinks per episode	
	High Risk	≥ 11 drinks per episode	
Females	Low Risk	≤ 4.0 drinks per episode	≤4 drinks per episode
	Risky	>4.0<7 drinks per episode	
	High Risk	≥ 7 drinks per episode	
Additional guidelines			
		1-2 days of not drinking	Abstinence days not stipulated
		No equivalent	Drinks should be spread over several hours
Males & Females		No equivalent	Guidelines are for healthy men and women
Person less than 15 years		No equivalent	Persons under 15 years of age are at the greatest risk of alcohol related harm
People 15-17 years		No equivalent	Delay drinkling for as long as possible
Pregnant Females		No equivalent	Pregnant, breastfeeding or planning pregnancy Pregnancy, not drinking safest option

Results

In 2009, 10.6% of adult Queenslanders reported consuming alcohol in quantities that placed them in risky or high risk categories for harm in the long term, based on NDSHS long alcohol questions (Table 2). Estimates of prevalence for risky/high risk consumption were similar for males and females.

Estimates of the proportion of the adult population who consumed alcohol in quantities that put them at risk or high risk of harm in the long term, using the Queensland CATI short alcohol questioning method, were almost half that of the estimates derived using the NDSHS long alcohol questioning methodology at 5.1% and 10.6 % respectively (Table 2).

Table 2: Alcohol consumption, adults 18 years and older, risk of harm in the long term, by sex, Queensland 2009

	Risky/high risk	
NDSHS questions (long alcohol)	%	95% CI
Males	11.9	9.8-14.5
Females	9.2	7.3-11.5
Persons	10.6	9.1-12.2
CATI Queensland (short alcohol)	%	95% CI
Males	5.8	4.4-7.6
Females	4.4	3.3-5.8
Persons	5.1	4.2-6.2

In 2009, 7.5% of adult Queenslanders, 9.2% of males and 5.9% of females, reported consuming alcohol at least weekly in quantities that placed them in risky or high risk categories for harm in the short term, based on NDSHS long alcohol questions (Table 3). In 2009, 15.5% of adult Queenslanders, 20.3% of males and 11.0% of females, reported consuming alcohol at least monthly in quantities that placed them in risky or high risk categories for harm in the short term, based on NDSHS long alcohol questions (Table 3).

For policy makers the prevalence of consuming alcohol at least weekly and at least monthly at risky or high risk levels are the most relevant indicators of short term harm. At least yearly consumption for short term harm is not reported from this survey due to data anomalies.

Differentials across populations

Table 3 displays sex, age and socioeconomic category estimates for risky/high risk alcohol consumption for short and long term harm. Table 4 displays sex and person level estimates for all sub-categories of alcohol consumption and estimates for alcohol abstainers in the NHMRC 2001 guidelines.

For long term harm, there are more female abstainers (17.2%) than male abstainers (12.1%)(Table 4). Within the low risk, risky and high risk consumption categories there are no statistically significant differences between the sexes. After controlling for age, sex and socioeconomic area for long term harm, the odds of reporting risky/high risk alcohol consumption are around 1.4 times higher in males than females. For high risk consumption alone the odds increase to around 1.8 times higher in males than females.

For short term harm, there are more male at least monthly risky/high risk drinkers (20.3%) than females (11%). There are also more male at least weekly risky/high risk drinkers than females at 9.2% and 5.9% respectively (Table 3). After controlling for age, sex and socioeconomic area for short term harm, the odds of reporting at least monthly, risky/high risk alcohol consumption are around 2.2 times higher in males than females. The odds of reporting at least weekly, risky/high risk alcohol consumption are around 1.6 times higher in males than females.

For long term harm, there are more 18–24 year old risky/high risk drinkers (17.9%) than persons over 55 years (around 6%)(Table 3). There are also more 35–54 year old risky/high risk drinkers (around 12%) than the over 55 age group. Significantly different reported rates of consumption are observable between the 18–24 age group and the older or oldest age groups across the remaining categories of high risk, long term harm and risky/high risk at least weekly and at least monthly short term consumption.

After controlling for age, sex and socioeconomic area for both short and long term harm, consumption behaviour can be seen to be divided into three broad, age related behavioural groups

The first group, 18-24 year olds, reported the most risky/high risk consumption across **all** of the risk categories (refer to Table 3). The odds of reporting risky/high risk alcohol behaviour are almost twice as high in 18–24 year olds compared to 25–34 year olds after controlling for sex and socioeconomic area in almost all categories of consumption.

The second behaviourally similar group is 25–54 year olds who reported largely similar consumption behaviour within the age categories after controlling for sex and socioeconomic area.

The third group, 55 years and older, exhibited a generally uniform and statistically significant decline in reporting of risky/high risk alcohol consumption across all of the consumption categories after controlling for sex and socioeconomic area. When comparing the 18–24 years and 55 years and older groups, the odds of reporting risky/high risk behaviour in the long term in 18–24 year olds are around 3.5 times higher than in persons aged 55 years and older, after controlling for sex and socioeconomic area.

For all categories of long and short term harm there are no detectable or consistent effects of socioeconomic area (advantage or disadvantage) on the prevalence of risky or high risk alcohol consumption or on the odds of reporting risky or high risk alcohol consumption behaviour after controlling for age and sex (Table 3).

Table 3: Alcohol consumption, adults 18 years and older, risk of harm in the short and long term: proportion of the population, by sex, age, socioeconomic area, Queensland 2009

	Risk of long term harm				Risk of harm in the short term			
					At least weekly		At least monthly	
	Risky/high risk		High risk		Risky/high risk		Risky/high risk	
Sex	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Males	11.9	9.8-14.5	4.1	2.8-6.0	9.2	7.3-11.6	20.3	16.9-24.0
Females	9.2	7.3-11.5	2.4	1.5-3.9	5.9	4.4-7.8	11	8.7-13.6
Persons	10.6	9.1-12.2	3.2	2.4-4.4	7.5	6.3-9.0	15.5	13.5-17.8
Age	%	95% CI	%	95% CI	%	95% CI	%	95% CI
18-24 years	17.9	11.7-26.5	7.4	3.5-15.2	15.2	9.7-22.9	33.3	24.5-43.5
25-34 years	9.2	6.0-13.9	2.5	1.1-5.8	7.4	4.6-11.8	17.7	13.0-23.6
35-44 years	11.8	8.7-15.8	3.7	2.1-6.4	8.5	5.9-12.0	19.6	14.7-25.7
45-54 years	12.4	9.5-16.1	2.6	1.6-4.3	7.3	5.1-10.2	14.2	11.0-18.2
55-64 years	6.7	4.9-9.2	2.5	1.5-4.3	4.7	3.2-7.0	6.6	4.5-9.5
65 years and older	6	4.2-8.6	1.5	0.8-2.8	3.1	1.9-5.2	3.7	2.4-5.8
Socioeconomic area	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Disadvantaged	8.5	6.4-11.2	2.7	1.6-4.3	7.7	5.7-10.4	13.1	9.7-17.3
Quintile 2	9.7	7.1-13.0	2.4	1.1-5.0	7.3	5.1-10.4	14.8	10.5-20.5
Quintile 3	14.3	10.8-18.7	5.3	3.3-8.6	9.8	6.8-13.8	14.2	11.0-18.1
Quintile 4	10.3	7.0-14.9	2.1	1.0-4.3	5.8	3.7-9.1	18.3	13.2-24.8
Advantaged	9.5	6.2-14.3	3.5	1.5-8.0	6.8	4.0-11.5	17.2	12.3-23.6

NHMRC. Australian Alcohol guidelines: health risks and benefits. Canberra: NHMRC; 2001.

Table 4: Alcohol consumption, adults 18 years and older, risk of harm in the long term, by sex, risk categories, Queensland 2009

Persons	%	95% CI
Abstainer	14.7	13.1-16.6
Low risk	74.7	72.4-76.9
Risky	7.3	6.1-8.7
High risk	3.2	2.4-4.4
Males	%	95% CI
Abstainer	12.1	9.9-14.8
Low risk	75.9	72.6-79.0
Risky	7.8	6.1-9.9
High risk	4.1	2.8-6.0
Females	%	95% CI
Abstainer	17.2	14.9-19.9
Low risk	73.6	70.4-76.5
Risky	6.8	5.2-8.8
High risk	2.4	1.5-3.9

NHMRC. Australian Alcohol guidelines: health risks and benefits. Canberra: NHMRC; 2001.

Validity of the QHS implementation of the NDSHS alcohol consumption questions

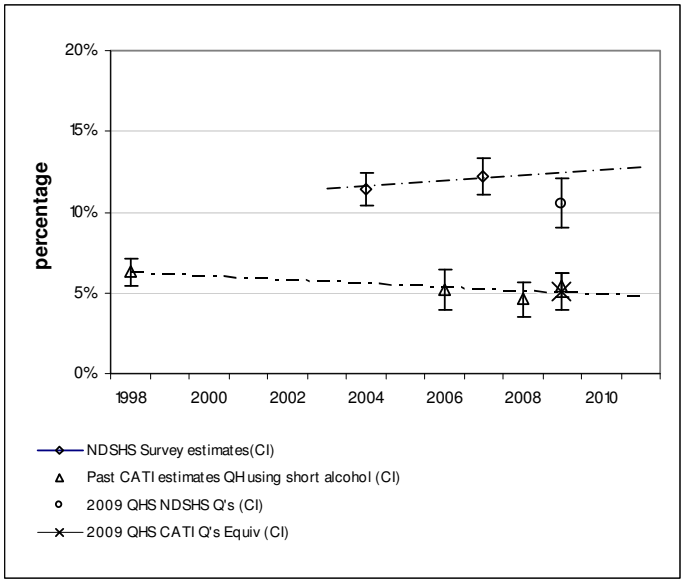
Alcohol consumption estimates from the 2009 QHS survey and estimates from NDSHS and Queensland Health CATI surveys are graphically presented in Figures 1 and 2. Estimates of consumption derived from the QHS delivery of the NDSHS long alcohol questions are comparable to estimates derived from the AIHW NDSHS mixed method delivery (Figures 1 and 2). The estimates derived from the short alcohol question set in 2009 (Figure 1) are comparable to previous Queensland Health estimates from CATI surveys.

The confidence intervals (CIs) for estimates derived from both the NDSHS (long alcohol) question method and the Queensland CATI (short alcohol) equivalent question method overlap the linear regression trend lines fitted to previous estimates, with the marginal exception of the

2009 QHS NDSHS long term harm estimate (see Figure 1). QHS estimates are not statistically significantly different from the previous estimates derived from the respective survey/questioning methods. The value of the trend lines is limited due to the few data points available. However, the evidence provided by the NDSHS long alcohol question method suggests a relatively static level of risky/high risk alcohol consumption for both short and long term harm in the past six years. Results from the Queensland Health CATI short alcohol question also suggest that risky/high risk alcohol consumption behaviour is relatively static (Figure 1).

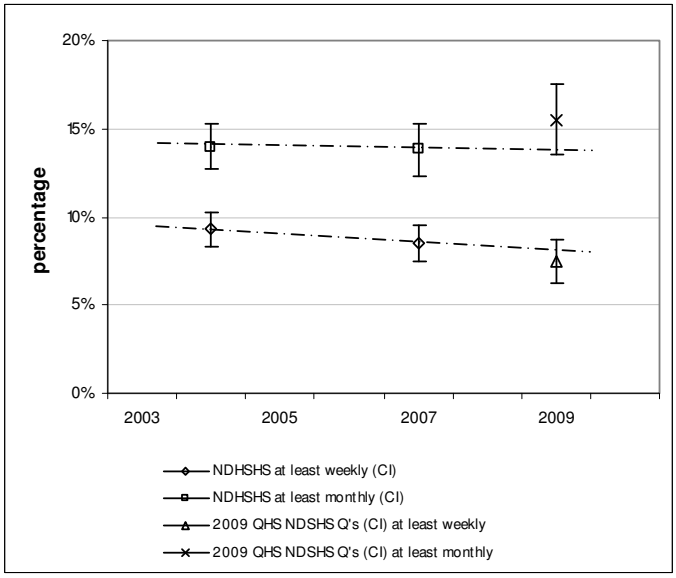
In summary, the continued use of the NDSHS (long alcohol) question method inside the Queensland Health CATI health surveillance framework is supported by these results. Incorporation of future estimates into this validity analysis will build upon this preliminary finding.

Figure 1: Risky/High Risk Alcohol consumption (long term harm). Time series data 18yrs+, Queensland.



NHMRC. Australian Alcohol guidelines: health risks and benefits. Canberra: NHMRC; 2001.

Figure 2: Risky/High Risk Alcohol consumption (short term harm). Time series data 18yrs+, Queensland.



NHMRC. Australian Alcohol guidelines: health risks and benefits. Canberra: NHMRC; 2001.

SECTION 2: PARTICIPANT DEMOGRPAHIC INFORMATION

Sample and Weighted population for all except *		Sample	Effective Base		Weighted pop
		3,594	1,467		3,141,797
Demographic variables	**Response Categories**	%	LCI	UCI	n
Age	18 to 24	12.9	10.8	15.3	195
	25 to 34	18.0	15.8	20.4	431
	35 to 44	19.4	17.5	21.5	706
	45 to 54	18.5	16.8	20.4	741
	55 to 64	15.4	13.9	17.0	678
	65 years and older	15.9	14.4	17.4	843
	Total	100.0			
Sex	Male	49.0	46.4	51.5	1,522
	Female	51.0	48.5	53.6	2,072
	Total	100.0			
Annual personal income	Less than $14,000	20.3	18.4	22.4	900
	$14,000 to $22,999	14.4	12.8	16.3	514
	$23,000 to $33,999	14.1	12.2	16.1	425
	$34,000 to $56,999	21.0	19.0	23.2	650
	$57,000 or more	21.3	19.4	23.4	773
	Don't know	6.1	4.9	7.6	225
	Refused	2.8	2.2	3.6	107
	Total	100.0			
Annual household income	Less than $23,000	11.1	10.0	12.3	701
	$23000 to $33,999	9.8	8.5	11.2	388
	$34000 to $56,999	14.5	12.8	16.3	500
	$57000 to 67,999	8.0	6.8	9.4	298
	$68,000 to 109,999	24.5	22.3	26.9	721
	$110000 or more	17.6	15.7	19.8	541
	Don’t know	11.5	9.7	13.7	327
	Refused	3.0	2.3	3.8	118
	Total	100.0			
Labour force status	Employed	66.4	64.0	68.7	2,172
	Unemployed	4.2	3.1	5.6	123
	Not in labour force	29.4	27.3	31.6	1,299
	Total	100.0			
Employment status*	Full-time	68.5	65.4	71.5	1,494
n=2174, pop=2086795	Part-time	31.3	28.3	34.4	677
	Refused	0.2	0.0	0.6	3
	Total	100.0			
Spouse partner status	Live with partner	68.7	66.2	71.2	2,299
	Do not live with a partner	31.3	28.8	33.8	1,294
	Total	100.0			
Indigenous status	Indigenous status	1.9	1.2	2.8	77
	Non-Indigenous	98.1	97.1	98.7	3,515
	Total	100.0			
Highest educational	Bachelor or higher degree	16.5	14.9	18.2	762
qualification	Diploma or Certificate	33.2	30.8	35.7	991
	Completed year 12	23.9	21.5	26.6	603
	Did not complete year 12	26.0	24.0	28.1	1,222
	Other	0.2	0.1	0.4	9
	Refused	0.2	0.1	0.4	7
	Total	100.0			
Language spoken at home	Language other than English	8.4	6.9	10.2	225
	English	91.6	89.8	93.1	3,369
	Total	100.0			
Household with persons	Household with children	44.0	41.5	46.6	1,357
under 18 years	Household without children	56.0	53.4	58.5	2,237
	Total	100.0			
Single person household	Single person household	9.4	8.4	10.4	760
	Multi person household	90.6	89.6	91.6	2,834
	Total	100.0			

SECTION 3: RESULTS WEIGHTED QUESTION RESPONSES

Questions	Sample	Weighted pop
E1: Have you ever tried alcohol?	3,594	3,141,797
E2: Have you ever had a full serve of alcohol?	3,428	3,024,635
E5: Have you had an alcoholic drink of any kind in the last twelve months?	3,307	2,940,856

Question	E1 Have tried alcohol?			E2 Had full serve alcohol?			E5 Drink last 12 months?		
Response	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI
Yes	96.3	95.0	97.2	97.2	96.3	98.0	90.8	89.3	92.1
No	3.7	2.8	5.0	2.6	1.9	3.5	9.0	7.8	10.5
Don't know	0	0	0	0.2	0	0.5	0.2	0	0.7
Refused	0	0	0	0	0	0.1	0	0	0
Total	100			100			100		

Questions	Sample	Weighted pop
E7: How often do you have an alcoholic drink of any kind?	2,940	2,675,014
E13: On a day that you have an alcoholic drink, how many standard drinks do you usually have?	2,906	2,647,221

Question	E7 How often alc drinks		
Response	%	LCI	UCI
Every day	13.0	11.4	14.7
5 to 6 days a week	7.2	6.0	8.6
3 to 4 days a week	13.9	12.1	15.8
1 to 2 days a week	26.4	23.9	29.1
2 to 3 days a month	13.9	11.9	16.1
About 1 day a month	10.6	9.0	12.5
Less often than 1 day a month; or	13.8	12.1	15.8
Do you no longer drink	1.0	0.6	1.7
Don't know	0.2	0	0.8
Refused	0	0	0
Total	100		

Question	E13 Num drinks on drink-day		
Response	%	LCI	UCI
13 or more drinks	2.2	1.5	3.3
11-12 drinks	0.9	0.5	1.4
7 – 10 drinks	4.7	3.6	6.1
5 – 6 drinks	11.0	9.1	13.1
3 – 4 drinks	26.3	23.8	28.9
1 – 2 drinks	52.9	50.0	55.7
Less than 1 drink	2.0	1.5	2.7
Don't know	0	0	0.1
Refused	0.1	0	0.3
Total	100		

Questions	Sample	Wtd pop
E15A: In the last 12 months, how often have you had 20 or more standard drinks in a day?	2,940	2,675,014
E15B: In the last 12 months, how often have you had 11-19 standard drinks in a day?	2,938	2,673,306
E15C: In the last 12 months, how often have you had 7-10 standard drinks in a day?	2,935	2,672,737
E15D: In the last 12 months, how often have you had 5-6 standard drinks in a day?	2,912	2,652,947
E15E:In the last 12 months, how often have you had 3-4 standard drinks in a day?	2,861	2,614,679
E15F. In the last 12 months, how often have you had 1-2 standard drinks in a day?	2,761	2,534,492
E15G:In the last 12 months, how often have you had less than 1 standard drink a day?	2,521	2,343,926
E15H:In the last 12 months, how often have you had no drinks at all in a day?	**2,479**	**2,290,539**

Questions	E15A ≥ 20 drinks			E15B 11-19 drinks			E15C 7-10 drinks			E15D 5-6 drinks			E15E 3-4 drinks			E15F 1-2 drinks			E15G < 1 drink			E15H 0 drinks		
Response	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI	%	LCI	UCI
Every day	**0.1**	0	0.4	**0**	0	0.1	**0.7**	0.4	1.5	**1.4**	1	2.1	**3.1**	2.3	4.1	**7.5**	6.3	8.9	**2.3**	1.4	3.6	**12**	10	14
5 to 6 days a week	**0**	0	0.1	**0.1**	0	0.2	**0.2**	0.1	0.7	**0.6**	0.3	1.2	**2.2**	1.6	3.1	**5.6**	4.5	6.9	**6.4**	5.2	7.9	**54**	51	57
3 to 4 days a week	**0.1**	0	0.2	**0.2**	0.1	0.5	**0.7**	0.4	1.2	**2.1**	1.5	2.9	**5.8**	4.7	7.3	**10**	8.7	12	**3.3**	2.6	4.3	**17**	15	19
1 to 2 days a week	**1.1**	0.5	2.1	**1.9**	1.2	3.1	**4**	3	5.2	**7.1**	5.8	8.6	**14**	12	17	**24**	21	26	**6.3**	5	8	**8.8**	7.5	10
2 to 3 days a month	**1.6**	0.9	2.8	**2.7**	1.9	4	**5.6**	4.3	7.2	**9.3**	7.5	12	**9**	7.4	11	**12**	9.7	14	**4.6**	3.4	6.2	**3.9**	2.9	5.1
About 1 day a month	**2.6**	1.8	3.7	**5.6**	4.2	7.4	**8**	6.2	10	**9.4**	7.7	12	**12**	9.8	14	**12**	10	14	**6.2**	4.8	7.8	**0.7**	0.4	1.3
Less often	**12**	10	14	**19**	16	21	**26**	23	28	**27**	24	29	**25**	23	28	**18**	16	20	**14**	12	16	**1.5**	0.9	2.7
Never	**82**	80	85	**71**	68	73	**54**	52	57	**43**	40	45	**28**	26	30	**11**	9.3	13	**56**	53	59	**1**	0.5	1.9
Don't know	**0.1**	0	0.3	**0.4**	0.2	0.7	**0.6**	0.3	1	**1**	0.5	2	**0.8**	0.4	1.5	**1**	0.6	1.8	**1.3**	0.8	2.3	**0.5**	0.2	1.7
Refused	**0.1**	0	0.2	**0.1**	0	0.2	**0.1**	0	0.2	**0.1**	0	0.3	**0.1**	0	0.2	**0.1**	0	0.2	**0.1**	0	0.3	**0.1**	0	0.3
Total	100			100			100			100			100			100			100			100		

Question	Sample	Weighted pop	
E17: How many standard alcoholic drinks did you have yesterday?	3,594	3,141,797	
Response (categorised)	%	LCI	UCI
1 to 2 drinks	18.2	16.4	20.2
>2 drinks but < or equal to 4 drinks	6.5	5.5	7.7
>4 drinks but < or eqaul to 6 drinks	3.1	2.4	4.1
>6 drinks but < or equal to 10 drinks	1.8	1.2	2.8
>10 drinks	15.7	14.0	17.6
Did not drink	54.5	51.9	57.0
Refused	0.1	0	0.2
Total	100		

SECTION 4: SURVEY DESCRIPTION AND METHODOLOGY

4.1 Introduction

The QHS is an omnibus survey providing accurate and reliable information about Queensland adults' attitudes, experiences and behaviours. The 2009 QHS was conducted from 18 May 2009 to 15 June 2009.

The methodology used for the survey is described in section 4.2. Operational results and interviewer feedback are reported in section 4.3. Weighting is discussed in section 4.4, output for Queensland Health is described in section 4.5, and interviewer feedback on Queensland Health questions is provided in section 4.6. Call status descriptions are detailed in section 4.7
Objective

The objective of the May 2009 QHS was to inform the Queensland Government about people's knowledge and opinions on a number of important issues, including:

- computer usage and internet access in the home
- awareness of electric ants
- preparing households for storm, cyclone or flood
- physical activity in the context of sport, recreation, work and everyday life
- consumption of alcohol (as submitted by Queensland Health)
- household use of water and perception of water issues in Queensland.

4.2 Survey Methodology

The QHS was conducted by CATI. A team of 44 interviewers was used for the duration of the May 2009 survey. Survey responses were collected under the Statistical Returns Act 1896. This Act prohibits the disclosure of identifiable information relating to an individual without their consent.

Scope of the survey
The scope for QHS was all people aged 18 years or over who were usually resident in private dwellings with telephones throughout Queensland.

Survey frame
The QHS survey frame was developed using the 2004 electronic version of the White Pages. Approximately 15% of Queensland households with telephones are likely to have silent numbers not listed in the White Pages. The White Pages, therefore, was used to compile a list of the range of telephone numbers used throughout each sampling stratum (for example, 3300 0000 to 3300 9999). Landline telephone numbers were then selected at random from within this range. This method of selection is called Random Digit Dialling (RDD). The resulting selection of telephone numbers included some unconnected numbers, business telephone numbers and other out-of-scope numbers. Approximately 45% of telephone numbers selected using RDD were expected to be private dwelling numbers (these were termed 'in-scope').

Only one adult aged 18 years or over in each sampled dwelling was interviewed. For households with more than one resident adult, one household member was randomly chosen to be interviewed. Failing to do so, by interviewing whichever adult answered the telephone, could have biased the sample. This is because some demographic groups tend to spend less time in the home (for example, university students living with their parents, people working full time) or are less likely to answer the telephone.

Sample design and selection
A total sample of 43,322 telephone numbers was selected for the survey to achieve 3,600 completed interviews. Queensland was stratified into 11 regions, which were aligned to the ABS statistical division boundaries (with the exception of Western QHS region[7]). The sample

[7] Western QHS region is South West, Central West and North West SDs combined

was designed to achieve 600 interviews in Brisbane, along with 300 interviews in each of the following 10 regions:

- Gold Coast QHS region
- Sunshine Coast QHS region
- West Moreton QHS region
- Darling Downs QHS region
- Wide Bay-Burnett QHS region
- Fitzroy QHS region
- Mackay QHS region
- Northern QHS region
- Far North QHS region
- Western QHS region.

Table 5 shows the actual number of interviews achieved in each of the QHS regions.

Table 5: Sample achieved by QHS region

Region	Frequency
Brisbane	598
Gold Coast	299
Sunshine Coast	298
West Moreton	300
Darling Downs	302
Wide Bay Burnett	299
Fitzroy	297
Mackay	300
Northern	300
Far North	301
Western	300
Total	3,594

4.3 Operational Results

Operational results reported in this section apply to the whole QHS survey, not just the questions submitted by Queensland Health.

Status of sample units at completion of survey

Although 43,322 sample units (potential eligible telephone numbers) were allocated to the main sample, only 21,990 sample units needed to be attempted to achieve the main sample. As the sample units were randomly ordered on the queue, no bias results from this action. From those that were attempted, 3,594 completed interviews were achieved. The results of all attempted sample units in the survey appear in Table 6 below. Call status descriptions are given in section 4.7.

A sample unit was deemed to be finalised and assigned a final status when:

- an adult in a sampled household completed the survey
- an adult in a sampled household refused the survey
- the household was found to be out of scope
- the predetermined number of attempts to contact a household was reached
- the sample quota[8] was reached and the survey was closed.

[8] The final sample was subsequently reduced from 3,603 to 3,594 as nine responses were removed from the analysis because they did not provide their age and/or sex, both of which are required for weighting.

Table 6: Final status of sample units

Final status	Number	%
No answer	2,059	9.4
Engaged	242	1.1
Answering machine	1,136	5.2
FAX machine	1,337	6.1
Unable survey -away	741	3.4
Unable survey -illness	231	1.1
Unable survey -hearing	130	0.6
Unable survey -other disability	23	0.1
Unable survey -speech	4	0
Unable survey -intellectual	32	0.1
Unable survey -language problem	136	0.6
Call-back	337	1.5
Partial complete -give ups	65	0.3
Partial complete -not usable	9	0
Partial complete -usable	152	0.7
Completed	3,442	15.7
Refused survey	2,018	9.2
Refused survey -phone slam	298	1.4
Out-of-scope -household	77	0.4
Out-of-scope -business	2,048	9.3
Disconnected	7,473	34
Total	21,990	100.0*
Not attempted	21,333	

*Percentages may not add to exactly 100.0 due to rounding

To be considered usable, a partially completed survey had to have responses to most questions, including age and sex (used for weighting). Most of the partially completed surveys not used came from respondents who gave up part way through due to lack of time, lack of interest or difficulty in continuing (these respondents are labelled 'Partial complete – give ups').

In the QHS, sample units were classified as:

1. In scope responding, if the interview resulted in a completed or partially completed (usable) survey.

2. In scope non-responding, if the interview resulted in:
   - a partially completed (not usable) survey
   - the sample unit was unable to be surveyed or refused
   - a call-back appointment was made but did not eventuate.

3. Out of scope, if the sample unit was a non-private dwelling or a duplicate phone number.

Sample units where no contact was made, and hence scope is unknown, were apportioned between in scope and out of scope based on their historical proportions from previous surveys. The four response categories apportioned between in scope and out of scope were:

- no answer
- engaged
- answering machine
- phone slam.

Table 7 shows the number of sample units in each response status by scope. Table 8 shows the number and percentage of sample units in each response status for those sample units classified as in-scope.

Table 7: Final status of sample units by scope

Status	In scope responding	In scope non-responding	Out of scope	Total
No answer		1,653	406	2,059
Engaged		126	116	242
Answering machine		1,024	112	1,136
FAX machine			1,337	1,337
Unable survey - away		741		741
Unable survey - illness		231		231
Unable survey - hearing		130		130
Unable survey -other disability		23		23
Unable survey - speech		4		4
Unable survey - intellectual		32		32
Unable survey - language problem		136		136
Call-back		337		337
Partial complete - give ups		65		65
Partial complete - not useable		9		9
Partial complete – useable	152			152
Completed	3,442			3,442
Out-of-scope - household			77	77
Out-of-scope -business			2,048	2,048
Refused survey		2,018		2,018
Refused survey - phone slam		239	59	298
Disconnected			7,473	7,473
Total	3,594	6,768	11,628	21,990

Table 8: Final status of in-scope sample units

Status	Frequency	Percentage
No answer	1,653	16.0
Engaged	126	1.2
Answering machine	1,024	9.9
Unable survey - away	741	7.2
Unable survey - illness	231	2.2
Unable survey - hearing	130	1.3
Unable survey - other disability	23	0.2
Unable survey - speech	4	0.0
Unable survey - intellectual	32	0.3
Unable survey - language problem	136	1.3
Call-back	337	3.3
Partial complete - give-ups	65	0.6
Partial complete - not useable	9	0.1
Completed and Partial complete - useable	3,594	34.7
Refused survey	2,018	19.5
Refused survey - phone slam	239	2.3
Total	10,362	100.0*

*Percentages may not add to exactly 100.0 due to rounding

Survey response
All efforts were taken by the OESR to obtain the highest response rate possible. Refusal rates for each interviewer were monitored throughout the survey and extra training was given to interviewers with higher than average refusal rates.

Response rate
The quality of response can be considered in terms of the willingness of someone to participate in the survey. This is a measure of both the interviewer's skills and how well the questionnaire was designed. OESR defines the response rate as the number of interviews that can be used in the analysis, as a percentage of the number of eligible persons actually contacted. This is derived by dividing:

- the number of in-scope responding (completed and usable partials) 3,594 by
- the number of in-scope responding 3,594 + partially complete (give ups) 65 + partially complete (not usable) 9 + refused survey 2,018 + phone slam deemed in scope 239 = 5,925.

The estimated overall response rate for the May 2009 QHS was 3,594/5,925 x 100 = 60.7%.

Table 9 shows the response rate achieved in each of the QHS regions.

Table 9: Response rate, by QHS region

QHS region	Response rate %
Brisbane	60.2
Gold Coast	52.0
Sunshine Coast	62.5
West Moreton	63.4
Darling Downs	59.9
Wide Bay Burnett	63.4
Fitzroy	61.8
Mackay	63.4
Northern	58.8
Far North	60.3
Western	64.2
Overall survey response rate	60.7

Interview time
The average time for a completed interview in the CATI system was 20 minutes for the full survey. The average interview time for the Queensland Health questions was 2.1 minutes.

Interviewer feedback - general
All interviewers were asked to provide feedback on respondent reactions to the survey. The following comments on the overall survey were received from the interviewers:

- The questionnaire flowed smoothly — most respondents had a positive reaction to the survey.
- The introduction was a bit too long.
- Other than for some older respondents, the length of the survey didn't appear to be an issue because of the variety of the topics.

Respondent queries
A small number of enquiries were received on the 1800 number. The majority of the calls were the result of:

- respondents wanting to know how their silent number was able to be contacted
- respondents wanting to complete the survey as a result of the 1800 number being left on their answering machine
- the selected person contacting this office following the 1800 number being left with a household member.

4.4 Sample characteristics and weighting

The stratified sampling design of the QHS means that state-level estimates of the characteristics of the population can only be derived with the application of survey weights. In the QHS, each observation in the sample survey (either a person or household) is intended to represent several units in the population. The number of persons or households in the population represented by each observation is known as the weight. Weighting involves applying a multiplying factor to the survey answers provided by each respondent in the calculation of both point estimates (percentages and population counts) and variance estimates (standard errors and CIs).

All population and variance estimates presented in this report and the associated output tables have been calculated using weighted data. Without the application of survey weights, statistics derived from respondent data may not be representative of the Queensland population.

In general, the calculation of weights is a multi-stage process the aims of which are listed below:

1. Adjust for differences in the probability that a dwelling with a landline telephone number will be selected and the probability that a member of that household will be asked to participate in the survey.

2. Correct for sample imbalances caused by variation in non-response and frame under-coverage across different demographic groups. In most surveys, rates of non-contact and refusal will be higher for some demographic groups and lower for others. A comparison of the demographic characteristics of the respondent sample with known population distributions can provide information on individual characteristics associated with non-response and frame under-coverage. Population distributions on many key demographic characteristics are published by the ABS and can be used to correct for observed sample biases.

3. Allow estimates of the number of persons or households with a given characteristic or outcome to be derived. Scaling factors are applied to each respondent and the answers they provide are taken as representative of a specific fraction of the population. These scaling factors are calculated using estimates of the size of the Queensland population. Population estimates are regularly published by government agencies.

Two types of weights were applied to respondent data collected in the May 2009 QHS. These were household level weights and person level weights.

Household weights
Household level weights were calculated using a two-step process[9].

1. Initial household selection weights were calculated to adjust for differences in the probability that a dwelling with a landline telephone was selected across the 11 primary sampling strata. In each stratum (*s*)[10], the formula used to calculate the initial weight was:

$$\text{Initial HH weight} = \frac{N_s}{n_{rs}}$$

where N_s was the benchmark estimate of occupied dwellings in that stratum, and n_{rs} was the number of respondents who completed the survey.

2. Initial weights were scaled down by a factor representing the proportion of households found to be in scope (that is, having usual residents 18 years or older) in each QHS region.

[9] Note that the household weights do not adjust for potential differences in non-contact across different household types.
[10] Note that the initial household weights were calculated separately for the 35 secondary sampling strata (statistical subdivisions). Because the selection of telephone numbers in the secondary sampling strata was designed to match known distributions of private dwellings in each primary sampling stratum (but not across the state), the initial weights principally adjust for differences in selection probabilities across the primary sampling strata (QHS regions).

These calculations result in the assignment of a single weight to each household in the final respondent sample.

Table 10 describes the geographic distribution of the May 2009 QHS sample. This can be compared to the distribution of Queensland households in March 2009, based on unpublished data from the Department of Infrastructure and Planning. The population counts listed in the 'Count' column of this table are the benchmarks used in step 2 above.

Questions in the May 2009 QHS about household characteristics were weighted to the estimated total number of private dwellings in Queensland (1,600,529).

Table 10: Distribution of QHS surveyed households and all Queensland households, by QHS region

	QHS (May 2009) surveyed households	Queensland (March 2009) total households[a]	
QHS region	**%**	**%**	**Count**
Brisbane	16.6	45.4	726,523
Gold Coast	8.3	12.2	195,373
Sunshine Coast	8.3	7.7	122,907
West Moreton	8.4	2.0	32,625
Darling Downs	8.4	5.3	84,274
Wide Bay-Burnett	8.3	6.5	104,706
Fitzroy	8.3	4.7	75,044
Mackay	8.4	3.6	58,013
Northern	8.4	5.0	79,344
Far North	8.4	6.1	96,855
Western	8.4	1.6	24,865
Queensland	100.0*	100.0*	1,600,529

[a] Source: Planning Information and Forecasting Unit , Department of Infrastructure and Planning. Stock of dwelling estimates are derived using data on estimated total dwellings from the Population Census (ABS, 2006).

Person weights (w2p)

Person level weights were calculated using a more complex method. Person weights take account of the number of adults in the household, as well as higher rates of non-response among some demographic groups. Person level weights were derived from the initial household weights using a three-step process.

1. Initial household selection weights were calculated to adjust for differences in the probability a dwelling with a landline telephone was selected across the 35 secondary sampling strata. The calculation of initial selection weights accounted for non-responding households, as well as households that were out of scope. In each strata (*s*)[11], the formula used to calculate the initial weight was:

$$\text{Initial HH weight} = \frac{h_s\left(n_{rs} + n_{us}\right)}{f_s n_{rs}}$$

where h_s was the total number of RDD telephone numbers (derived from the White Pages and other sources), f_s was the number of telephone numbers randomly selected that were attempted, n_{rs} was the number of

[11] Note that the initial household weights were calculated separately for the 35 secondary sampling strata (statistical subdivisions). Because the selection of telephone numbers in the secondary sampling strata was designed to match known distributions of private dwellings in each primary sampling stratum (but not across the state), the initial weights principally adjust for differences in selection probabilities across the primary sampling strata (QHS regions).

respondents who completed the survey[12], and n_{us} was the number of in scope households that did not supply survey data.

2. Initial person weights would adjust for differences in the probability that a member of a sampled household would be asked to participate in the survey. This step was necessary because Queensland adults who lived in a sole person household (or household with no other adults) had a higher probability of selection than adults who lived with a partner or another adult. The formula used to calculate the initial person weights was:

$$\text{initial person weight} = \text{initial household weight} \times \text{total adults in surveyed household}$$

Initial person weights were then adjusted for non-response and frame under-coverage, and scaled up to match population benchmarks. Corrections for non-response and frame under-coverage took into account the distribution of the population by:

- age group by sex by metropolitan residence[13]
- gross annual personal income[14]
- educational qualification of a university degree or higher.

A very versatile approach, and the one used here, to satisfy population benchmarks like those above is called generalised regression weighting[15]. This method modifies the initial weights in light of some auxiliary information, at the same time minimising the difference between the initial and modified weights. This optimisation problem can be solved through the use of regression, thus the name of the approach. This was implemented in SAS using the GREGWT macro written by the ABS.

Population benchmarks for the May 2009 QHS weights were drawn from two ABS products. These were Population by Age and Sex, Regions of Australia, (2007, 2008[16], Catalogue number 3235.0) and CDATA Online, 2006 (cat. no. 2064.0 from the ABS 2006 population census). Population estimates for 2009 were imputed. To impute the Queensland population at May 2009, annual population growth rates between 30 June 2006 and 30 June 2007 were calculated and converted to an average monthly growth rate (by dividing by 12). These growth rates were calculated separately for males and females in each age group living in metropolitan and non-metropolitan Queensland.

Population estimates for May 2009 QHS were then imputed by allowing for 11 months average population growth between 30 June 2008 (the date the last ABS population estimates were published) and 30 May 2009 (the time of QHS fieldwork). This imputation method assumed that unobserved monthly population growth rates from June 2008 to May 2009 will be identical to average monthly population growth rates observed between June 2007 and June 2008.

The 2006 Population Census was used to correct for differences in QHS non-response according to educational qualification and personal income. The May 2009 QHS sample has a slight overrepresentation of Queensland adults with a degree and under representation of adults with an income in either the highest or lowest income quintile (see Table 11).

Questions that asked adults about their individual views and behaviours were weighted to the imputed total number of Queensland adults in May 2009 (3,141,797).

[12] This includes respondents who partially completed the survey, but provided sufficient data for statistical analysis.
[13] Metropolitan Queensland was defined as the Brisbane QHS region.
[14] The population census conducted by the ABS collected data on gross personal income using slightly different answer categories to the May 2009 QHS. To adjust the person level weights, the list of 12 income categories used in the Population Census were collapsed into six categories: (a) Nil or negative, (b) $1 to $12,999, (c) $13,000 to $20,799, (d) $20,800 to $31,199, (e) $31,200 to $51,999, (f) $52,000 or more per year. The five positive income categories approximated income quintiles in Australia in 2006. The five positive income categories used in the May 2009 QHS approximated personal income quintiles in Queensland in 2008.
[15] For a technical introduction to generalised regression, refer to Deville, J-C, and Sarndal, C-E (1992) Calibration estimators in survey sampling. Journal of the American Statistical Association, **87**, 376-382.
[16] Preliminary population estimates for 30 June 2008 used as final estimates are yet to be published by the ABS. Final population estimates were available for 30 June 2007.

Table 11: Distribution of QHS respondents and Queensland adult population, 2009

	QHS respondents (May 2009)	Queensland adults (30 May 2009)[a]	
	%	%	Count
Region			
Metropolitan[b]	16.6	45.8	1,439,155
Non-Metropolitan	83.4	54.2	1,702,641
Sex			
Males	42.4	49.0	1,538,989
Females	57.7	51.0	1,602,808
Age			
18 to 24 years	5.4	12.9	403,813
25 to 34 years	12.0	18.0	564,648
35 to 44 years	19.6	19.4	610,412
45 to 54 years	20.6	18.5	581,007
55 to 64 years	18.9	15.4	483,452
65 years or older	23.5	15.9	498,466
Education			
Has university degree	21.2	16.5	518,397
Does not have university degree or not stated	78.8	83.5	2,623,400
Personal income			
Nil or negative	4.1	5.0	157,112
$1 to less than $14,000	21.0	15.3	481,317
$14,000 to less than $23,000	14.3	14.4	453,355
$23,000 to less than $34,000	11.8	14.1	441,425
$34,000 to less than $57,000	18.1	21.0	660,428
$57,000 or more	21.5	21.3	670,076
Not stated	9.2	8.9	278,084
Queensland	100.0*	100.0*	3,141,797

[a] Population percentages and counts by region, by sex and by age group were imputed by OESR using data from Population by Age and Sex, Regions of Australia (ABS). Population percentages and counts by education and by personal income were imputed for Queensland adults living in private dwellings using data from the Population Census (2006).
[b] Metropolitan Queensland is the Brisbane Statistical Division and non-metropolitan Queensland is comprised of all other statistical divisions.
* Percentages may not add to exactly 100% due to rounding.

4.5 Output

The outputs provided to Queensland Health from the May 2009 QHS comprise:

- a benchmarked de-identified unit record file
- a Survey Report (this section).

Categories used for the demographic variables

Demographic categories used in the analysis closely match the answer categories provided to respondents, though some response categories have been collapsed for reporting purposes. Table 12 summarises how the answer categories in the telephone questionnaire correspond to the categories used for reporting. Region and Sex were not altered and are therefore not listed in the table. All demographic questions include the answer options Don't Know and Refused. For brevity, these categories have been omitted.

Table 12: Categories used for the demographic variables

Demographic	Derived category reported	Questionnaire answer categories
Age	Single year age level	Respondents were asked for their date of birth. Those who did not provide their date of birth were asked for their age in years.
Agecat	18 to 24 years 25 to 34 years 35 to 44 years 45 to 54 years 55 to 64 years 65 years and over	Respondents that provided neither their date of birth nor their age in years (51 in total) were asked which age category their age was in. All respondents were able to be assigned to an age category.
Annual personal income	Less than $14,000	Zero to less than $14,000
	$14,000 to $22,999	$14,000 to $22,999
	$23,000 to $33,999	$23,000 to $33,999
	$34,000 to $56,999	$34,000 to $56,999
	$57,000 or more	$57,000 or more
Annual household income	Less than $23,000	Zero or negative to less than $23,000
	$23,000 to $33,999	$23,000 to $33,999
	$34,000 to $56,999	$34,000 to $56,999
	$57,000 to $67,999	$57,000 to $67,999
	$68,000 to $109,999	$68,000 to $109,999
	$110,000 or more	$110,000 or more
Labour force status	Employed	Currently employed in a job, business or farm.
	Unemployed	Currently unemployed and looking for work.
	Not in labour force	Currently neither employed in a job, business or farm, nor are they looking for work.
Employment status	Full time	Respondents who are working who usually work 35 hours or more each week.
	Part time	Respondents who are working who don't usually work 35 hours or more each week.
Spouse/Partner status	Live with a partner	Respondent lives with a partner or spouse
	Do not live with a partner	Respondent does not live with a partner or spouse.
Indigenous status	Indigenous	Aboriginal and/or Torres Strait Islander origin.
	Non-Indigenous	Not of Aboriginal or Torres Strait Islander origin
Highest educational qualification		Post-graduate qualifications
	Bachelor or higher degree	Bachelor degree
	Diploma or Certificate	Trade, technical certificate or diploma
	Completed year 12	Completed senior high school (year 12)
		Completed junior high school (year 10)
		Completed primary school
		Some schooling but did not complete primary school
	Did not complete year 12	No schooling
	Other	Other
Language spoken at home	Language other than English spoken at home	Respondent usually speaks a language other than English at home.
	English spoken at home	Respondent usually speaks English at home.
Household with persons under 18	Household with children	Household has at least one person aged 17 years or younger usually living there.
	Household without children	Household has no one aged 17 years or younger usually living there.
Single person household	Single person household	Household with one adult and no persons aged 17 years or younger usually living there.
	Multi person household	Household other than one adult with no persons aged 17 years or younger usually living there.

4.6 Feedback

Interviewers were asked to provide feedback on respondent reaction to specific questions asked in the QHS. The following comments were received from interviewers in relation to those questions submitted by Queensland Health.

- The alcohol questions were quite confusing for some respondents.
- The questions were seen as being quite repetitious.
- At times, respondents thought they were being asked 'how often have you had no drinks at all?' This was not what the question required.

4.7 Call status descriptions

No answer	No contact was made with the household on the first three attempts and on the last attempt, the phone was not answered.
Engaged	No contact was made with the household on the first three attempts and on the last attempt, the phone was engaged.
Answering machine	No contact was made with the household in the first three attempts. At the fourth attempt the 1800 number was left on the machine with a request for someone from the household to contact the Office of Government Statistician (OGS).
Fax machine	The phone number was connected to a facsimile machine.
Unable survey -away	The selected person could not be contacted within the call period because they were away during that time.
Unable survey -illness	The selected person could not be contacted within the call period because they were ill.
Unable survey -hearing	The selected person could not undertake the survey due to hearing difficulties.
Unable survey -intellectual	The selected person could not undertake the survey due to intellectual difficulties.
Unable survey -language	The selected person could not undertake the survey due to a language problem.
Unable survey -other disability	The selected person could not undertake the survey due to an unspecified disability.
Unable survey -speech (not language)	The selected person could not undertake the survey due to an inability to speak.
Call-back	A call-back was arranged to contact the selected person to interview but the appointment was unable to be completed by the time the interviewing period closed.
Partial complete -give up	The respondent failed to reach the end of the survey.
Partial complete -not usable	The respondent completed the survey but failed to answer three or more questions or refused to provide their age or sex.
Partial complete -usable	The respondent completed the survey but failed to answer one or two questions.
Completed	The respondent completed all questions.
Out-of-scope -household	The person who answered the phone indicated that there are no usual residents aged 18 or more in the household.
Out-of-scope -business	The person who answered the phone advised that it was a business number only.
Refused survey	The survey was refused.
Refused survey -phone slam	The person who answered the phone hung up without the interviewer being able to provide an explanation for the call.
Disconnected	The number was disconnected.

SECTION 5: QUESTIONNAIRE (ALCOHOL CONSUMPTION QUESTIONS ONLY, AS IMPLEMENTED IN THE QHS).

SECTION: ALCOHOL

*(ALL)

E1. Now some questions about alcohol. Have you ever tried alcohol?

1. Yes
2. No (END MODULE)
3. (Don't know) (END MODULE)
4. (Refused) (END MODULE)

*(HAVE EVER TRIED ALCOHOL)

E2. Have you ever had a full serve of alcohol? For example, a glass of wine, a whole nip of spirits, a glass of beer etc.?

1. Yes
2. No (END MODULE)
3. (Don't know) (END MODULE)
4. (Refused) (END MODULE)

*(HAVE EVER HAD A FULL SERVE OF ALCOHOL)

E5. Have you had an alcoholic drink of any kind in the last twelve months?

1. Yes (GO TO PREE7)
2. No (END MODULE)
3. (Don't know) (GO TO PREE7)
4. (Refused) (GO TO PREE7)

PREE7

IF HAD AN ALCOHOLIC DRINK IN THE LAST 12 MONTHS, OR CAN'T SAY (CODE 1, 3 OR 4 ON E5) CONTINUE, ELSE END MODULE

*(HAD ALCOHOLIC DRINK IN LAST 12 MONTHS)

E7. How often do you have an alcoholic drink of any kind? Would that be...(READ OUT AND PAUSE) (SINGLE RESPONSE)

1. Every day
2. 5 to 6 days a week
3. 3 to 4 days a week
4. 1 to 2 days a week
5. 2 to 3 days a month
6. About 1 day a month
7. Less often than 1 day a month; or
8. Do you no longer drink (GO TO PREE15A)
9. (Don't know)
10. (Refused)

PREE8

IF STILL DRINK ALCOHOL, OR CAN'T SAY (CODES 1 TO 7 OR 9 ON E7) CONTINUE, ELSE GO TO PREE15A

*(STILL DRINKS ALCOHOL OR CAN'T SAY)

PREE13 The following questions refer to 'standard drinks' of alcohol. The term 'a standard drink' of alcohol is sometimes used to help explain the alcohol content of different drinks. For example, a nip of spirits, a small glass of wine, and a pot of full strength beer each contains about the same amount of alcohol, and each is equal to one standard drink.

1. Continue

*(STILL DRINKS ALCOHOL OR CAN'T SAY)

E13. On a day that you have an alcoholic drink, how many standard drinks do you usually have? (PROMPT IF NECESSARY.)

(IF NECESSARY: Remember a 'standard drink' is equivalent to a nip of spirits, a small glass of wine, and a pot of full strength beer)

1. 13 or more drinks
2. 11-12 drinks
3. 7–10 drinks
4. 5–6 drinks
5. 3–4 drinks
6. 1–2 drinks
7. (Don't know)
8. (Refused)

PREE15A

IF HAVE HAD AN ALCOHOLIC DRINK IN THE LAST 12 MONTHS, OR CAN'T SAY (CODE

1, 3 OR 4 ON E5) CONTINUE OTHERWISE END

*(HAD AN ALCOHOLIC DRINK IN THE LAST 12 MONTHS, OR CAN'T SAY)

E15A. In the last 12 months, how often have you had 20 or more standard drinks in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)
2. 5 to 6 days a week
3. 3 to 4 days a week
4. 1 to 2 days a week
5. 2 to 3 days a month
6. About 1 day a month, or
7. Less often
8. Never
9. (Don't know / Can't recall)
10. (Refused)

*(HAVE NOT DRUNK 20 OR MORE STANDARD DRINKS EVERY DAY IN THE LAST 12 MONTHS)

E15B. In the last 12 months, how often have you had 11-19 standard drinks in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)
2. 5 to 6 days a week
3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE NOT DRUNK 11 TO 19 STANDARD DRINKS EVERY DAY IN THE LAST 12 MONTHS)

E15C. In the last 12 months, how often have you had 7-10 standard drinks in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)

2. 5 to 6 days a week

3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE NOT DRUNK 7 TO 10 STANDARD DRINKS EVERY DAY IN THE LAST 12 MONTHS)

E15D. In the last 12 months, how often have you had 5-6 standard drinks in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)

2. 5 to 6 days a week

3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month,

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE NOT DRUNK 5 TO 6 STANDARD DRINKS EVERY DAY IN THE LAST 12 MONTHS)

E15E. In the last 12 months, how often have you had 3-4 standard drinks in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)

2. 5 to 6 days a week

3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE NOT DRUNK 3 TO 4 STANDARD DRINKS EVERY DAY IN THE LAST 12 MONTHS)

E15F. In the last 12 months, how often have you had 1-2 standard drinks in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)

2. 5 to 6 days a week

3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE NOT DRUNK 1 TO 2 STANDARD DRINKS EVERY DAY IN THE LAST 12 MONTHS)

E15G. In the last 12 months, how often have you had less than 1 standard drink a day, i.e. part of a standard drink? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day (GO TO E17)

2. 5 to 6 days a week

3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE NOT DRUNK LESS THAN 1 STANDARD DRINK EVERY DAY IN THE LAST 12 MONTHS)

E15H. In the last 12 months, how often have you had no drinks at all in a day? (DO NOT READ OUT) (SINGLE RESPONSE) (PROBE TO CLARIFY)

1. Every day

2. 5 to 6 days a week

3. 3 to 4 days a week

4. 1 to 2 days a week

5. 2 to 3 days a month

6. About 1 day a month

7. Less often, or

8. Never

9. (Don't know / Can't recall)

10. (Refused)

*(HAVE HAD AN ALCOHOLIC DRINK IN THE LAST 12 MONTHS, OR CAN'T SAY)

E17. How many standard alcoholic drinks did you have yesterday?

Interviewer note: If less than one record whole drink, record to nearest fraction using decimal places 0.25, 0.5 or 0.75 as applicable

*PROGRAMMER NOTE: IF VALUE GREATER THAN OR EQUAL TO 10 ON E17 DISPLAY

"UNLIKELY RESPONSE". INTERVIEWER TO CONFIRM

1. Response given (Specify: Min: 0, Max: 99)

2. (Don't know)

3. (Refused)

Notes on calculation of alcohol consumption estimates from the NDSHS question series
For long term harm, calculation of mean weekly alcohol consumption is done by using the E15 question series (above) with question E7 and question E13 used to generate mean consumption if the E15 series fails. The average weekly consumption estimate is then used for classification into the consumption risk categories detailed in Table 1 in the main body of the report.

For short term harm, the method calculates consumption thresholds using the E15 series with E7 and E13 as backup if the E15 series fails. This enables allocation of individuals to alcohol consumption risk categories: at least weekly, at least monthly or at least yearly. In this way an individual who has very low average consumption calculated for long term harm can still be allocated to the category for risky/high risk for short term harm.

The precise method of calculation of weekly consumption and allocation to short and long-term harm categories is too complex to describe in words and those interested should refer to the underlying code, available by contacting the Population Epidemiology Section, Development and Information Unit, Queensland Health; email: Population_Epidemiolgy@health.qld.gov.au.