

Alcohol Use in New Zealand Survey (AUiNZ) 2019/20

Methodology report

January 2021

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ALCOHOL USE IN NEW ZEALAND SURVEY (AUINZ) 2019/20

METHODOLOGY REPORT

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1. SUMMARY

The following tables (Tables 1 and 2) provide a summary of the key methodological elements and the sample profile for the Alcohol Use in New Zealand Survey (AUiNZ) 2019/2020.

Results from the AUiNZ are available at: <https://www.hpa.org.nz/our-work/research/publications>

TABLE 1: OVERVIEW OF METHODOLOGICAL ELEMENTS IN THE AUiNZ 2019/20

	Details	
Overview	Nationwide survey, using a sequential multi-method approach which enables respondents to complete the survey either online or on paper.	
Target population	New Zealand residents aged 18 years and over.	
Sample frame	Potential respondents were selected from the Electoral Roll.	
Sample size	Total sample	4,545
	Māori sample	1,285 The Māori sample was boosted to support Te Hiringa Hauora to meet its obligations under Te Tiriti and its focus on equity.
Response rate	26.5%	
Fieldwork periods	Wave 1: 2 August 2019 – 22 September 2019 Wave 2: 1 November 2019 – 6 January 2020 Wave 3: 31 January 2020 – 22 March 2020	
Interview length	Average for online completion: 15 minutes	
Weighting	Results for Māori have been weighted to be representative of the Māori population aged 18 and over by gender and age. These results have then been combined with the rest of the sample to be representative of the New Zealand population aged 18 and over by gender, age, region and ethnicity. Weighting was based on the proportions in the population using the StatsNZ 2018 Census results.	
Calibration to standard drinks	Respondents reported the number of drinks they drank rather than the number of standard drinks ¹ . Therefore, a standard drink calibration ratio has been applied at the analysis stage to calibrate reported consumption to standard drinks. This calibration is needed because Te Hiringa Hauora low-risk drinking advice refers to standard drinks, and one of the goals of the survey is to monitor who is adhering to this advice.	
Survey limitations	Due to alcohol consumption data being self-reported, there may be an undercount of alcohol use. The use of the Electoral Roll as sampling frame excludes those not enrolled. Currently the Electoral Roll includes approximately 87% of the eligible population over the age of 18.	

¹ A standard drink contains 10g of alcohol, and is not usually the same as a glass of wine or beer poured in a bar or at home

TABLE 2: SAMPLE PROFILE FOR AUINZ 2019/20

GENDER Q31. Are you...	Unweighted count (n=)	Weighted %
Male	1,958	49%
Female	2,532	51%
Gender diverse	25	0%
Not answered	30	0%
AGE <i>Age as stated in the Electoral Roll</i>		
18-24 years	930	12%
25-44 years	1,128	35%
45-64 years	1,520	33%
65 and over	967	20%
ETHNICITY Q35. Which ethnic group do you belong to? (multiple response)		
New Zealand European	3,369	71%
Māori	1,285	14%
Pasifika	182	7%
Asian	323	15%
Other	228	5%
REGION <i>Location as stated in the Electoral Roll</i>		
Upper North Island (excluding Auckland)	1,100	20%
Auckland	1,324	33%
Lower North Island	1,089	22%
South Island	1,032	24%
NET: Urban	3,707	83%
NET: Rural	838	17%
NEW ZEALAND DEPRIVATION INDEX <i>Location as stated in the Electoral Roll</i>		
Low deprivation (1-3)	1,455	33%
Medium deprivation (4-7)	1,721	39%
High deprivation (8-10)	1,369	28%

2. INTRODUCTION

The Alcohol Use in New Zealand Survey (AUiNZ) 2019/20, also known as *What you think about drink*, is a new survey for Te Hiringa Hauora/Health Promotion Agency.

It is an alcohol monitor surveying New Zealanders aged 18 and over. The survey covers alcohol consumption and behaviours, attitudes and beliefs about drinking, and experiences of short-term harm from alcohol.

Te Hiringa Hauora has undertaken alcohol monitoring surveys for a number of years, particularly the Attitudes and Behaviour towards Alcohol Survey (ABAS) until 2015/16 and the Health and Lifestyles Survey (HLS). In 2018, Te Hiringa Hauora reviewed the ABAS, and as a result it was agreed that a new alcohol survey should be developed to better meet the needs of the organisation.

Purpose

The purpose of the new survey is to:

- provide information to monitor public attitudes and behaviours towards alcohol
- support Te Hiringa Hauora to develop and implement evidence-informed alcohol advice, policies, programmes, resources and other activities
- contribute to fulfilling the statutory function of Te Hiringa Hauora to “research the use of alcohol in New Zealand, public attitudes towards alcohol, and problems associated with, or consequent on, the misuse of alcohol”.

Specifically the survey aims to (1) find out how many people are drinking above Te Hiringa Hauora low-risk drinking advice and to monitor this over time; and (2) investigate the relationships between weekly consumption levels and other factors captured in the survey (such as demographic variables and attitudes).

AUiNZ includes a boosted Māori sample to support Te Hiringa Hauora to meet its obligations under Te Tiriti and its focus on equity.

Enduring questions

The framework for the new survey is guided by eight enduring questions of relevance to Te Hiringa Hauora:

Alcohol consumption behaviours

1. What is the level of alcohol consumption in New Zealand?
2. How can we change behaviours to reduce alcohol consumption and alcohol-related harm?

Attitudes toward alcohol and alcohol policy

3. What are the attitudinal factors that influence New Zealanders’ drinking?
4. What are New Zealanders’ attitudes towards policy interventions and other vehicles?

Awareness and experiences of alcohol harm

5. How much alcohol-related harm is there in New Zealand?

6. How does awareness of harms influence consumption and other drinking behaviours?

Culture and context

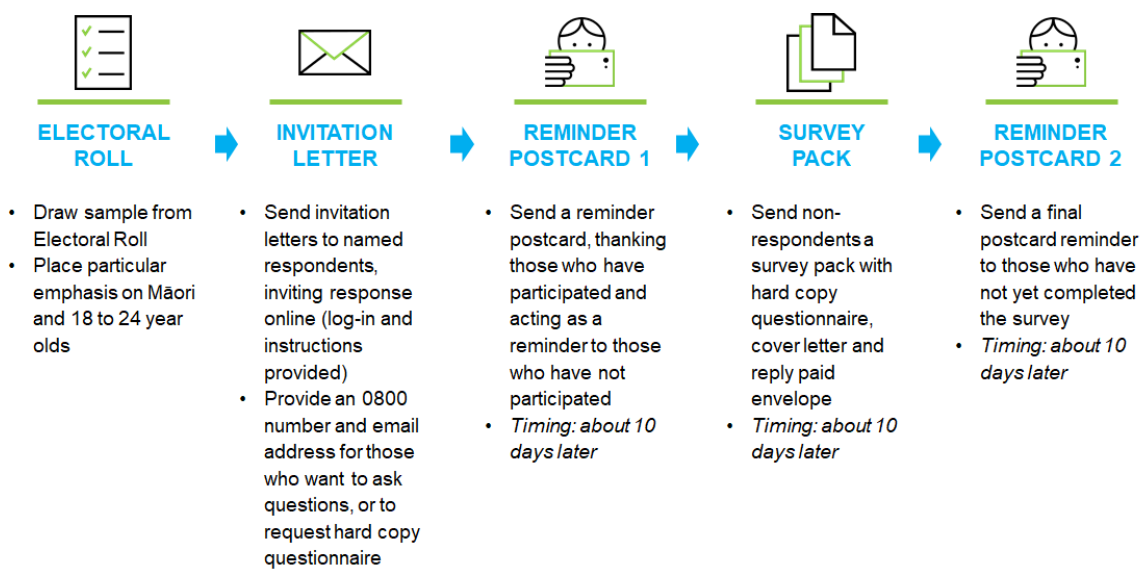
7. What are the contextual factors that influence New Zealanders' drinking?
8. How does alcohol interact/relate to other issues?

3. RESEARCH DESIGN

METHODOLOGY

The AUiNZ used a sequential multi-method approach, enabling respondents to complete the survey either online or on paper (Figure 1). Questionnaire completion methods were offered in sequence, first online completion and then self-completion via hard copy.

FIGURE 1: SEQUENTIAL MULTI-METHODOLOGY PROCESS



SAMPLING FRAME

The New Zealand Electoral Roll was used as the sampling frame. The Electoral Roll records the addresses of the majority of New Zealanders aged 18 and over. The Roll is representative of the adult New Zealand population and currently includes approximately 87% of the eligible population aged 18 years and over.

For the purposes of sampling, 2013 Census data² at meshblock level were used to identify areas where there were large numbers of people belonging to the broad Pacific ethnic groups. These meshblocks were included in the random sample selection. Māori descent from the Electoral Roll was used to identify those with a high possibility of having Māori ethnicity. Gender was identified using the title variable in the Electoral Roll. The age of respondents was calculated using the birthdate field in the Electoral Roll.

²At the time of sample selection 2018 Census data were not available.

SAMPLE DESIGN

The sample was stratified into 192 strata based on 16 regions, six age groups and whether the person was of Māori descent. The sample was allocated disproportionately to strata based on sample size requirements by the main dimensions of region, age and Māori descent. People were selected randomly within strata.

After the first wave was completed, sample achieved and response rates were assessed for key demographic factors, such as Māori and all six age groups, to try to increase sample achievement in the subsequent wave. This process was repeated for the second wave to try to increase sample achievement in the third wave.

Māori were oversampled to improve the precision of Māori results and to enable detailed sub-group analysis for Māori. This will support Te Hiringa Hauora to meet its Te Tiriti obligations by improving the responsiveness of our data for Māori.

The Electoral Roll was re-requested each wave to ensure the most up-to-date details were available. Table 3 outlines the sample achieved at each wave.

TABLE 3: ACHIEVED SAMPLE BY WAVE

	Wave 1 Total achieved	Wave 2 Total achieved	Wave 3 Total achieved	Total achieved
Māori	410	427	448	1,285
18-24 years	326	311	293	930
Total sample	1,614	1,486	1,445	4,545

Tables 4 and 5 outline the sample achieved and the corresponding margin of error based on a 95% confidence interval. This level is the probability that a margin of error around the reported sample percentage would include the true percentage for the population being measured.

TABLE 4: TARGET SAMPLE, ACHIEVED SAMPLE AND MARGIN OF ERROR

	Sample target	Sample achieved	Margin of error (95% confidence interval)
Māori	1,300	1,285	±2.7%
18-24 years	500	930	±3.2%
Total sample	4,000	4,545	±1.5%

TABLE 5: POPULATION, ACHIEVED SAMPLE AND MAXIMUM MARGIN OF ERROR BY KEY DEMOGRAPHIC VARIABLES³

	% of population (Weighted to 2018 Census)	Sample achieved (Unweighted count)	Margin of error (95% confidence interval)
Male	49%	1,958	±2.2%
Female	51%	2,532	±1.9%
18-24 years	12%	930	±3.2%
25-44 years	35%	1,128	±2.9%
45-64 years	33%	1,520	±2.5%
65 years or more	20%	967	±3.2%
Māori	14%	1,285	±2.7%
Pasifika	7%	182	±7.3%
Asian	15%	323	±5.5%
New Zealand European	71%	3,369	±1.7%

³ Prioritised ethnicity is used for weighting purposes. Gender diverse is allocated randomly to male or female (proportional to the population gender distribution).

4. FORMATIVE RESEARCH

Te Hiringa Hauora commissioned two pieces of formative research to inform the development of the AUiNZ. This included a desk-top review of international approaches to measuring alcohol consumption and qualitative research on how New Zealanders talk about alcohol.

Desk-top review

The review of alcohol consumption questions identified a number of difficulties in accurately capturing alcohol consumption through survey methods. These difficulties included: (1) no standard way of measuring alcohol consumption; (2) respondents' ability to accurately recall information and; (3) less frequent drinkers being more likely to under-report the alcohol they consumed. In addition, many surveys asked respondents to report the amount of alcohol they drank in standard drinks which was challenging to most people, and contributed to under-reporting of consumption.

The recommendations from the review were to:

- Not make it difficult for respondents to give accurate answers (for example, asking about recent drinking behaviour rather than last year or last month consumption).
- Enable respondents to report the amount they drank in commonly used units and, if needed, use this information to derive standard drinks.

Qualitative research

A series of focus groups, face-to-face interviews and pair interviews were undertaken with 48 respondents. This included a good mix of different age and ethnic-groups as well as individuals from both rural and urban areas and both heavy and light drinkers. Key areas explored included attitudes towards drinking, how people drink and managing drinking behaviour. Of particular interest was having up-to-date descriptions of behaviours and attitudes so that any emerging trends were included in the new survey.

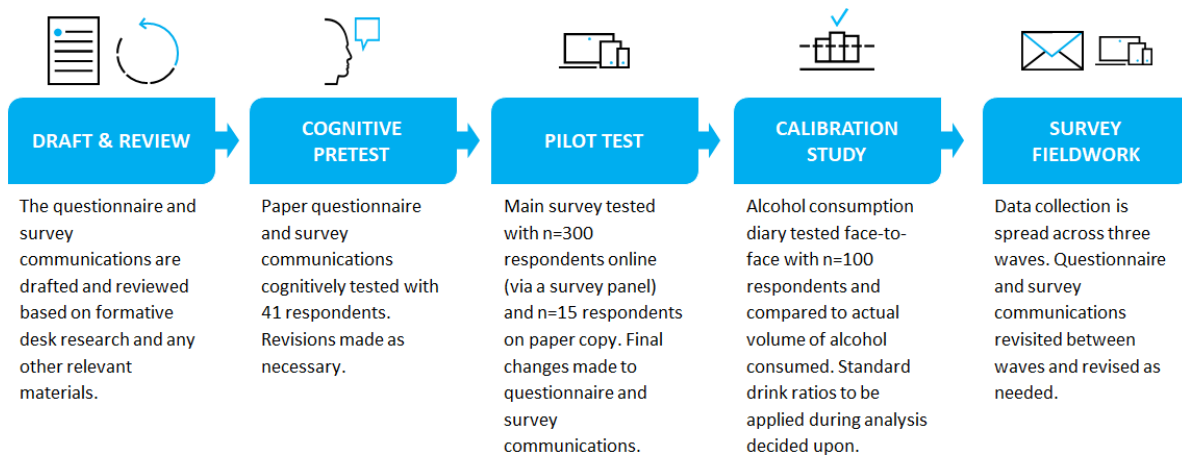
This qualitative research reinforced what was found in the review. The standard drink concept was not understood by respondents and that the task of calculating alcohol consumption in terms of standard drinks was too difficult, even when guidelines were provided. When taken through their responses to the question 'in the last four weeks, what is the largest number of standard drinks you can recall having on one occasion?' most respondents under-estimated the number of drinks they had consumed. On average respondents under-estimated their consumption by about five standard drinks.

These two pieces of work led to key decisions about how alcohol consumption would be captured in the survey.

5. DESIGN AND TESTING

The questionnaire and field documents were developed in an iterative way following the process outlined in Figure 2.

FIGURE 2: OVERVIEW OF SURVEY DEVELOPMENT PROCESS



STEP 1: Draft questionnaire development

The formative research and enduring questions (detailed on page 5-6 of this report) were used to inform the development of first draft of the questionnaire.

Diary development

A diary approach was developed enabling respondents to report their last-week alcohol consumption on a daily basis. The diary was designed so that:

- respondents would not be asked about standard drinks but about their actual consumption and then the standard drinks would be calculated post-survey
- respondents were prompted to recall what they had drunk on each day through questions about who they were drinking with and where they were drinking.
- the information was sufficiently detailed to enable Te Hiringa Hauora to monitor compliance with the low-risk alcohol drinking advice.

The draft questionnaire was developed collaboratively by Te Hiringa Hauora and Nielsen, and circulated to stakeholders for comment. Draft communications (including the survey invitation and reminder postcard) were also developed.

STEP 2: Cognitive testing

Once the survey questionnaire was developed, three phases of cognitive testing were undertaken. Cognitive testing took place in March/April 2019 and consisted of 41 tests in total, including 10 tests with Māori respondents conducted by a Māori researcher. This testing covered comprehension, flow, and accuracy of recall for the questionnaire, as well as

the persuasiveness of the communication material (ie, survey invitation). Cognitive testing led to a number of changes to the 7-day diary in order to improve clarity and ease of use.

STEP 3: Pilot test

A pilot test was conducted in May/June 2019. This consisted of 300 respondents from an online panel. Additionally, 15 responses were completed via paper.

The main purpose of the pilot was to check that the questionnaire skip-logic and flow worked effectively, and that the online programming was 100% correct. It also provided a further opportunity to test question wording and make amendments.

STEP 4: Calibration study

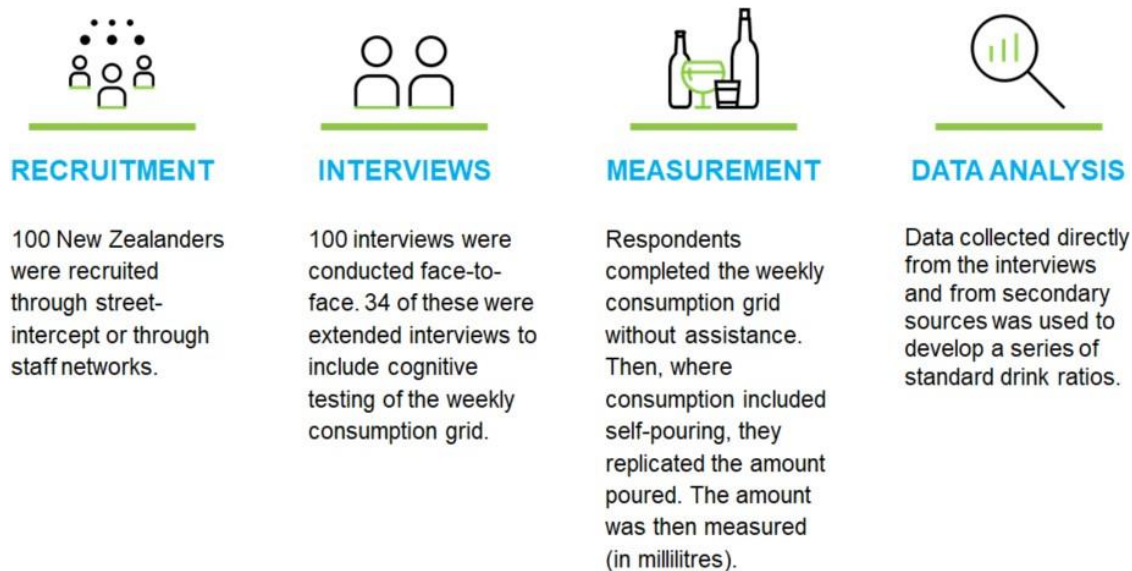
This AUiNZ aims to provide reliable measures of daily and weekly consumption, these measures are usually reported as standard drinks. In the AUiNZ respondents were asked to report the number of drinks (not the number of standard drinks).

The purpose of the calibration study was to determine if adjustments to the self-reported drinking amounts needed to be made when converting to 'standard drinks'.

The study was conducted in July 2019, with interviews being conducted in Wellington (84 interviews) and Auckland (16 interviews).

The method for the study is outlined in Figure 3.

FIGURE 3: OVERVIEW OF THE CALIBRATION STUDY METHOD





From left to right: selection of spirits, beer, cider and wine with accompanying glasses.

As a result of the study a standard drink calibration ratio has been applied at the analysis stage to calibrate reported consumption to standard drinks. Calibration ratios are detailed on page 22 of this report.

For the most part, people were able to accurately recall the amount of alcohol they consumed based on the consumption grid illustration in the questionnaire. The only exception was for shots/shots with mixers which may have been under-reported, if self-poured. The calibration ratio accounts for this potential under-reporting of spirits.

The study also looked to see whether different calibration ratios are recommended for different population groups. However, there were no consistent or significantly different patterns of under-reporting or over-reporting among various sub-groups (based on gender, age group, and ethnicity).

A secondary objective of the study was to obtain an indication of the extent of under-reporting due to incomplete recall over the period of a week. The extended interviews provided reassurance that the weekly self-completion consumption grid approach is likely to capture the vast majority of weekly consumption.

STEP 5: Survey fieldwork and revisions

The analysis of Wave 1 data prompted some changes to the questionnaire before Wave 2. These are outlined below:

- Question A1: Removed 'Don't know / can't recall' and added 'In the last 12 months but don't know when.' In Waves 2 and 3, the additional respondents who selected the new response were then included in the 'Drinkers' base (whereas they would not have been captured as a drinker in wave 1).

Wave 1:

A1 When did you last have a drink containing alcohol?
By a "drink" we mean more than a sip.

Please circle one answer

In the last 7 days	1
In the last 4 weeks but not the last 7 days	2
In the last 12 months but not the last 4 weeks	3
Not in the last year	4
Never	5
Don't know / can't recall	6

If you circled 4/5/6, please now go to section C on page 8

Waves 2 and 3:

A1 When did you last have a drink containing alcohol?
By a "drink" we mean more than a sip.

Please circle one answer

In the last 7 days	1
In the last 4 weeks but not the last 7 days	2
In the last 12 months but not the last 4 weeks	3
In the last 12 months but don't know when	4
Not in the last year	5
Never	6

If you circled 5 or 6, please now go to section C on page 8

- Question A6: Wording was changed for the pregnancy option in the question about reasons for drinking less or thinking about drinking less - from 'Pregnancy/recently became a mother' (in wave 1) to 'Pregnancy/recently became a parent' (for waves 2 and 3).
- Question B4 (waves 2 and 3): A new question (B4) was added where respondents were asked what type of alcohol they typically consumed over the last 4 weeks. This was used to calibrate B2 and B3 (that ask about alcohol consumption over the past 4 weeks) to standard drink amounts.

Waves 2 and 3:

B4 What type of alcohol did you **mostly** drink over the last 4 weeks?

Please circle one answer

Beer	1
Wine	2
Cider	3
RTDs	4
Spirits	5
Liqueurs	6
Cocktails	7
Others	8
Don't know	9

- Alcohol consumption diary: Minor changes were made to the wording and images.

No further changes were required between Wave 2 and Wave 3.

The survey communications are in Appendix 1. The questionnaire is published alongside this report on www.hpa.org.nz

6. DATA COLLECTION

This section of the report provides information about data collection processes.

ETHICS

In May 2019, the questionnaire and survey methodology were assessed by the Ministry of Social Development Research Ethics Panel. On feedback from the panel the survey privacy statement was updated to make it more user-friendly.

Participants received information about the survey via mail and they were able to familiarise themselves with the purpose of the survey before choosing to participate. Participation was voluntary and participants could withdraw at any time.

Confidentiality of all information provided by respondents in the interviews was assured by the Privacy Act 1993. The final datasets stored as electronic records contain no identifying information of the participating respondents, and responses can only be analysed as overall or grouped data.

INCENTIVES

To encourage participation, respondents were given the chance to win a Prezy® card.

In each of the three waves, three respondents were chosen at random to receive either one \$500 or one of two \$100 Prezy® cards.

TIMING AND SURVEY LENGTH

Data collection was spread across three waves:

Wave 1: 2 August – 22 September 2019

Wave 2: 1 November 2019 – 6 January 2020

Wave 3: 31 January – 22 March 2020⁴

The average online survey length was 15 minutes. The time taken to complete the paper questionnaire was not able to be calculated.

DATA COLLECTION

The online survey was programmed in Decipher (the online survey software used by Nielsen) and were device agnostic, so respondents saw the best layout for their computer/ tablet/ phone regardless of their device brand.

⁴ Fieldwork was completed before COVID-19 Alert Level 4 lockdown came into force at 11:59 pm Wednesday 25 March 2020.

Care was taken to ensure consistency between the online survey and the paper questionnaire. The main differences were:

- the randomisation of attitude statements in the online survey
- error messages appearing for invalid responses for those completing the survey online.

As completed paper questionnaires were received at the Nielsen’s office, the data were entered manually. The data entry team had the ability to select ‘No response’ for any question where a paper respondent had not selected a response.

Data entry protocols were set up to ensure consistency between data entry team members. As part of Nielsen’s quality control processes, 10% of each team member’s data-entered surveys were validated by another coder.

MODE OF RESPONSE

For all completed surveys, the method of completion (whether online or paper) was captured. This allows for the proportion of completed online and paper questionnaires to be calculated.

On average, 70% of respondents chose to complete the survey online, with the remaining 30% returning paper questionnaires. Table 6 shows this proportionally across the key sub-groups.

TABLE 6: PERCENTAGE OF ONLINE AND HARD-COPY COMPLETES (UNWEIGHTED)

	Online	Hard-copy	Online %	Hard-copy %
Māori	884	401	69%	31%
Pasifika	132	50	73%	27%
18-24 years	771	159	83%	17%
Total sample	3,181	1,364	70%	30%

RESPONSE RATES

To calculate the response rates, every individual adult who was sent an invitation to complete the survey was tracked and the outcome of the invitation recorded.

A call-log tracked which of the letters, postcards or questionnaire packs were returned as ‘Gone no address’, as well as any telephone notification of refusal to participate. This log also recorded notifications from third parties that the nominated respondent was not available or capable of completing the survey due to age, language issues, or health reasons. Every effort was made to remove any ineligible respondent from subsequent samples.

Table 7 shows the outcome codes.

TABLE 7: OUTCOME CODES

'Ineligible' outcome codes	
Deceased	A third party advised that the named respondent was deceased.
Overseas	A third party advised that the named respondent was living overseas.
Gone no address	A third party advised that the named respondent was no longer living at the address, or alternatively the mail was returned to Nielsen by NZ Post.
Language	A third party or the named individual advised that the named respondent was unable to take part due to language difficulties.
Unavailable/Other	A third party or the named individual advised that the named respondent was unable to take part as they were on holiday or unavailable for another reason.
Health/Age	A third party or the named individual advised that the named respondent was unable to take part due to health or age reasons.
Other outcome codes	
Refused	Individual was not willing to take part in the survey.
Late	Individual returned a completed survey after the close date.
Incomplete	Individual did not complete the full survey, though they did make a start.

If a respondent was having difficulty completing the survey, they were able to call or email Nielsen and ask for assistance. There were 31 calls/emails asking for assistance with the survey link or with a general enquiry.

The **return rate** was calculated as follows:

$$\text{Completed surveys} / (\text{total number of invitations mailed out} - \text{'ineligibles'}) \times 100$$

The **response rate** was also calculated. In calculating the response rate it is assumed that from the unknown outcomes (those not given an outcome code from Table 7), the same proportion of ineligible applies. The response rate was calculated as follows:

M = total mail outs

N = number of known outcomes

E = the ratio of ineligible to known outcomes (N/M)

B = the number of unknown outcomes who would be excluded if E applies to them (B = E*[M-N])

$$\text{Completed surveys} / (\text{total number of invitations mailed out} - \text{'ineligibles'} - B) \times 100$$

The final response rate was 26.5%.

Table 8 shows the response rate for each of the three waves.

The proportion of respondents who reported drinking in the last year was compared to the 2019/20 NZ Health Survey⁵ to determine the generalisability of the survey findings to all New Zealanders. In the AUiNZ 83% of respondents (aged 18+) reported being past- year drinkers, this is comparable to the NZ Health Survey 2019/20 which identified 81.5% of

⁵ https://minhealthnz.shinyapps.io/nz-health-survey-2019-20-annual-data-explorer/_w_eee7e0e7/#/

respondents aged 15+ as past-year drinkers. For Māori, both surveys identified 83% of respondents as past-year drinkers.

TABLE 8: RESPONSE RATES PER WAVE

Category	Total	Wave 1	Wave 2	Wave 3
Deceased	20	7	8	5
Overseas	64	31	11	22
Gone no address	872	399	217	256
Language	2			2
Unavailable	6	1	2	3
Health/Age	52	12	12	28
Total Ineligibles	1,016	450	250	316
Refused	123	46	41	36
Incomplete	5	4	1	
Late	109	38	11	60
Unknown - Mailed Out, No Info	14,972	4,748	5,181	5,043
Completes	4,545	1,614	1,486	1,445
Mail Outs	20,770	6,900	6,970	6,900
Return rate (%)	23.0%	25.0%	22.1%	22.0%
Response rate (%)	26.5%	29.6%	24.8%	25.2%

7. ANALYSIS AND REPORTING

DEFINITIONS

Ethnicity: Ethnicity is self-defined, and people are able to identify with as many different ethnicities as they wish.

Total response is used for analysis. This involves each person being allocated to all ethnic groups they have identified with, rather than being prioritised to a single ethnic group.

Prioritised ethnicity is used for weighting. Prioritised ethnic groups involve each person being allocated to a single ethnic group based on the ethnic groups they have identified with. Ethnicities are prioritised in the following order: Māori, Pasifika, Asian, NZ/European and Other.

Last-week drinker: A respondent who reported having had a drink in the last 7 days.

Drinker: A respondent who reported having had a drink containing alcohol in the last 12 months (including those who had a drink in the last 7 days).

Non-drinker: A respondent who reported that they have not had a drink in the last 12 months or have never had a drink.

Standard drink: A standard drink contains 10g of alcohol, it isn't usually the same as a glass of wine or beer poured in a bar or at home.

Drunk: Defined as any of the following: feeling more confident and chatty; slower reaction times, losing coordination and having trouble remembering things; mood changing (unhappiness or increased wellbeing); having a hangover the next day.

Day: A 'day' refers to a single day where alcohol was consumed – it is possible that different types of alcohol were consumed, and that the respondent drank at different locations and with different people on the same day.

Deprivation Index: The University of Otago compile and release the New Zealand Deprivation Index (NZDep). It is an area-based measure of socioeconomic deprivation in New Zealand. It measures the level of deprivation for people living in each of a number of small areas (meshblocks or statistical area units). It is based on nine variables from the 2018 Census.



NZDep can be displayed as an ordinal scale ranging from 1 to 10, where each value represents a tenth of the areas in New Zealand.

- 1 represents people living in the least deprived 10 percent of small areas.
- 10 represents people living in the most deprived 10 percent of small areas.



LOW-RISK DRINKING ADVICE

Results were analysed based on adherence with Te Hiringa Hauora low-risk alcohol drinking advice: <https://www.alcohol.org.nz/help-advice/advice-on-alcohol/low-risk-alcohol-drinking-advice>

ADVICE FOR REDUCING LONG-TERM HEALTH RISKS FROM DRINKING

	1. Standard drinks <u>daily</u>	2. Standard drinks <u>per week</u>	3. Alcohol-free days <u>per week</u>
 Males	No more than 3	No more than 15	At least 2
 Females	No more than 2	No more than 10	

ADVICE FOR REDUCING THE RISK OF INJURY FROM DRINKING

	Standard drinks <u>daily</u>
 Males	No more than 5
 Females	No more than 4

DERIVED VARIABLES

For comparison purposes (in data analysis), a number of derived variables have been created. These included ethnicity categories, deprivation level, and last-week drinker (definitions are given above).

WEIGHTING

To account for biases in the sample design and non-response bias, the data were weighted before reporting. Some biases include:

- disproportionate sample selection – certain sub-populations were over-represented to ensure an adequate base size for analysis. Most notably, Māori and 18-24 year-olds were oversampled to meet the target quotas.
- differential response rates – for example, in general older people and females have higher rates of response than younger people and males.
- the sample frame used – while the New Zealand Electoral Roll is the most accurate and representative sampling frame available, it does not include all members of the survey population (for example, people living in New Zealand who are not enrolled to vote).

These biases need to be reduced in the survey results to accurately reflect the wider population through weighting. Survey results are weighted to be representative of the wider population according to age,

gender, ethnicity and region. Weighting was based on the proportions in the population using the Stats NZ 2018 Census results.

For weighting purposes only, those who reported being 'gender diverse' were randomly allocated to male or female (proportional to the population gender distribution). This random allocation is necessary because proportions of gender diverse are not provided as part of Stats NZ 2018 Census results. For analysis purposes gender diverse individuals were included within the total population sample, but not in the gender specific analyses.

The sample was adjusted to represent the survey population, using standard weighting techniques. These included cell-based weighting for some of the dimensions and, where these were not appropriate, Iterative Proportional Fitting (IPF/Rim).

The weighting process was carried out as follows for each wave.

Sample distributions for each of the weighting variables were calculated:

- a. Māori were weighted by age within gender:
 - i. Age groupings were 18 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64 and 65+.
 - ii. Gender was defined by male and female.
- b. The total population were weighted by age within gender by region as follows:
 - i. Regions were Auckland, Northland/Waikato, Bay of Plenty/Gisborne/Hawke's Bay/Taranaki/Manawatu-Wanganui, Wellington, Canterbury, South Island (excluding Canterbury).
 - ii. Age groupings were 18 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64 and 65+.
 - iii. Gender was defined by male and female.
- c. Ethnicities were prioritised in the following order: Māori, Pasifika, Asian, European and other (including don't know/not specified). For example, if a person is both Pasifika and Asian, then they were counted in the Pasifika category.

For each of the weighting dimensions defined above, IPF/Rim weighting was used to adjust the sample proportions to the population proportions.

The data were weighted each wave and then, at the end of fieldwork, a post-weight adjustment was applied to correct any disparities in the sample sizes between the three waves.

Note regional level data have been weighted based on age and gender for the total population but not for Māori. However, the Māori sample has been compared against the Stats NZ population within each region by gender and age (18-24 years and 25+ years). The regional Māori data from the AUiNZ were comparable to the Stats NZ population structure for all regions except Northland/Waikato where there was an under-representation of male respondents.

TABLE 9: DATA CLEANING REQUIRED FOR WEIGHTING VARIABLES

Variable	Data cleaning
Age	Age was imputed from the Electoral Roll using the age data so no data cleaning was required.
Gender	Adults who skipped the gender question on the paper questionnaire had their likely gender imputed from the Electoral Roll using their title or name.

Ethnicity	Adults who skipped the ethnicity question on the paper questionnaire were grouped with the most common group (for weighting only).
Region	Location was imputed from the Electoral Roll using the location data so no data cleaning was required.

Some data cleaning was required for these weighting variables, outlined in Table 9.

CALIBRATION RATIOS

A standard drink calibration ratio has been applied at the analysis stage to calibrate reported consumption to standard drink measures. This calibration to standard drinks enables us to compare consumption across different drink types and across other alcohol use surveys. It also enables Te Hiringa Hauora to estimate adherence to the low-risk alcohol drinking advice (which is provided in standard drinks).

Further information on the calibration study used to determine the calibration ratios is detailed on page 12-13 of this report and the low-risk alcohol drinking advice is detailed on page 20.

The ratios for each drink type and volume are shown in Table 10.

TABLE 10: STANDARD DRINK CALIBRATION RATIOS

	BEER		WINE	CIDER	SPIRITS		
Alcohol type	Can/bottle	Pint	Glass	Can/bottle	RTD can/bottle	Cocktail	Shot/shot with mixer
Volume	330ml	450ml	150ml	330ml	250ml and 330ml	-	30ml
Alcohol content	4.5%	4.5%	13%	5%	7% and 5%	-	40%
Standard drinks	1.2	1.6	1.5	1.3	1.4	1.8	1

CODING OPEN-ENDED ANSWERS

The verbatim answers given to open-ended questions were analysed, with recurring themes forming the codeframes. Each verbatim comment was then coded into the applicable theme.

A number of questions with an existing codeframe for respondents had an 'other specify' response for any missing categories. These comments were either coded back into an existing code (if appropriate) or a new code was created.

DATA CLEANING

Some data cleaning and back coding was required for accurate and consistent results.

Back coding was required for alcohol consumption and determining when respondents last had a drink.

- In the paper copy, after selecting when they last consumed alcohol, some respondents who did not select 'in the last 7 days' completed the alcohol consumption diary. In this instance, respondents were back coded to having consumed alcohol in the last 7 days.
- Inversely, some respondents who selected 'in the last 7 days' then indicated in the consumption diary that they had not consumed alcohol on any of the last 7 days. These respondents were back coded to having consumed alcohol in the last 4 weeks, but not in the last 7 days.

A small number of respondents completing the paper questionnaire skipped questions that were set as compulsory online. These responses were excluded from that question alone, so results represent those who provided an answer. This explains why the base numbers of respondents answering each question may vary slightly.

ACCESS TO CONFIDENTIAL MICRODATA

The analyses presented in publications from Te Hiringa Hauora are only a proportion of those that could be undertaken. Confidentialised microdata from the AUiNZ will be available in 2021 for approved researchers to use for specific research projects. The microdata will have all identifying information about individuals removed and will be modified to protect individual information.

Approval will be subject to certain criteria, terms and conditions and the researcher's organisation will have to sign an access agreement with Te Hiringa Hauora. Further information is available on Te Hiringa Hauora website:

<https://www.hpa.org.nz/our-work/research/accessing-microdata>

7. LESSONS LEARNT

Design process

There was a high level of collaboration between Te Hiringa Hauora Alcohol Research team and the Nielsen team, especially during the design stage of the project. The shared understanding of the goals of the project allowed for an iterative design process which worked smoothly.

The formative research and desk-top review of consumption questions provided a solid base for the design of the questionnaire. Along with the pre-testing and piloting, it allowed for content and design decisions to be made based on evidence and user experience.

The enduring questions agreed by Te Hiringa Hauora provided focus during the design phase and will ensure that the survey results are able to support Te Hiringa Hauora in their work.

The development process of the consumption diary, including review by stakeholders, pre-testing and the calibration study, provide assurance that it is an appropriate collection tool.

Response to the survey

Re-evaluating the sampling each wave worked well, we were able to learn and adjust each wave to take into account which groups were over/under-responding. In particular, to adjust for the higher number of 18-24 year-olds.

There was initially a lower response rate from non-drinkers to the survey than expected. Communication materials were redesigned part way through to encourage more participation by explaining that we wanted to hear from non-drinkers as well as drinkers. However it is difficult to say how much impact these changes had on response for a number of reasons (eg, due to seasonal differences in drinking behaviour across the three waves of fieldwork). In the final survey results 83% of respondents (aged 18+) were past-year drinkers, this is comparable to the NZ Health Survey 2018/19 which identified 80% of respondents aged 15+ as past-year drinkers.

A higher than expected number of 18-24 year-olds responded to the survey. This could be in part due to the survey topic (alcohol), but may also be due to the online survey method and the design of communications. A higher proportion of 18-24 year-olds used the online method to respond.




The communication material (including the survey title) was pretested to ensure that it would resonate with harder-to-reach groups.

The sampling approach successfully estimated the response from the boosted Māori sample, resulting in a robust number of completes.

APPENDIX 1: SURVEY COMMUNICATIONS

1.1. MAIL OUT 1 – INITIAL LETTER

ENVELOPE:

Nielsen, PO Box 11 348, Wellington 6142, New Zealand	New Zealand Permit No. 77166	Permit 
	 TE HIRINGA HAUORA	
If this letter is not for you please help us by crossing out the address and sending it back by writing 'return to sender' on the front of this envelope. Alternatively call us free on 0800 400 402 to let us know.		

INVITATION LETTER (FRONT)



<Addressee's Name>
<Address Line 1 >
<Address Line 2 >
<City>, <post code>

<DATE>

Kia ora, Talofa lava, Mälō e lelei, Ni sa bula vinaka, Hello,

Tēnā koe <named respondent>,

I would like to invite you to take part in a survey about how New Zealanders drink alcohol. This survey is for people who drink **and** people who don't drink.

The purpose of this survey is to understand how we drink, what we like about drinking and what problems we think it can cause.

Why should I take part?

Your feedback is valuable and will help the people working to improve health and wellbeing in New Zealand to make decisions based on the best information. This information will provide evidence to inform advice, policies, programmes, resources and other activities.

An accurate picture of what all New Zealanders do and think is needed, so it is very important that everyone invited takes part, whether you drink alcohol or not.

How long will it take?

Depending on your answers, the survey will take about 15 minutes to complete.

How was I chosen?

You have been randomly chosen from the Electoral Roll.

The answers you give will be confidential and will be combined with hundreds of other responses so you can't be identified.

Nielsen, an independent research company, has been asked to carry out this nationwide survey for the Health Promotion Agency/Te Hiriinga Hauora (a Crown agency).

Thanks so much for your help with this. If you have any questions, please contact Nielsen on 0800 400 402 or Adrienne.Pointer@nielsen.com.

Ngā mihi

David Dundon-Smith
Manager Research

How to take part:

Completing the survey online is easy, quick and secure.

1. Go to:

WWW.NLSN.ONLINE/ALCOHOL

2. Enter the following details to login:

User name: <user name>

Survey code: <survey code>

If you have any questions or would prefer a paper copy of the questionnaire mailed to you, please contact Nielsen on 0800 400 402 or adrienne.pointer@nielsen.com



Plus your chance to win one of three Prezzy Cards!

To thank you for completing the survey, you could win one \$500 or one of two \$100 Prezzy Cards.

The prize will be drawn on 6th of April 2020. Terms and conditions apply.

FREQUENTLY ASKED QUESTIONS (BACK OF LETTER)

FREQUENTLY ASKED QUESTIONS

Why was I invited to take part in the survey?

You have been randomly selected from the Electoral Roll which contains names and addresses of all New Zealanders registered to vote. The Health Promotion Agency/Te Hiriinga Hauora has been given permission to use the Electoral Roll for the purpose of this research.

To make sure we hear the views of a cross-section of the population, it is important that you **personally** (rather than anyone else) fill in the survey.

Do I have to complete the survey?

To make sure results accurately reflect the views of people in New Zealand, it is very important that all those selected to complete this survey do so.

The survey is **voluntary**. If you cannot take part or if you have any questions, please call Nielsen on 0800 400 402.

Why does the website address provided on the first page of this letter not take me to the correct web page?

Try this address: WWW.NLSN.ONLINE/ALCOHOL

Or, you may have inserted the link into the search box rather than the address bar on the website browser. Using the **address bar** works better.



If you continue to have difficulties then please call Nielsen on 0800 400 402.

Who is the Health Promotion Agency/Te Hiriinga Hauora (HPA)?

HPA is an evidence-based health promotion organisation, influencing all sectors that contribute to health and wellbeing. Their key role is to lead and support health promotion initiatives to:

- promote health and wellbeing and encourage healthy lifestyles
- prevent disease, illness and injury
- enable environments that support health, wellbeing and healthy lifestyles
- reduce personal, social and economic harm.

You can find out more about HPA at <https://www.hpa.org.nz/>

How will my answers be kept confidential?

All results will be reported at the group level so that no individual may be identified.

Personal information (such as name and address) will be kept in strict confidence by Nielsen. Nielsen will strip all personal information from the data before supplying it to HPA. HPA will only share the data with approved researchers.

What do I do if the site crashes before I've had time to complete the survey?

Until you submit the questionnaire, you can re-open it and you'll find that it will take you back to the last question you completed. All of your answers will have been saved as you progress.

Can I change my answers?

If you would like to change any of your answers, please call 0800 400 402.

1.2. LOGON SCREEN



Welcome

Thank you for accessing the **What you think about drink** survey being conducted by Nielsen for the Health Promotion Agency/Te Hiringa Hauora.

The purpose of this survey is to understand how we drink, what we like about drinking and what problems we think it can cause.

PLEASE ENTER YOUR USER NAME AND SURVEY CODE BELOW THEN CLICK 'CONTINUE'

Username:	<input type="text"/>
Survey Code:	<input type="text"/>

Your **Username** comprises 6 numerals.

Your **Survey Code** comprises 3 lower-case alphabet characters.

Your **Username** and **Survey Code** can be found on the letter and/or reminder postcard that you would have received.

If you have any problems logging in to the survey please call Nielsen on **0800 400 402**.

If you would like to view our privacy statement, please [click here](#).

Continue >

|

1.3. MAIL OUT 2 – POSTCARD 1

FRONT:



BACK:



Dear <respondent>

Just over a week ago you were invited to take part in a survey about how New Zealanders drink alcohol.

Your feedback is valuable and will help the people working to improve health and wellbeing in New Zealand to make decisions based on the best information. This information will provide evidence to inform advice, policies, programmes, resources and other activities.

Please go to WWW.NLSN.ONLINE/ALCOHOL and enter the following to take part:
User name: <username> Survey code: <survey code>

If you have any questions please contact Nielsen on **0800 400 402**.

If you have recently completed the survey online, thank you and please recycle this card.


Ngā mihi
David Dundon-Smith
Manager Research


1.4. MAIL OUT 3 – SURVEY PACK


ENVELOPE:

Nielsen, PO Box 11 348, Wellington 6142, New Zealand

New Zealand
Permit No. 77166

Permit 




TE HIRIINGA HAUORA

If this letter is not for you please help us by crossing out the address and sending it back by writing 'return to sender' on the front of this envelope. Alternatively call us free on 0800 400 402 to let us know.

LETTER (FRONT):



<Addressee's Name>
<Address Line 1>
<Address Line 2>
<City>, <postcode>

<DATE>

Kia ora, Talofa lava, Māiō e lelei, Ni sa bula vinaka, Hello,

Tēnā koe <named respondent>,

Recently you were asked to go online and take part in a survey about drinking. This survey is for people who drink **and** people who don't drink. It asks about whether, and how, New Zealanders drink alcohol, what we like about drinking and what problems we think it can cause.

Why was I invited to take part?

You have been randomly chosen from the Electoral Roll to be invited to take part in this survey which should take about 15 minutes to complete.

An accurate picture of what all New Zealanders do and think is needed, so it is very important that everyone invited takes part, whether you drink alcohol or not.

Why is this important?

Your feedback is valuable and will help the people working to improve health and wellbeing in New Zealand to make decisions based on the best information. This information will provide evidence to inform advice, policies, programmes, resources and other activities.

How do I take part?

You can either go online to complete the survey using the instructions below. Or, if you would prefer, you can complete the attached paper copy of the survey and return it in the freepost envelope provided.

To complete online, go to WWW.NLSN.ONLINE/ALCOHOL and enter the following details to login:
User name: <user name>
Survey code: <survey code>

The survey is open until **22 March 2020** so please complete it at your earliest convenience.

Nielsen, an independent research company, has been asked to carry out this nationwide survey for the Health Promotion Agency/Te Hīringa Hauora (a Crown agency). The answers you give will be confidential and will be combined with hundreds of other responses so you can't be identified.

Any questions?

If you have any questions, please call Nielsen's helpline on 0800 400 402 or email adrienne.pointer@nielsen.com. If you have recently completed the survey online, thank you. Please recycle this pack.

Thank you for your help.

Ngā mihi

David Dundon-Smith
Manager Research



FREQUENTLY ASKED QUESTIONS (BACK OF LETTER):

FREQUENTLY ASKED QUESTIONS

Why was I invited to take part in the survey?

You have been randomly selected from the Electoral Roll which contains names and addresses of all New Zealanders registered to vote. The Health Promotion Agency/Te Hīringa Hauora has been given permission to use the Electoral Roll for the purpose of this research.

To make sure we hear the views of a cross-section of the population, it is important that you **personally** (rather than anyone else) fill in the survey.

Do I have to complete the survey?

To make sure results accurately reflect the views of people in New Zealand, it is very important that all those selected to complete this survey do so.

The survey is **voluntary**. If you cannot take part or if you have any questions, please call Nielsen on 0800 400 402.

Why does the website address provided on the first page of this letter not take me to the correct web page?

Try this address: WWW.NLSN.ONLINE/ALCOHOL

Or, you may have inserted the link into the search box rather than the address bar on the website browser. Using the **address bar** works better.



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- prevent disease, illness and injury
- enable environments that support health, wellbeing and healthy lifestyles
- reduce personal, social and economic harm.

You can find out more about HPA at <https://www.hpa.org.nz/>

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What do I do if the site crashes before I've had time to complete the survey?

Until you submit the questionnaire, you can re-open it and you'll find that it will take you back to the last question you completed. All of your answers will have been saved as you progress.

Can I change my answers?

If you would like to change any of your answers, please call 0800 400 402.

QUESTIONNAIRE (FRONT COVER):

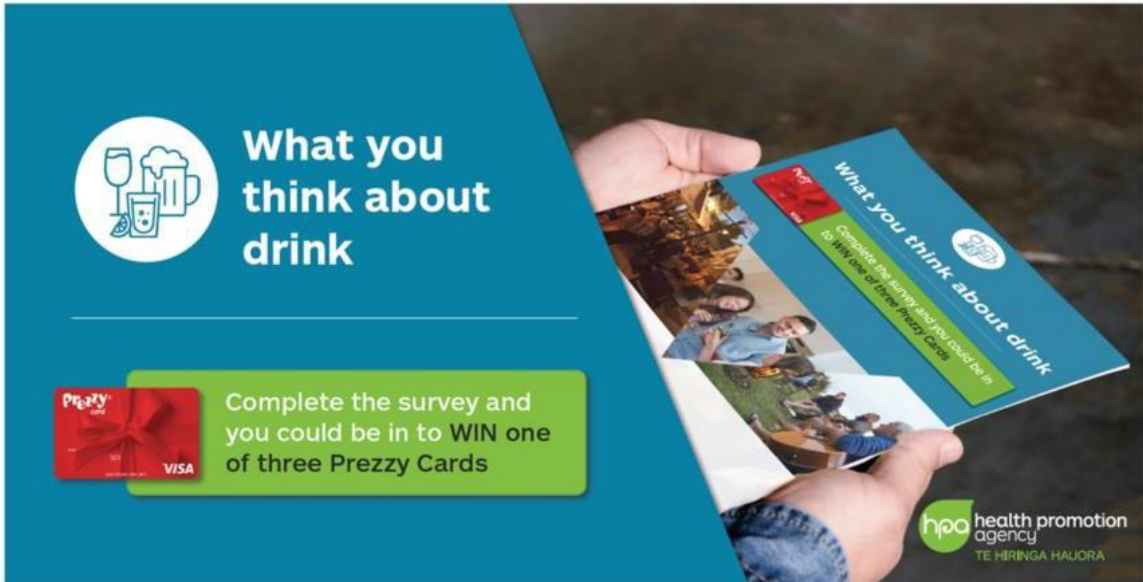


QUESTIONNAIRE (BACK COVER):



1.5. MAIL OUT 4 – POSTCARD 2

FRONT:



BACK:



Dear <respondent>

You should have recently received a questionnaire in the mail for a survey about how New Zealanders drink alcohol.

Your feedback is valuable and will help the people working to improve health and wellbeing in New Zealand to make decisions based on the best information. This information will provide evidence to inform advice, policies, programmes, resources and other activities.

Please complete this survey and return it in the freepost envelope provided, within the next week.

Alternatively you can still complete it online at WWW.NLSN.ONLINE/ALCOHOL using the following:
User name: <username> **Survey code:** <survey code>

If you have recently returned the questionnaire, thank you and please recycle this card.

If you have any questions please contact Nielsen on 0800 400 402.

Ngā mihi,
 David Dundon-Smith
Manager Research

Nielsen Holdings plc (NYSE: NLSN) is a global performance management company that provides a comprehensive understanding of what consumers watch and buy. Nielsen's Watch segment provides media and advertising clients with Nielsen Total Audience measurement services for all devices on which content — video, audio and text — is consumed. The Buy segment offers consumer packaged goods manufacturers and retailers the industry's only global view of retail performance measurement. By integrating information from its Watch and Buy segments and other data sources, Nielsen also provides its clients with analytics that help improve performance. Nielsen, an S&P 500 company, has operations in over 100 countries, covering more than 90% of the world's population. For more information, visit www.nielsen.com