



# Methodology Report for the 2008 Health and Lifestyles Survey



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# 1 Introduction

The Health and Lifestyles Survey (HLS) is a monitor of the health behaviour and attitudes of New Zealand adults aged 15 years and over, and parents and caregivers. The HLS is managed by the Health Sponsorship Council (HSC) and collects information relating to the programme areas the HSC works in. These areas include tobacco control, sun safety, problem gambling and healthy eating. The HLS is carried out every two years, with the first HLS carried out in 2008.

The 2008 HLS involved face-to-face interviews with 1608 adults (aged 15 years and over). Some of these adults were also included in interviews of 777 parents and caregivers of 5 to 16-year-olds.

This methodology report details the procedures and protocols followed to ensure the HLS produces high-quality and robust data. Publication of specific analyses can be accessed at <http://www.hsc.org.nz>.

## 1.1 Background

Prior to the 2008 HLS, the HSC undertook a number of different monitor surveys to benchmark and monitor changes in New Zealanders' knowledge, attitudes and behaviour in response to its social marketing and health promotion programmes and community-level activities in the health sector. These included:

- The Smokefree/Auahi Kore Monitor, which had been running since the early 1990s and had been run annually since 2003.
- The 2006/07 Gaming and Betting Activities Survey, that provided benchmark measures for the problem gambling programme.
- The New Zealand Children's Food and Drinks Survey, undertaken in 2007 to provide benchmark measures for the healthy eating programme.
- The Sun Protection Triennial Survey, which monitored responses to the sun safety programme and had been undertaken since 1994.

These monitors focused on adults, although the Gaming and Betting Activities Survey, the Children's Food and Drink Survey and the Sun Protection Triennial Survey also interviewed young people in the target age group for that particular programme.

HSC reviewed the adult surveys and has combined the majority of these into a single survey - the Health and Lifestyles Survey (HLS).

## 1.2 Objectives of the HLS

The objectives of the HLS are to:

- measure objectives from HSC's existing programme plans
- provide quality measures for Statement of Intent reporting requirements
- monitor short-, medium- and long-term societal changes in attitudes, knowledge and behaviours, and track changes in views about the social desirability and acceptability of various measures of tobacco control, preventing and minimising gambling harm, increasing healthy eating behaviours, and sun safe behaviours.

### **1.3 Ethics**

The 2008 HLS was voluntary and this was clearly explained to potential participants in the HSC brochure, as well as verbally by the interviewer. All survey procedures were consistent with the Code of Practice of the Market Research Society of NZ Inc, of which the survey provider, the National Research Bureau Limited (NRB) is a member.

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

## 2 Population and Frame

This section discusses the target population, the survey population, and the sample frame. The *target population* is the population the survey aims to represent. All statistics for the survey refer to the target population. The *survey population* is the population that had a probability of being selected to participate in the survey. For various reasons (discussed below), there was a small proportion of people who did not have a chance of being selected to participate in the survey. As a result, the survey population is slightly smaller than the target population. The sample *weights* are designed to reflect the target population, so that the weighted statistics produced from the HLS can be taken to be representative of this population.

The *sample frame* is the list of areas, and the lists of dwellings and people within these areas, that were used to select the HLS sample from the survey population.

### 2.1 Target population

The target population was the usually resident civilian population of all ages living in permanent private dwellings in New Zealand. The target population was approximately 3.1 million adults (aged 15 years and over).

For reasons of practicality and cost-effectiveness, the target population is defined to include only permanent private dwellings, so temporary private dwellings are excluded, including caravans, cabins and tents in a motor camp, and boats. The target population also excludes non-private dwellings (institutions). Examples of this type of dwelling are: hotels, motels, guest houses, boarding houses, homes for the elderly, hostels, motor camps, hospitals, barracks, and prisons.

People were eligible to be interviewed at their usual residence only. If they were temporarily visiting a household that was selected into the HLS, they were not eligible to be selected as part of that household. This process ensured that no-one had a double chance of being selected in the survey.

People who were usually resident in a private dwelling in New Zealand, but who were temporarily overseas for some of the survey period, were in the target population. In the great majority of cases these individuals had a chance of being selected in the survey, as the survey provider made six repeated call-backs to non-contacted households in the sample over the survey period. The benchmarks used in weighting the survey also included usual residents temporarily overseas.

People aged 15 years and over were in the target population for the survey.

### 2.2 Survey population

For practical reasons a small number of households (1.1%) that were part of the defined target population were excluded from the survey population, but these have been accounted for in the final estimates via the survey weights. Households not included were those in meshblocks with fewer than nine occupied dwellings (according to the 2006 New Zealand Census of Population and Dwellings), and those located off the main islands of New Zealand (North, South and Waiheke), such as those on other sparsely inhabited off-shore islands, on-shore islands, waterways, and inlets. Due to the small number of households omitted, any possible bias is likely to be extremely small.

## **2.3 Sample frame**

An area-based frame of Statistics New Zealand's meshblocks was used, based on New Zealand 2006 Census meshblocks, containing 34,723 meshblocks. A sample of 300 meshblocks was selected from this frame. Interviewers listed all the addresses in each of these areas. These lists of dwellings were then used as a frame from which a sample of dwellings was selected from each meshblock. One eligible parent/caregiver and/or one adult (if any) was then selected from each selected dwelling.

## 3 Sample Design

The survey was designed to be able to produce nationally representative estimates. The 2008 HLS adopted a multi-stage, stratified, probability-proportional-to-size (PPS) sampling design.

### 3.1 Rationale for the sample design

A primary consideration in the sample design of the HLS was the need for sufficient samples of people of Māori, Pacific, and people of European/Other ethnicities, as well as low socio-economic status groups and current smokers. The main group of interest was adults aged 15 years and over, but it was also important there be enough parents and caregivers of 5 to 16-year-olds to be able to analyse the results of this group with confidence.

The challenge for the sample was to arrive at a design that would:

- provide national, projectable figures
- use a survey method with higher (face-to-face), rather than lower (phone, mail, web) public participation
- deliver 1500 interviews with adults aged 15 years and over, made up of 400 interviews with Māori, 300 with Pacific peoples and 800 with European/Other people
- in addition, deliver 350 interviews from parents/caregivers of 5 to 16-year-olds, 300 interviews from low socio-economic groups, and 350 interviews from smokers
- provide the minimum design effect for the overall sample and specific target groups within the budget for the survey.

The simplest possible sample design would be a random sample of all people in New Zealand, so that everyone has an equal and independent chance of being selected in the sample. However, a design of this type would not be feasible because:

- there is not a sufficiently accurate list of all addresses in New Zealand to use as a sampling frame
- the sample would be geographically very dispersed, requiring interviewers to travel great distances between interviews.

Also, a simple random sample would not result in large enough numbers of Māori, or Pacific peoples, to enable adequate statistics for these groups. Because of this, the 2008 HLS, like most household surveys, used a complex sample design.

Complex designs have two main features that affect the precision of statistics coming from the survey.

1. *Different people have a different chance of selection.* This was captured in the ‘weight’, which is the number of people that each survey respondent represents in the target population. In the 2008 HLS, Māori and Pacific peoples had lower weights than other people to reflect the fact that these groups had an increased chance of selection in the sample relative to simple random sampling. Sampling of one adult per household also led to different weights, because adults in larger households received a larger weight. In the 2008 HLS, the selection weight for adult participants who were selected for the parent/caregiver sample was adjusted to account for their increased chance of selection in the adult sample.

2. *The sample was 'clustered'*. In the 2008 HLS a sample of meshblocks was selected, and then a sample of households was selected from each meshblock. If the households in the sample were shown on a map of New Zealand they would appear clumped. Clustering made the survey more affordable, in that interviewers did not have to travel between as many areas as they would if simple random sampling was used.

The net effect of a complex design can be measured by the 'design effect' (or DEFF). The DEFF is the ratio of the variance (a measure of precision) of an estimate achieved by a complex design relative to the variance of the same estimate that would be achieved by a simple random sample of the same size. The closer the DEFF is to 1, the closer the design is to simple random sampling. Design effects of between 2 and 4 are typical in population health surveys, which means the variance is larger than would have been obtained using a simple random sample. A complex design like that used in the 2008 HLS is less precise than a simple random sample with the same sample size, but is much more precise than could be achieved by a simple random sample with the same budget.

Nevertheless, DEFFs should not be too large. On the one hand, it is appropriate for weights to vary across the sample, otherwise it would not be possible for Māori and Pacific peoples to have an increased chance of selection in the sample. On the other hand, if the variation in weights is too extreme, the DEFF will be very large, and this would be counter-productive for all statistics, even for Māori and other sub-population groups. The methods to sample sub-populations were used to ensure the sample design was appropriate for achieving adequate precision for national and sub-population estimates within the survey budget.

Note that the design effects are different for each statistic. Table 1 presents the design effects for an indicator from each programme area.

**Table 1: Design effects for four indicators from the 2008 HLS for each sample, by ethnic group**

Indicator	Ethnic group	General sample	Parent/Caregiver sample
Current smoker	Māori	2.0	1.5
	Pacific	1.9	1.6
	Asian	1.5	1.1
	European/Other	1.8	1.3
	Total	2.1	1.7
Never let your child get sunburnt ad recognition	Māori	2.3	1.2
	Pacific	1.7	1.5
	Asian	1.7	1.1
	European/Other	1.5	1.4
	Total	2.3	2.0
Gambler	Māori	1.9	–
	Pacific	1.7	–
	Asian	2.6	–
	European/Other	2.0	–
	Total	2.7	–
Usually spends \$151-\$200 each week on food and drinks	Māori	1.8	1.4
	Pacific	2.7	1.7
	Asian	1.2	1.4
	European/Other	1.9	1.4
	Total	2.3	1.9

Note: the parent/caregiver sample was not asked any questions from the gambling section of the questionnaire.

### 3.2 Sample selection

A four-step selection process was used to achieve the sample.

#### Step 1: Put all meshblocks into strata

Using Statistics New Zealand meshblocks as the initial unit of sampling, two strata were formed – a Pacific people’s stratum consisting of meshblocks in which 20% or more of the population were of Pacific ethnicity, and another stratum consisting of all of the (“other”) remaining meshblocks.

#### Step 2: Select meshblocks within strata

Meshblocks vary considerably in size and were therefore selected by PPS design within each stratum. The size measure was the number of occupied dwellings in the meshblock according to the 2006 Census. This means that larger meshblocks had an increased chance of selection in the design. In summary:

- 48 meshblocks were selected from within the Pacific stratum
- 252 meshblocks were selected from the Other stratum.

Thus a total of 300 meshblocks were selected.

### **Step 3: Select households within meshblocks**

Within each meshblock, some households (on average 10, with a maximum of 15) were selected to form the core sample, and some households were selected to form the screened or booster sample.

Households in the core sample were selected by a systematic procedure of beginning at a random dwelling pre-allocated in the meshblock and knocking on the door of every  $k^{\text{th}}$  house.

Up to 22 of the dwellings in between the  $k^{\text{th}}$  houses were then selected as the screened sample. In up to 14 of these 22 dwellings, both Māori and Pacific peoples were eligible to be sampled, in the remaining eight dwellings only Pacific peoples were eligible to be sampled.

### **Step 4: Select respondents within households**

The procedure for selecting respondents in the 'core' and 'screened' households was essentially the same (see Figure 1).

Within each household, all eligible adults (those aged 15 years and over who usually resided at that dwelling) were identified. The names of all eligible respondents were then listed in descending order of age on a sampling Kish grid (Kish 1949), and the ethnicities (obtained by proxy from the person who answered the door using the Statistics New Zealand question that has been used in the 2001 and 2006 Census) of all household members were recorded. The interviewer asked if any children aged 5 to 16 years usually (four or more days per week) lived in the household. If so, the interviewer recorded whether any of the adults were parents or caregivers of any children aged 5 to 16 years.

If there were not any 5 to 16-year-old children living in the household, and the household was included as part of the adult sample (approximately 50% of the time, this was the case), then one adult was selected based on whose names fell alongside predetermined indicators on the sampling Kish grid (see Appendix 1 for an example of how the Kish grid selection process works).

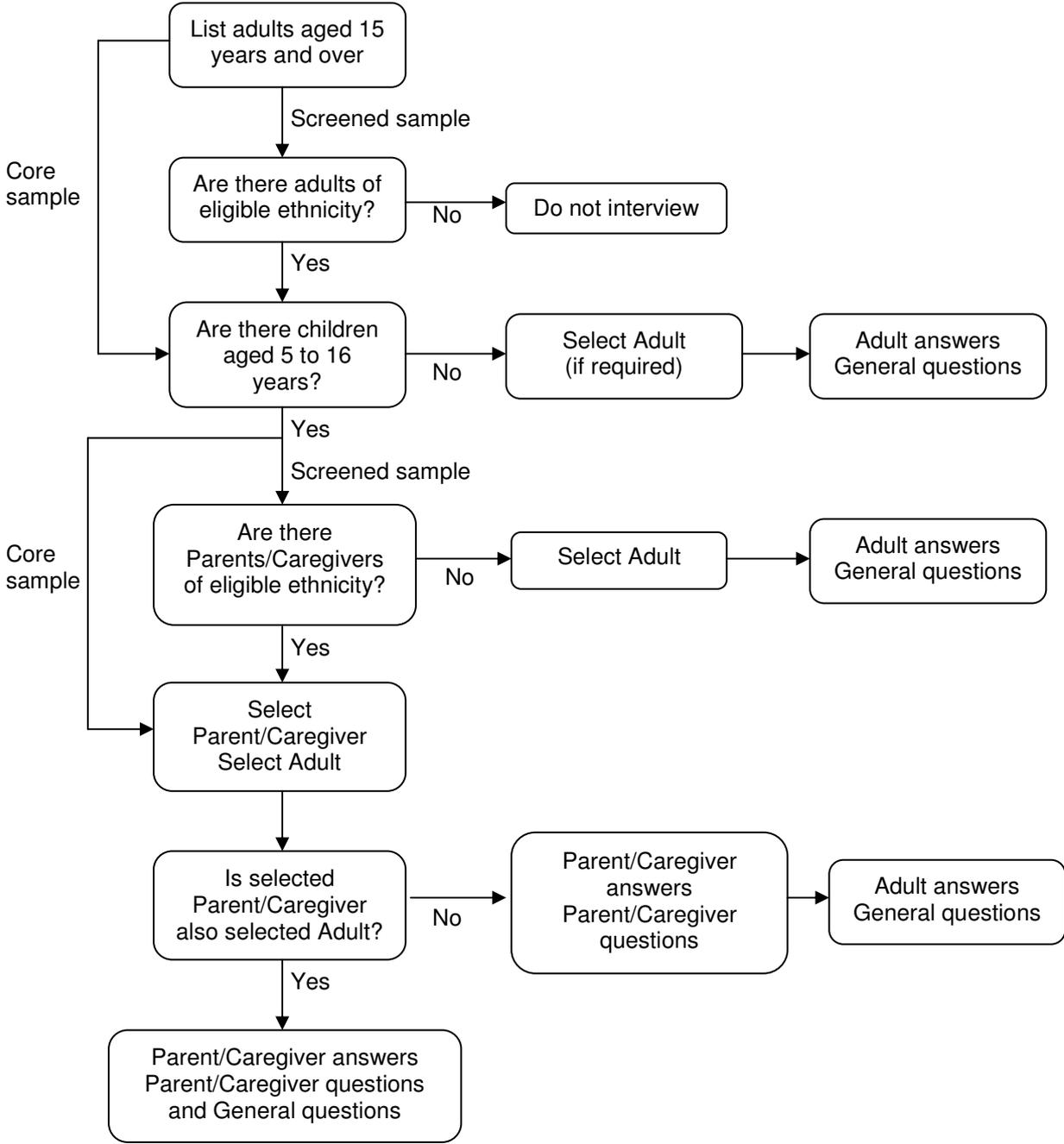
If there were 5 to 16-year-old children living in the household then one parent/caregiver was selected based on whose names fell alongside predetermined indicators on the sampling Kish grid. After the parent/caregiver was selected, the probability of selection of the same person for the adult sample was double. This meant that in some households a single person was interviewed as part of the parent/caregiver sample and as part of the adult sample, while in other households two people were interviewed, one for the parent/caregiver sample and another for the adult sample.

The sampling process for parents/caregivers and adults was the same in the screened sample, except that for the first 14 houses only people of Māori or Pacific ethnicities were eligible for selection in either the parent/caregiver or the adult samples, and for the other eight houses only Pacific peoples were eligible for these samples.

<sup>1</sup> K is determined by the number of dwellings in the Meshblock, for example, in a small Meshblock K might be every 5<sup>th</sup> dwelling, while in a large Meshblock it might be every 10<sup>th</sup> dwelling.

Overall, 1608 people aged 15 years and over participated in the adult sample, and 777 people participated in the parent/caregiver sample of the 2008 HLS. There was no substitution of households or respondents if the selected household or respondent was not contactable or was unavailable.

**Figure 1: Diagram of the 2008 HLS respondent selection process within the household**



## 4 Data Collection Instruments

### 4.1 Questionnaire content

The 2008 HLS questionnaire is available from <http://www.hsc.org.nz/researchpublications.html>. Table 2 outlines the topic areas in the questionnaire. There were a larger number of questions in the sun safety and tobacco control sections of the 2008 questionnaire, with fewer questions in the healthy eating and problem gambling sections.

A large number of questions in the 2008 HLS were sourced from the Smokefree/Auahi Kore Monitor, the 2006/07 Gaming and Betting Activities Survey, the 2007 Children's Food and Drinks Survey, and the Sun Protection Triennial Survey. This was done to enable the monitoring over time of the concepts these questions measured.

The 2008 HLS questionnaire was informed by advice from HSC staff working in the specific programme areas, external researchers working in the specific topic areas, as well as other surveys. The HSC Research and Evaluation Unit and the research company carrying out the survey, NRB, worked together to construct the questionnaire.

**Table 2: Summarised content of the 2008 HLS questionnaire**

Programme area	Information domains	Output details
Sun safety	Perception of, and knowledge and attitudes to, sun protection behaviour	<ul style="list-style-type: none"> <li>Perceived advantages and disadvantages of sun exposure.</li> <li>Attitudes towards tanning.</li> <li>Awareness and understanding of the link between sunburn and the incidence of melanoma/skin cancers.</li> </ul>
	Sun protection behaviour	<ul style="list-style-type: none"> <li>Use of SunSmart behaviours (adults and children).</li> <li>Changes in sun protection behaviours in order to get Vitamin D.</li> </ul>
	Incidence of sunburn	<ul style="list-style-type: none"> <li>Incidence of mild and extreme sunburn in children last summer.</li> </ul>
	Campaign monitoring	<ul style="list-style-type: none"> <li>Recall of, and attitudes towards, SunSmart advertising.</li> <li>Knowledge of, and behaviours as a result of, the UV Index.</li> <li>Validation of a segmentation of the sun safety intervention audience (parents/caregivers) developed from qualitative research.</li> </ul>
	Sun protection-related demographics	<ul style="list-style-type: none"> <li>Skin type (of adult, and child if applicable).</li> </ul>
Healthy eating	Parents/caregivers' knowledge, awareness and use of healthy eating strategies	<ul style="list-style-type: none"> <li>Parents/caregivers' knowledge and awareness of strategies to improve children's diets.</li> <li>Extent to which parents/caregivers are implementing the strategies aimed at improving children's diets.</li> </ul>
	Attitudes	<ul style="list-style-type: none"> <li>Attitudes towards the promotion of unhealthy food products.</li> </ul>

<b>Programme area</b>	<b>Information domains</b>	<b>Output details</b>
	Healthy eating-related demographics	<ul style="list-style-type: none"> <li>• Average weekly spend on food and beverages.</li> </ul>
Tobacco control	Smokefree behaviour	<ul style="list-style-type: none"> <li>• Parents/caregivers' protective behaviours for youth initiation of smoking.</li> </ul>
	Second-hand smoke exposure	<ul style="list-style-type: none"> <li>• Exposure to second-hand smoke in the home and in the car.</li> </ul>
	Quitting	<ul style="list-style-type: none"> <li>• Smokers/recent quitters' barriers to quitting smoking.</li> <li>• Extent to which societal attitudes led smokers/recent quitters to try to quit.</li> </ul>
	Location	<ul style="list-style-type: none"> <li>• Smokers' most frequent smoking locations.</li> </ul>
	Campaign monitoring	<ul style="list-style-type: none"> <li>• Awareness of quit smoking advertising and advertising on the harmful effects of smoking.</li> <li>• Awareness of things that might encourage smoking.</li> <li>• Awareness of warning labels on cigarette and tobacco packets.</li> </ul>
	Attitudes	<ul style="list-style-type: none"> <li>• Attitudes towards smoking in a number of indoor and outdoor settings.</li> <li>• Attitudes towards smoking in the car.</li> <li>• Attitudes towards exposing young people to adult role models of smoking behaviour.</li> <li>• Parents/caregivers' attitudes towards their children smoking.</li> <li>• Smokers' attitudes towards harm of smoking.</li> <li>• Attitudes towards regulation of smoking.</li> </ul>
	Tobacco control-related demographics	<ul style="list-style-type: none"> <li>• Smoking status.</li> </ul>
Problem gambling	Awareness	<ul style="list-style-type: none"> <li>• Awareness of harms associated with problem gambling.</li> </ul>
	Exposure	<ul style="list-style-type: none"> <li>• Exposure to gambling harm (directly or indirectly).</li> </ul>
	Attitudes	<ul style="list-style-type: none"> <li>• Attitudes towards communities'/individuals' ability to contribute to activities that prevent and minimise problem gambling harm.</li> </ul>
	Problem gambling-related demographics	<ul style="list-style-type: none"> <li>• Participation in gambling activity - nature and frequency of this participation.</li> </ul>

## **5 Data Collection and Quality Control**

### **5.1 Collection mode**

Interviews were conducted in respondents' homes, with the interviewer typing responses directly into a laptop computer using Blaise CAPI software. Show cards with predetermined response categories were used to assist respondents where appropriate.

### **5.2 Interviewer training**

Approximately 80 interviewers were trained in the sampling and interviewing procedure for the 2008 HLS interviews. Interviewer training sessions took place in the 20 largest population centres. These were delivered by the NRB Area Supervisor for that centre. Training sessions were spread over one day and covered both sampling procedures and questionnaire administration. Practice interviews were conducted by each interviewer as part of this training.

Training sessions revolved around a training manual that contained both generic NRB training material as well as material specific to the administration of the HLS.

### **5.3 Enumeration**

Before selecting households to participate in the 2008 HLS, interviewers counted the dwellings in their area (meshblock) to take account of the number of new dwellings built and the number of buildings demolished since the last pre-Census enumeration.

### **5.4 Call pattern**

The call pattern used in the 2008 HLS was an important part of achieving a high response rate.

The 'call' refers to one visit on one day during a particular time band. Households were initially approached between 4pm and 7pm on weekdays, and 11am and 6pm on weekends. Thereafter, appointments were made at a time that best suited the household for completing the interview. NRB conducted a total of up to six calls at each sampled dwelling, at different times of the day, and on different days of the week, before accepting that dwelling as a non-contact.

### **5.5 Performance and quality control**

It is rare for interviewers who are properly trained and field-supported to falsify interview, but, nevertheless, NRB monitor interviewers to ensure high quality data collection.

Interviewers were monitored by their NRB Area Supervisors by way of:

- regular meetings to examine sampling sheet completion and deal with meshblock issues and enumeration checks
- examination of individual response rates and how to improve these if necessary
- checking of 15% of completed interviews by phoning respondents to confirm that the interview was done and to check that the respondent is the one stated.

## 5.6 Informed consent

The 2008 HLS was voluntary, relying on the goodwill of participants, and consent was obtained without coercion or inducement.

Participants selected for the survey were given an invitation letter and an information brochure. The information brochure included information about the provision of an interpreter if required (in multiple languages, including New Zealand sign language). Respondents were also informed of the possibility of matching respondents and interviewers by language, ethnicity, and gender when requested.

(See Appendix 2 for examples of the information provided to the participants.)

## 5.7 Pilot

A pilot survey of 102 respondents was run in February and March 2008. The main purpose of the pilot was to test the questionnaire, including how participants responded to being questioned about four separate health topics, and the CAPI instrument, prior to its implementation in the main survey. The sampling method was already well tested by NRB in the 2007 Children's Food and Drinks Survey, 2006/07 Gaming and Betting Activities Survey and a number of other large-scale surveys for government clients.

The pilot sample was not random, as people were selected to represent the different mix of ethnic groups, age groups, and geographic locations likely to be included in the main survey (a purposive sample). Once the pilot was reviewed, a number of questions were removed from the questionnaire, or further refined. A full report of the pilot procedure, including a copy of the pilot questionnaire, is available from HSC on request.

## 5.8 Field dates

Interviews for the main survey were conducted from mid-June to late-August 2008.

## 5.9 Respondent burden

The survey sought to minimise the burden on respondents by:

- seeking interviews by appointment rather than pressuring people for immediate participation
- reducing the number of dwellings in which two interviews were required, by increasing the probability of the randomly selected parent/caregiver also being the randomly selected adult
- planning for a 40-minute average duration. In practice, a duration of 44 minutes<sup>2</sup> eventuated for adults, and 35 minutes for parent/caregivers. Where the parent/caregiver was also the selected adult, thereby answering both sets of questions, the average duration was 57 minutes. Two interviews were conducted in 172 dwellings, one with a parent/caregiver and one with another adult. In these dwellings, the combined average interview duration was 82 minutes
- using showcards wherever possible to assist answering
- inviting open-ended answers to enable people to feel they could express themselves, rather than being simply an information source

<sup>2</sup> These times are the CAPI times and include all question modules. They do not include the time spent in a household before or after the interview was conducted.

## 6 Response Rates

The main measure used to assess the overall quality of a survey is the response rate. The response rate is a measure of how many people who were selected to take part in the survey actually participated. The response rate reflects the proportion of people interviewed from those who were selected into the sample, and describes the success of the study in terms of achieving cooperation from the population being measured. A high response rate means the survey results are more representative of the target population.

### 6.1 Response rate calculation

There are four components to the response rate calculation:

- ineligible (eg, vacant sections, vacant dwellings, and non-residential dwellings)
- respondents (interview conducted, respondent confirmed to be eligible for the survey)
- eligible non-respondents (interview not conducted, but enough information collected to indicate that the household did contain an eligible adult)
- unknown eligibility<sup>3</sup> (eg, non-contacts and refusals who provided insufficient information to determine eligibility).

The 2008 HLS response rate was calculated as follows:

$$\text{Response rate} = \frac{\text{number of respondents}}{\left[ \begin{array}{l} \text{number of} \\ \text{respondents} \end{array} \right] + \left[ \begin{array}{l} \text{number of eligible} \\ \text{non-respondents} \end{array} \right] + \left[ \begin{array}{l} \text{estimated number of eligibles} \\ \text{from the unknowns} \end{array} \right]} \times 100$$

The justification for this response rate was that a proportion of the unknowns were likely to be eligible if contact could have been made. As contact could not be made with the estimated number who would be eligible, they were classified as non-respondents.

The estimated number of unknown eligibles was calculated as follows:

$$\left[ \begin{array}{l} \text{Estimated number of eligibles} \\ \text{from the unknowns} \end{array} \right] = \left[ \begin{array}{l} \text{number of} \\ \text{unknowns} \end{array} \right] \times \frac{\left[ \begin{array}{l} \text{number of} \\ \text{respondents} \end{array} \right] + \left[ \begin{array}{l} \text{number of eligible} \\ \text{non-respondents} \end{array} \right]}{\left[ \begin{array}{l} \text{number of} \\ \text{respondents} \end{array} \right] + \left[ \begin{array}{l} \text{number of eligible} \\ \text{non-respondents} \end{array} \right] + \left[ \begin{array}{l} \text{number of} \\ \text{ineligibles} \end{array} \right]}$$

### 6.2 Adult sample response rate

The final response rate for the adult sample in the 2008 HLS was 63.7%.

### 6.3 Parent/caregiver sample response rate

The final response rate for the parent/caregiver sample in the 2008 HLS was 63.2%.

<sup>3</sup> This grouping applies to the response rate calculated for parent/caregivers. The response rate calculated for adults has all these outcomes added to the eligible non-respondents category.

## **7 Data Processing**

This section outlines the processes used to collect, check, and output the data for the 2008 HLS.

### **7.1 Capture**

Questionnaire responses were entered directly on interviewers' laptops using Blaise CAPI software. As interviewing progressed, completed interviews were uploaded to NRB's website, from which they were drawn down for inspection, coding, and editing. Interviews were uploaded to the website on a weekly basis.

### **7.2 Coding**

Different types of questions were used in the 2008 HLS. Single-response questions, which a respondent can only give one response to, were coded as is. Some questions allowed for multiple responses. For these questions all responses were retained, with each response shown as a separate variable on the data file.

Open-ended questions were used extensively. For these, the interviewer keyed in the verbal answers, as near as possible to the respondent's spoken words. Coding of these was then done by NRB's data processing team.

Coding of open-ended questions was undertaken by initially printing out the answers given by respondents to each open-ended question. These answers were examined jointly by the researcher and a data specialist to search for recurring points or themes. Each recurring point/theme was identified as a code. All answers falling sufficiently close to that point/theme, (ie, differing only in the words the person used to describe it) were assigned to that code.

Questions with an "Other, please specify" code were treated in the same way as open-ended questions. In this case, the number of original codes was extended to accommodate any further recurring answers. In some instances, interviewers tend to put into "Other, please specify" an answer that fits into one of the pre-coded categories. In this case, the answer was assigned that code.

### **7.3 Security of information**

Any information collected in the survey that could be used to identify individuals has been treated as strictly confidential. Data were transferred from interviewers' laptops to head office at NRB by a secure internet upload facility.

Names and addresses of people and households who participated in the survey have not been stored with response data.

### **7.4 Imputation**

Imputation for non-response or refused answers was not done. When household income was not stated (eg, either refused or unknown by approximately 6%) - this was left as unstated.

### **7.5 Creation of derived variables**

A number of derived variables have been created for the 2008 HLS data set.

## Ethnicity

Ethnicity was calculated using prioritisation in the order of Pacific peoples, Māori, Asian and European/Other. Prioritisation involves each person being allocated to a single ethnic group, based on the ethnicities they have identified with, in the prioritised order of Pacific peoples, Māori, Asian and European/Other (Ministry of Health 2004b). For example, if someone identifies as being Chinese and Māori, under the prioritised ethnic group method, they are classified as Māori for the purpose of analysis. The way that the ethnicity data is prioritised means that the group of prioritised European/Other effectively refers to non-Māori, non-Pacific, and non-Asian people.

As the number of Asian people who participated in the HLS was small (74 in the adult sample), for many of the analyses Asian people have been grouped with European/Other people.

## Likert agreement scales

Many of the questions on people's attitudes were asked using a five point agreement scale from strongly disagree to strongly agree. For many analyses, these have been grouped into fewer categories. For example, agree and strongly agree being referred to as 'agree' and disagree and strongly disagree being referred to as 'disagree'.

## Smoking status

These are the definitions used for smoking status:

*Never smoker:* has never smoked tobacco.

*Non-smoker now:* has ever smoked tobacco, but never started smoking [regularly]

*Current smoker:* has ever smoked tobacco, and now smokes at least once a month or more often.

*Recent/past quitter:* has ever smoked tobacco, but has now stopped smoking.

## Gambling type

*Non gamblers:* did not participate in any gambling activities in the last 12 months.

*Infrequent gamblers:* participated in any gambling activities less than once a week.

*Frequent, non-continuous gamblers:* participated weekly or more often in non-continuous<sup>4</sup> forms of gambling.

*Frequent, continuous gamblers:* participated weekly or more often in continuous<sup>5</sup> forms of gambling.

<sup>4</sup> Non-continuous forms of gambling include: lottery games; going to casino evenings/buying raffle tickets for fundraising; making bets with family/friends.

<sup>5</sup> Continuous forms of gambling include: playing electronic gaming (pokie) machines; betting on horse or dog races, or sports events; table games at casinos; housie and bingo; Internet games; text games

## **Neighbourhood socioeconomic deprivation: The New Zealand Index of Socioeconomic Deprivation 2006**

The New Zealand Index of Socioeconomic Deprivation 2006 (NZDep2006) has been linked to the 2008 HLS as a measure of neighbourhood socioeconomic deprivation and a proxy for individual socioeconomic position. The NZDep2006 was created using nine variables<sup>6</sup> from the 2006 Census data, with a decile value calculated for each meshblock (Salmond et al 2007). For some analyses of the 2008 HLS, these deciles have been grouped, so that deciles 1–3 are referred to as low deprivation, 4-7 as moderate (or mid) deprivation, and 8-10 as high deprivation.

<sup>6</sup> Receiving a means-tested benefit, low household income, not owning the home you live in, single-parent family, unemployment, no school qualifications, household overcrowding, no access to a telephone and no access to a car.

## 8 Weighting

To ensure that no group is under- or over-represented in estimates from the survey, ‘weights’ are calculated for every survey participant. The weight can be thought of as the number of people in the population represented by a given survey participant.

### 8.1 Overview of weighting process

Most national surveys have complex sample designs, where different groups have different chances of being selected in the survey. These complex designs are used for a variety of purposes, including:

- reducing interviewer travel costs by ensuring the sample is geographically clustered, or ‘clumped’
- ensuring all sub-populations (in the 2008 HLS, especially the Māori and Pacific populations) have a sufficient sample to enable adequate estimates.

To ensure no group is under- or over-represented in estimates from a survey, a method of calculating estimates that reflects the sample design must be used. Estimation weights are used to achieve this aim. A weight is calculated for every respondent, and these weights are used to calculate estimates of population totals (counts), averages, and proportions. Typically, members of groups who have a lower chance of selection are assigned a higher weight, so that these groups are not under-represented in estimates. Conversely, groups with a higher chance of selection (eg, Māori and Pacific populations who are included in the booster samples) receive lower weights. Also, groups that have a lower response rate (eg, older men) are usually assigned a higher weight so that these groups are correctly represented in all estimates from the survey.

Weights are designed to:

- a) reflect the probabilities of selection of each respondent
- b) make use of external population benchmarks (typically obtained from a population census) to correct for any discrepancies between the sample and the population benchmarks – this improves the precision of estimates and reduces bias due to non-response.

### 8.2 Probability of selection and selection weights

The probability of selection for each respondent comes from three factors:

- The probability of the meshblock being selected.
- The probability of their dwelling being selected within the meshblock.
- The probability of the respondent being selected from all the eligible individuals within the dwelling.

The average probability of selection is the product of these factors.

The selection weight applied to each respondent in the database of responses is the inverse of the probability of selection for that respondent.

### 8.3 Non-response adjustment

Each selection weight was adjusted using the response rate of the meshblock the respondent was selected from. This adjustment was done to compensate for any non-response bias that may have arisen from not everyone who was selected for the survey participating in it. The adjustment was

made by dividing the selection weight by the response rate. Applying this adjustment at the meshblock level helped to account for any bias that may have arisen due to differences at the area level, for example differing levels of deprivation in different meshblocks.

## 8.4 Benchmark populations used for the 2008 HLS adult sample

The benchmarks used in the 2008 HLS weighting of the adult sample were population counts by:

- age group (15-24 years, 25-44 years, 45 years and over)

by

- gender (male, female)

by

- ethnic group (Māori, Pacific, Other).

Age, gender and ethnicity were included because these variables are related to health behaviour and to non-response and were a key output classification for the survey.

The most recent New Zealand Census was conducted in March 2006, the population benchmarks were calculated using the 2006 Census counts for usual residents.

The ethnic group counts from the Census were calculated using single-ratio methodology. Single-ratio methodology involves people in the Census who identified with more than one ethnic group being analysed as a fraction for each ethnic group. This means that if someone identified with two ethnic groups they would be counted as a half for each of them, if they identified with three ethnic groups they would be counted as a third for each. These single-ratio counts were then applied to the prioritised ethnic groups of the 2008 HLS sample.

Adjusting the selection weight with the benchmark weight helps remove any differences between the proportions of different groups in the sample compared to these proportions in the New Zealand population.

The 2008 HLS weights were adjusted back down to the sample size of the survey.

## 8.5 Representativeness of the 2008 HLS parent/caregiver sample

Due to difficulties in obtaining counts of how many parents/caregivers of 5 to 16-year-olds there are in New Zealand, the 2008 HLS parent/caregiver sample was not adjusted using benchmark weights.

In the parent/caregiver sample, a number of questions referred to a randomly selected 5 to 16-year-old child in the household. As published statistics exist for this group, these can be used to determine the representativeness of the parent/caregiver sample.

Table 3 below gives three basic demographics: gender, age, and ethnic group. The column on the left, gives the weighted number of children represented by a parent/caregiver in the 2008 HLS (this is the number of children in these sub-groups) after selection weights have been applied. The column on the right gives the number of interviews we would expect from our sample, based on the 2006 Census.

Table 3 shows that with the selection weight adjustments the weighted counts are very similar to what we would have expected from Census. Therefore, if the selected child is used as a proxy for

the parent/caregiver, we can see that the HLS sample was representative of New Zealand children aged 5 to 16 years, with similar proportions of gender, age, and ethnic group counts to what was expected.

**Table 3: Actual versus expected numbers of children represented by a parent/caregiver in the 2008 HLS, by gender, age and ethnic group**

Demographic	Sub-group	Actual Weighted Counts in 2008 HLS	Expected Counts from 2006 Census
Gender	Male	396	398
	Female	381	379
Age group	5 - 7 years	214	185
	8 - 12 years	300	320
	13 - 16 years	263	271
Ethnic group <sup>1</sup>	Māori	151	142
	Pacific	79	77
	Asian	83	61
	European/Other	464	498

<sup>1</sup> Ethnic group refers to total responses (eg, if the child is in both Māori and Pacific ethnic groups, this is counted in both ethnic groups). Ethnic group data is only available in five year age bands. As a result, it has been assumed that the 5 to 16 year age group of interest is made up of counts of the 5 to 9, 10 to 14 and a proportion of the 15 to 19 year age groups from Census.

## 8.6 Replicate weights

Standard errors are a measure of the precision of an estimate, and replicate weights are a method for obtaining standard errors for any weighted estimate. In the 2008 HLS, jackknife replicate weights were used as part of the survey estimation procedures in the Stata version 10 statistical software package. The standard error of the population estimate is based on the variation of the replicate estimates.

For technical information on replicate variance estimation in surveys, see Rao and Wu (1988) and Shao and Tu (1995).

## 8.7 Survey estimates

Once weights have been calculated for all respondents, estimates of means, totals, counts, and proportions can be calculated as follows.

### Proportions

The proportion of the population who belong to a particular group (eg, the proportion of the population who smoke daily) is estimated by calculating the sum of the weights for the respondents in the group, divided by the sum of the weights of all respondents.

### **Proportions within population groups**

The proportion of people in a population group who belong to a subgroup (eg, the proportion of Māori who smoke daily) is estimated by calculating the sum of the weights for the respondents in the subgroup (Māori who smoke daily), divided by the sum of the weights for the respondents in the population group (Māori).

### **Totals (counts)**

Estimates of totals (counts) are given by the sum of the respondents of the weight multiplied by the variable of interest. For example, the estimate of the total number of people who smoke daily in the whole population would be given by the sum, over all respondents, of the number of respondents who smoke daily multiplied by the weight.

### **Averages (means)**

The population averages (eg, the average age of smoking initiation) are estimated by calculating the sum, over all respondents, of the weight multiplied by the variable of interest divided by the sum of the weights.

### **Averages within population groups**

Sometimes the average within a group is of interest (eg, the average age of smoking initiation among males). The estimate is given by calculating the sum, over respondents, in the group of the weight multiplied by the variable of interest, divided by the sum of the weights of respondents in the group.

## 9 Technical Notes for Analysis

The descriptive 2008 HLS analyses presented in *In Fact* and *In the Know* used a number of specific techniques, which are discussed below.

### 9.1 Suppression due to small numbers

Small sample numbers can affect both the reliability and the confidentiality of results. Problems with reliability occur when the sample becomes too small to adequately represent the population from which it has been drawn. Problems with confidentiality can occur when it becomes possible to identify an individual, usually someone in a sub-group of the population within a small geographical area.

In order to ensure the survey data presented are reliable and that the confidentiality of the participants is protected, data have only been presented when there are at least 30 people in the denominator (the population group being analysed). Care has been taken to ensure that no participant can be identified in the results.

### 9.2 Confidence intervals

Ninety-five percent confidence intervals have been used to represent the sample error for estimates. A 95% confidence interval means there is a 95% chance the true value of the estimate (if we were to survey the whole population) lies between the lower and upper confidence interval values.

Differences between estimates are said to be statistically significant when the confidence intervals for each rate do not overlap. Sometimes, however, even when there are overlapping confidence intervals the difference between the groups can be statistically significant. Any differences between two variables where the confidence intervals overlapped were tested using a t-test. The significance of a t-test is represented by the p-value. If a p-value is below 0.05, then we are 95% confident the difference between the two estimates is statistically significant.

## 10 Comparability of 2008 HLS Data with Other Survey Data

In order to determine any changes in the prevalence of indicators over time, some analyses may be carried out comparing current the 2008 HLS estimates with estimates from other surveys. This section outlines the methodologies of the HSC surveys that were the main sources of questions for the 2008 HLS.

Caution is recommended when comparing results between surveys, because there are differences in sample sizes, response rates, questions, and methodology. We advise that these aspects be taken into account before making comparisons between results from different surveys.

### 10.1 The Smokefree/Auahi Kore Monitor

The Smokefree/Auahi Kore Monitor (SF/AKM) was a cross-sectional telephone survey that was carried out from 1999 to 2007, on a typically biennial basis.

The SF/AKM provided information for HSC-specific social marketing brands and programmes, as well as information on smoking behaviour; second-hand smoke exposure in public and private settings; restrictions on smoking in the home, household car, and public settings; and quitting behaviour. The SF/AKM also provided information on public opinion towards smoking restrictions, the rights of people to live in smoke free environments, and youth uptake of smoking behaviour.

### 10.2 The 2006/07 Gaming and Betting Activities Survey

The *2006/07 Gaming and Betting Activities Survey* (GBAS) provided baseline information for evaluating the impact of the social marketing programme and related public health activities in communities, and for informing the planning of future public health services.

The GBAS was a nationwide CAPI survey of adult New Zealand residents aged 18 years and over. The survey also included a sample of young people aged 15 to 17 years. A total of 1,774 adult and 199 youth interviews were conducted. This represented a weighted response rate of 66.3% and included 514 Māori, 267 Pacific peoples, 346 Asian peoples, 1098 European/Other people.

### 10.3 The 2007 Children's Food and Drink Survey

The *2007 New Zealand Children's Food and Drinks Survey* was a nationwide survey of parents and caregivers of children aged 5 to 16 years. A number of the questions were about a child in this age range. If there was more than one 5 to 16-year-old in a household, then one of these children was selected at random. In half the households, the child was also asked to complete a short interview and then, to complete a booklet to record all the foods and drinks they usually ate and drank.

Interviews were conducted with a total of 1133 parents and caregivers and 547 (out of 579 sampled) children. This was a response rate of 75% for the parents and caregivers, and 94% for the children. Of the 547 children who answered questions, 424 completed and returned the Food Questionnaire (ie, 73% of the child sample). The sample of parents and caregivers included 315 Māori, 330 Pacific peoples, 81 Asian and 543 European/Other people.

## 10.4 The Triennial Sun Protection Survey

The Triennial Sun Protection Survey was initiated in 1994 by the Cancer Society of New Zealand and the Department of Preventive and Social Medicine at the University of Otago. The purpose of the Triennial Sun Protection Survey was to provide regular and consistent prevention information to inform skin cancer control programmes in New Zealand. The survey was carried out over the summer months when ultra-violet radiation is at its highest. Many of the questions asked respondents about their behaviour outdoors in the previous weekend, measuring weekend prevalence of sunburn.

The survey population was adults aged 15 to 69 years, approximately 1250 per survey and some children 12 to 14 years (inclusion varied across years). New Zealand's five largest metropolitan centres (Auckland, Hamilton, Wellington, Christchurch, and Dunedin) were included. Five waves of the survey were carried out every three years (1994, 1997, 2000, 2002/03, 2005/06).

Telephone random digit dialling (RDD) was used as the original sample frame. From 2000, the electoral roll, followed by tele-matching, were used to send a pre-contact letter to households. This was followed by computer assisted telephone interviewing. In order to improve the response rates of youth, interviewers would ask to speak to the youngest person in the household over 15 years of age. Additionally, for each wave of the survey, quotas were set for males and females (50:50), and within each geographical area (n=250). The response rate declined from 68% in 1994 to 21% in 2005/06.

The Triennial Sun Protection Survey has been reviewed and replaced with the Sun Exposure Survey (SES). The first wave of the SES was carried out in 2010.

## 11 Dissemination of Data

There are several ways to access the results and data from the 2008 HLS:

- publications
- journal articles
- confidential microdata.

### 11.1 Publications

*In Fact* and *In the Know* are information sheets highlighting interesting points from specific research. *In Fact* is designed to meet the needs of researchers and academics. *In the Know* is designed to meet the needs of people working in the health sector.

*In Fact* and *In the Know* reports using data from the 2008 HLS are available on the HSC website at: <http://www.hsc.org.nz/researchpublications.html>. In addition to these a journal article has been written using 2008 HLS data:

Thompson G, Wilson N, Edwards R. 2010. Kiwi support for the end of tobacco sales: New Zealand governments lag behind public support for advanced tobacco control policies. *New Zealand Medical Journal*.123(1308): 106–11.

Further publications using the 2008 HLS are planned and will be available from <http://www.hsc.org.nz/researchpublications.html>.

### 11.2 Access to confidential microdata

The analyses presented in publications are only a small proportion of those that could be undertaken. HSC is currently exploring the possibility of producing confidentialised microdata from the 2008 HLS for approved researchers to use for specific research projects.

If this goes ahead, the microdata will have all identifying information about individuals removed and 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 HSC. Contact HSC for more information [research@hsc.org.nz](mailto:research@hsc.org.nz), ph: 64 4 472 5777

## References

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# Appendix 1: Example of Kish grid respondent selection process

08-083



0

## HEALTH AND LIFESTYLES SURVEY

PSU No: **1 2 3**

Sampled home No: **3 4**

GREEN SCREENER: 'IN-BETWEEN HOMES'  
PACIFIC ARE ELIGIBLE

### INTRODUCTION

"Good morning/afternoon/evening. My name is Xxx from the National Research Bureau. I'm calling today on behalf of the Health Sponsorship Council. We're talking to people all over the country about a number of health topics, and we'd like to include the opinions of your household. The way we find which person is eligible, is to list the first name or initials, and then check if they fit the criteria."

#### Pre-Kish: ADULTS 15 years and over

	A First name / Initials	B Ethnicity <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>	C Parent/CG <input checked="" type="checkbox"/>
Oldest			
1.	<b>A</b>	P <input type="checkbox"/> Other <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.	<b>L</b>	P <input type="checkbox"/> Other <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.	<b>S</b>	P <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>	
4.	<b>K</b>	P <input type="checkbox"/> Other <input checked="" type="checkbox"/>	
5.	<b>I</b>	P <input checked="" type="checkbox"/> Other <input type="checkbox"/>	
6.	<b>P</b>	P <input checked="" type="checkbox"/> Other <input type="checkbox"/>	
7.		P <input type="checkbox"/> Other <input type="checkbox"/>	
Youngest			
8.		P <input type="checkbox"/> Other <input type="checkbox"/>	

PACIFIC  AND PARENT/CG   
IF NONE, PACIFIC

#### KISH: Select ELIGIBLE PARENT/CAREGIVER If none, select ELIGIBLE ADULT 15 yrs & over

F Respondent No.	D Eligibles: Pacific (first name/initials)	E
1	Oldest <b>S</b>	1
<b>2</b>	<b>I</b>	2
3	<b>P</b>	2
4		3
5		3
6		4
7		5
8	Youngest	5

A "To see if anyone in this house is eligible for this survey, may I please have the first name or initials of all the people aged **15 years and over**, who usually live here, even if they are away at present? Please give them to me oldest to youngest." LIST IN COLUMN A, OLDEST TO YOUNGEST.

B SHOW ETHNICITY CARD "We also ask about the ethnicity of these people. This helps us to include enough people in each group. Looking at this card, can you tell me which ethnic group or groups Xxx belongs to?" TICK BOX IN COLUMN B FOR EACH PERSON - USE MULTIPLE BOXES IF APPLICABLE.

IF NO PACIFIC ADULTS, TICK NE:   
THEN THANK AND CLOSE.  
RECORD NE ON SAMPLING SHEET

C "Are there any children who usually live here, who are aged between 5 and 16 years old?" CIRCLE ANSWER BELOW.

Yes - **1**

No - 5

#### SELECT PACIFIC PARENT/CAREGIVER:

"Can you tell me which of the people listed are regular parents or caregivers of these children?" TICK PARENT/CAREGIVERS IN COLUMN C.

D TRANSFER NAMES OF PACIFIC PARENT/CGs TO THE KISH GRID BELOW. LIST OLDEST TO YOUNGEST.

IF NO PACIFIC PARENT/CGs, GO TO D

E FOLLOW THE YOUNGEST PARENT/CG's LINE ACROSS TO COLUMN E. THE NUMBER IN COLUMN E TELLS YOU WHICH PARENT/CG TO SELECT IN COLUMN F.

F CIRCLE THE SELECTED PARENT/CG IN COLUMN F. TICK PARENT/CG

INTERVIEW:

NOW TURN THE PAGE OVER AND ASK FOR AN INTERVIEW APPOINTMENT WITH THE SELECTED PARENT/CAREGIVER.

#### SELECT PACIFIC ADULT:

D TRANSFER NAMES OF ALL PACIFIC ADULTS TO THE KISH GRID BELOW. LIST OLDEST TO YOUNGEST.

E FOLLOW THE YOUNGEST ADULT'S LINE ACROSS TO COLUMN E. THE NUMBER IN COLUMN E TELLS YOU WHICH ADULT TO SELECT IN COLUMN F.

F CIRCLE THE SELECTED ADULT IN COLUMN F. TICK ADULT

INTERVIEW:

NOW TURN THE PAGE OVER AND ASK FOR AN INTERVIEW APPOINTMENT WITH THE SELECTED ADULT.

## **Appendix 2: Information provided to potential participants**

## Invitation letter



Health Sponsorship Council  
Te Rōpū Whakatairanga Hauora  
1st Floor, 120 Featherston Street  
PO Box 2142, Wellington 6140  
NEW ZEALAND

P +64 4 472 5777  
F +64 4 472 5799  
W [www.hsc.org.nz](http://www.hsc.org.nz)

Kia ora / Hello

Your home has been selected randomly to take part in a health survey. The Health Sponsorship Council (HSC) is doing this survey to understand more about our views and experiences of a number of health topics.

Please help by taking part. You will be asked questions about being out in the sun, providing food and drinks, contact with and attitudes about smoking, and your views of gaming and betting.

The National Research Bureau (NRB) is carrying out the survey for HSC. NRB's interviewers wear an official badge and will hand you a brochure that tells you more about this survey and HSC. Please feel free to ask the interviewer any questions you may have.

The HSC would greatly appreciate your household taking part to help it understand more about our health and lifestyles to benefit New Zealanders in the future.

Thank you,

Dr Sue Walker  
**Manager**  
**HSC Research and Evaluation Unit**

.....  
Your NRB interviewer's name is

\_\_\_\_\_

Appointment Day: \_\_\_\_\_ Date: \_\_\_\_\_

Time: \_\_\_\_\_

If you would like to change this appointment or request an interviewer of the same gender or ethnicity as yourself, please phone NRB on 0800 672 476.





The HSC is a New Zealand government agency that promotes health and encourages healthy lifestyles. We do this by developing and delivering health promotion programmes for the Ministry of Health.



If you were out when we called, we'd still like to interview someone in your household for the 2008 Health and Lifestyles Survey.

## 2008 Health and Lifestyles Survey

Our interviewer will call again shortly to arrange a time that is convenient.

[www.hsc.org.nz](http://www.hsc.org.nz)

If you want to know more about the survey, please call National Research Bureau's freephone information line, between 9am and 5pm weekdays.



**NRB 0800 672 476**

We appreciate your help.

A nationwide survey  
for the Health  
Sponsorship  
Council

## What is the 2008 Health and Lifestyles Survey?

This survey is about New Zealanders' views and experiences of a number of health topics, including being out in the sun, providing food and drinks, contact with and attitudes about smoking, and views of gaming and betting. We want to talk to people aged 15 years and over, in particular children's parents and caregivers, to learn what you think and do. About 1,500 people will take part in this survey over the next three months.

## Who is carrying out the survey?

The National Research Bureau (NRB Ltd), an independent research company, is carrying out the survey for the Health Sponsorship Council (HSC).

## Why was I asked to participate?

Addresses are selected randomly throughout New Zealand, so your home has been chosen by chance to take part in this survey. One person (aged 15 years and over) will be chosen and asked to take part. If there are children in your household, we may ask a second person to take part as well (also aged 15 years and over).

You do not have to take part in the survey. However, it will be very helpful if you can.

## Where and when will I be interviewed?

In your own home. The interviewer calling on you will have photo identification and an interviewer number.

If you are busy when the interviewer calls, please ask them to come back when it's more convenient. The interviewer is happy to make an appointment for a time and day that suits you.

## What sort of questions will I be asked?

You will be asked questions on your views and experiences of different health topics, including being out in the sun, providing food and drinks, contact with and attitudes about smoking, and your views of gaming and betting.

If you are a parent or caregiver, you may also be asked questions about these health topics for one of the children you look after. If you don't want to answer a particular question, you don't have to, just tell the interviewer.

## How long will it take?

The interview will take about 45 minutes. The interviewer is happy to arrange a time and day when you have time to take part in the survey.

## Can I have an interviewer of my own gender (male or female) or culture?

Yes, you can. Please let the interviewer know if you would like your interview to be done by an interviewer of the same gender or culture as yourself. If you prefer, phone the survey information line (0800 672 476) and leave your request with the supervisor. Remember to leave a contact phone number or address.

## Can I have an interpreter?

Yes, you can ask for an interpreter or a NZ Sign Language interpreter if you need one.

## What happens to my answers?

The interviewer will not discuss your information with anyone else, and no-one will know that you have taken part in this survey. Your answers are confidential and are protected by the Privacy Act 1993. You will not be identified from the results.

No person's name or address is connected to the answers they give. The answers from the survey are grouped and are only reported as anonymous statistical data.

## What will the information be used for?

The survey will help HSC to develop advice, information and practical ways to help New Zealand adults and children live healthy lifestyles.

## Can I find out about the results from the survey?

The results of the survey will be available by the end of 2008. You can get a free copy from the website.

[www.hsc.org.nz](http://www.hsc.org.nz)

or by phoning 04 472 5777.

**Thank you for your time.**

## **Additional information**

At the end of the interview respondents were offered the “Gambling Safely?” brochure prepared and printed by Gambling Helpline Limited. This provided a selection of phone numbers that anyone seeking help or advice about gambling could contact.

In addition, where respondents asked for information about healthy eating, they were given one of the following brochures at the end of the interview, as appropriate:

- “Everyday eating for health”, Ministry of Health
- “Nga Rourou Kai e Toru”, Te Hotu Manawa Maori
- “Taumafa mo le soifua maloloina”, Samoan language version, Heart Foundation

## Appendix 3: Sample sizes

Tables A1 to A6 show the 2008 HLS actual sample sizes and the weighted counts by gender, age, ethnicity, and NZDep2006 quintile for the Adult and Parent/Caregiver samples.

**Table A1: Sample sizes, by gender, 2008 HLS Adult sample**

Gender	Actual sample size	Weighted sample size
Males	615	774
Females	993	834
Total	1608	1608

**Table A2: Sample sizes, by gender, 2008 HLS Parent/Caregiver sample**

Gender	Actual sample size	Weighted sample size
Males	238	291
Females	539	486
Total	777	777

**Table A3: Sample sizes, by ethnic group and gender, 2008 HLS Adult sample**

Ethnic group	Gender	Actual sample size	Weighted sample size
Māori	Males	59	32
	Females	153	73
Pacific	Males	54	22
	Females	145	47
Asian	Males	13	22
	Females	38	54
European/Other	Males	396	635
	Females	629	683

Note: Ethnic group counts do not sum to 1608 because total response groups have been used, some respondents have selected more than one ethnic group.

**Table A4: Sample sizes, by ethnic group and gender, 2008 HLS Parent/Caregiver sample**

Ethnic group	Gender	Actual sample size	Weighted sample size
Māori	Males	59	32
	Females	153	73
Pacific	Males	54	22
	Females	145	47
Asian	Males	13	22
	Females	38	54
European/Other	Males	139	228
	Females	275	347

Note: Ethnic group counts do not sum to 777 because total response groups have been used, some respondents have selected more than one ethnic group.

**Table A5: Sample sizes, by age group and gender, HLS 2008 Adult sample**

Age group	Gender	Actual sample size	Weighted sample size
15–24 years	Males	77	146
	Females	113	144
25–34 years	Males	96	119
	Females	196	122
35–44 years	Males	161	157
	Females	261	180
45–54 years	Males	116	134
	Females	178	156
55–64 years	Males	93	119
	Females	104	96
65+ years	Males	72	99
	Females	141	135

Note: weighted counts may not sum to 1608 due to rounding

**Table A6: Sample sizes, by age group and gender, HLS 2008 Parent/Caregiver sample**

Age group	Gender	Actual sample size	Weighted sample size
15–24 years	Males	6	6
	Females	11	7
25–34 years	Males	37	31
	Females	118	84
35–44 years	Males	101	139
	Females	278	269
45–54 years	Males	67	76
	Females	104	106
55–64 years	Males	23	27
	Females	23	16
65+ years	Males	4	13
	Females	5	4

Note: weighted counts may not sum to 777 due to rounding

**Table A7: Sample sizes, by NZDep2006 group and gender, 2008 HLS Adult sample**

NZDep2006 group	Gender	Actual sample size	Weighted sample size
Low (least deprived neighbourhoods)	Males	151	243
	Females	222	269
Mid	Males	210	315
	Females	320	336
High (most deprived neighbourhoods)	Males	254	217
	Females	451	229

Note: weighted counts may not sum to 1608 due to rounding

**Table A8: Sample sizes, by NZDep2006 group and gender, 2008 HLS Parent/Caregiver sample**

NZDep2006 group	Gender	Actual sample size	Weighted sample size
Low (least deprived neighbourhoods)	Males	71	104
	Females	114	153
Mid	Males	68	107
	Females	144	178
High (most deprived neighbourhoods)	Males	99	80
	Females	281	155