

# Chapter 1: The Survey

This chapter provides an overview of the background, methodology and statistical analysis of the 1996/97 Health Survey. Further detail on aspects of the methodology and analysis is provided in the document *1996/97 New Zealand Health Survey Statistical Methodology*, which can be found on the Ministry of Health website ([www.moh.govt.nz](http://www.moh.govt.nz)).

The 1996/97 Health Survey provides a unique source of information on the health of New Zealanders and their use of health services. It was a nationally representative survey of 7862 adult and 1019 child New Zealanders, with a response rate of 73.8%. Interviews were staged over a 12-month period, and respondents were asked a variety of questions about their health and their use of health services. This survey builds on the previous 1992/93 Health Survey (the Household Health Survey), improving on content and methodology and extending the scope.

## Aims of the survey

The aims of the 1996/97 Health Survey were:

- to measure the health status of New Zealanders, including their self-reported physical and mental health status, and prevalence of selected conditions
- to measure the utilisation of health services and prescriptions
- to measure individuals' experience and knowledge of health services, including their satisfaction with health services and barriers to accessing health services
- to provide information on selected health-risk behaviours
- to provide this information at both a national and regional level and for population groups, especially Māori and Pacific people
- to compare results by key demographic and socioeconomic variables.

## Background

A previous health survey, the Household Health Survey, was undertaken in 1992/93 (Statistics New Zealand and Ministry of Health 1993). This was a nationally representative telephone survey of 7065 New Zealanders conducted by the then Department of Statistics and funded by the Department of Statistics and the then Department of Health.\*

Late in 1994, the Ministry of Health, the Regional Health Authorities (RHAs) and the Public Health Commission began to plan for a second health survey. A working group of Ministry and RHA representatives developed the questionnaires, liaised with other agencies, and chose the survey provider; statistical assessment of tenders was provided by the Statistics Research and Consulting Centre, Massey University. Te Pūmanawa Hauora, Massey University, provided Māori input to the survey development. A Ministry/RHA steering group oversaw the work of the working group.

After a competitive tendering process, Statistics New Zealand was chosen to design the sampling methodology, pretest the questionnaire, interview respondents, process the data, and provide a carefully checked dataset, with appropriate documentation, to the Ministry and the RHAs. More detailed statistical analysis was then carried out by the Ministry of Health, in conjunction with the Statistics Research and Consulting Centre, Massey University.

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\* A full description of the 1992/93 survey is given in the overview report *A Picture of Health* (Ministry of Health 1993).

The Ministry of Health provided the funding for the 1996/97 Health Survey, although the Central RHA contributed some additional funding to allow a greater number of people to be interviewed in the Central region.

The 1996/97 Health Survey was also linked to the National Nutrition Survey (NNS) through the use of the same sample frame. Respondents who took part in the 1996/97 Health Survey were asked at the conclusion of the survey if they would also be willing to participate in the National Nutrition Survey at a later date, a subset of whom (4644) agreed. The National Nutrition Survey is a survey of the food usage patterns, nutritional food intakes and nutritional status of New Zealanders, and includes health status measures such as:

- blood pressure
- blood lipids
- blood iron indices
- anthropometric measures (waist-to-hip ratio, height, weight, skinfolds, indices of muscle and bone mass).

The NNS was funded by the Ministry of Health and conducted by the University of Otago.

## Methodology

### Sample selection

The population for the 1996/97 Health Survey was defined as the total usually resident, non-institutionalised, civilian population of New Zealand of all ages, residing in private households. A stratified cluster sampling process was undertaken by Statistics New Zealand to select a sample from this population. The sampling frame was an area-based frame. New Zealand is divided into 18,800 small geographic areas called PSUs (Primary Sampling Units, in most cases containing between 50 and 100 dwellings). The PSUs are divided into 122 groups (strata) according to various characteristics (for example, urban/rural, high/low Māori population density) derived from the 1991 Census data. The sample was selected from all strata to ensure that it was representative of the total population. PSUs were randomly selected from each of the 122 strata. A panel of households in each PSU was then randomly selected to participate in the 1996/97 Health Survey.

In order to obtain more reliable estimates for Māori and for Pacific people, these groups were oversampled. Each of the 1752 selected PSUs contained a panel of households which had recently taken part in the Household Labour Force Survey. A subset of these households which were known to contain Māori or Pacific people was added to the 1996/97 Health Survey sample.

The Central region was also oversampled to obtain reliable estimates at a sub-regional level.

Adult respondents were selected from each of the 1752 PSUs. One eligible adult (aged 15 years and over) was selected in each household and asked to participate. In 970 PSUs, adult respondents were also asked to act as a proxy respondent for a selected child in the household. The selected adult was asked if they were a parent or caregiver to any children under 15 years of age in the household. All children for whom the selected adult was parent or caregiver were listed, and one of these children was selected.

The sample frame consisted of 11,921 households. The adult response rate was 73.8%. This was calculated by Statistics New Zealand and represents the proportion of eligible households visited during the survey period which provided an adult respondent. The final sample comprised 1019 children.

## Interviewing

Data were collected from October 1996 to October 1997. Adults who were selected to take part in the 1996/97 Health Survey were told about the survey and given an information brochure. If they agreed to take part they were asked to sign a consent form, as required by the regional ethics committees. A combined information sheet and consent form was also available in Māori, Samoan and Cantonese. Respondents were free to discontinue the interview at any stage.

There were four forms used in the survey: a short household form, used to select respondents; an adult questionnaire; a general health questionnaire; and a child questionnaire. Copies of these questionnaires are provided in Appendix 4: Survey Forms. Questions were administered in a face-to-face interview, except for the general health questionnaire, which was completed by the respondent at the end of the interview.

## Survey content

The questions in the 1996/97 Health Survey related to the respondent's health status, health risk behaviours, use of health services, and demographic and socioeconomic circumstances.

### Health status

The questions on health status in the 1996/97 Health Survey covered the following topics:

- self-reported physical and mental health
- disability
- asthma, diabetes and high blood pressure
- injuries/poisonings.

The SF-36 health status questionnaire (Ware and Sherbourne 1992) was included to measure the self-reported health status of respondents in relation to eight physical and mental health concepts. The SF-36 is a standardised questionnaire which has become one of the most widely used of the health-related quality of life questionnaires. This is the first time the SF-36 has been used in a national sample in New Zealand. The norms (that is, nationally representative estimates) provided in this document will enable the status of population groups to be compared and monitored over time, and will also provide a benchmark against which population and clinical studies in New Zealand can compare results. The SF-36 has been used in general population health surveys overseas, such as the 1995 Australian National Health Survey (Australian Bureau of Statistics 1997), and this will enable comparisons to be made with health status in other countries.

At the time of developing the 1996/97 Health Survey questionnaire, the 1996 Household Disability Survey was being conducted by Statistics New Zealand, and it was decided that any disability questions in the 1996/97 Health Survey should be comparable. The disability survey consisted of the two initial screening questions in the 1996 Census, a follow-up screening questionnaire to define disability, and the survey questionnaire proper. It was not possible to include the disability survey screening questionnaire in the 1996/97 Health Survey because of its length. The two initial Census screening questions were therefore included, and their use in any analysis was to be conditional on the prevalence rate of disability derived from these screening questions being comparable with the prevalence rate produced by the 1996 and 1997 disability surveys. Such a comparability did not occur. However, a comprehensive analysis of disability is provided in the report on the 1996/97 disability surveys (Health Funding Authority and Ministry of Health 1998).

While self-reported prevalence of diseases or conditions was not covered in detail in the 1996/97 Health Survey, there were a handful of conditions which were believed to have a relatively high prevalence in the general population, and which had been included in the previous health survey: asthma, diabetes and high blood pressure. High blood pressure and diabetes are also known risk factors for cardiovascular disease. The diabetes questions have been used previously in the Workforce Diabetes Survey (Scragg et al 1991), while the asthma questions are taken from a standard international questionnaire used for identifying adults with asthma (Burney et al 1994).

Injuries and poisonings which result in hospitalisations or deaths are well recorded in New Zealand. However, there is a lack of knowledge of the nature and extent of other, more minor, injuries, which could be used, for example, to inform the design of injury prevention programmes.

### Health risk behaviours

The questions on health risk behaviours in the 1996/97 Health Survey covered the following topics:

- smoking
- physical activity
- alcohol.

The survey contains the Census questions on smoking, plus some additional questions. Including these questions enables analysis to be done on smoking status against health status and use of health services.

The physical activity questions were influenced by the emphasis in recent years on the health benefits of regular moderate physical activity, rather than on vigorous exercise (US Department of Health and Human Services 1996). The vigorous exercise questions in the previous health survey were therefore replaced with questions which measured the frequency and duration of physical activity (whether mild or vigorous).

The AUDIT (Alcohol Use Disorders Identification Test) questionnaire (Saunders et al 1993) was used to collect information on alcohol use. This is a 10-item screening questionnaire developed by the World Health Organization and is designed to identify people with potentially hazardous or harmful alcohol consumption. It was produced for use in primary health care settings but is also appropriate for use in general population surveys.

Other health-risk factors – including food consumption, alcohol consumption, blood pressure and Body Mass Index (BMI) – are included in the National Nutrition Survey.

### Health service use

The questions on health service use in the 1996/97 Health Survey covered the following topics:

- frequency of contact with health care services (GPs, specialists, other health professionals, and hospital-based services)
- reason for, and cost of, last GP visit
- satisfaction with health care services
- unmet need for health care services
- number of prescriptions, and non-collection of prescriptions.

These questions collect a basic level of national population-based information about health service use which is not currently known through other sources. They are mostly questions about the use of primary care services, as detailed information is collected nationally about public hospital services from other sources.

The current survey questions on use of health services were largely the same as those in the previous health survey, with a few modifications. In particular, the recall period for use of services was extended to 12 months for most of the questions. The experience of the previous health survey was that for many health services the prevalence of use in the previous four weeks was very low. In the 1996/97 Health Survey, supplementary questions relating to use of services in the previous four weeks were included to allow for comparability with the previous survey.

### Demographic and socioeconomic factors

The questions on demographic and socioeconomic factors in the 1996/97 Health Survey covered the following topics:

- age and sex
- ethnicity
- education
- income
- health insurance and health cards
- labour force status
- occupation
- household type
- number of rooms.

Almost all of the demographic and socioeconomic questions were taken from the 1996 Census (and also the Household Labour Force Survey), although some were adapted slightly to make them appropriate for a face-to-face interview. This ensures consistency with the standard definitions used in New Zealand and consistency with the previous health survey. It also allows for accurate weighting of the sample.

The only demographic or socioeconomic questions in the 1996/97 Health Survey which were not in the 1996 Census were the questions on health insurance and health cards (for example, Community Services Cards). These were taken, or adapted, from questions in the previous health survey.

### Content development

The topic areas included in the 1996/97 Health Survey were determined by the 1996/97 Health Survey Working Group. The topics and questions covered in the previous health survey provided a starting point. The Working Group consulted internally within the Ministry of Health and the RHAs, and externally with relevant academic, epidemiological and medical experts, who advised on the inclusion of the SF-36 and AUDIT questionnaires, and other questions relating to health status. Questionnaire drafts which the Working Group drew up were further developed in collaboration with Statistics New Zealand. Cognitive testing of the questions with different groups of people and a field test of 100 respondents gave valuable feedback on how people understood and answered the questions.

## Changes from the previous health survey

All of the general topic areas covered in the previous health survey were also included in the 1996/97 Health Survey, apart from the Body Mass Index, which was included in the NNS. The sections on self-reported health status (SF-36 questionnaire) and injury had not been included in the previous survey. While the topic areas of the previous health survey were continued, many of the actual questions were modified or completely replaced. In addition to the reasons discussed above, modifications to questions were made in order to:

- make the questions easier for respondents to follow and understand (for example, breaking a long question into two questions)
- clarify exactly what the questions were designed to capture (for example, adding 'about your own health' to the questions on use of GPs)
- increase or standardise recall durations if usage rates were very small (for example, 12-month recall instead of four weeks for utilisation)
- extend the scope of the question (for example, increasing the number of health professionals in the questions on use of health services)
- improve the structure of the questionnaire.

When surveys are repeated over time there is a tension between improving questions based on the experience of having used them, and maintaining consistency. While a number of the questions were altered from the previous, and initial, survey, it is hoped that a consistent core of questions will be maintained for future surveys.

## Analysis

### National level analysis

The analysis reported here, carried out by Ministry of Health staff, in conjunction with the Statistics Research and Consulting Centre, Massey University, was performed at a national level only, rather than by region. Comparisons have been made with the previous 1992/93 Health Survey where possible, but differences in methodology and questions often precluded comparisons. Statistical comparisons of estimates from the two surveys were not possible due to the unavailability of accurate standard error estimates for the earlier survey.

### Descriptive/univariate versus multivariate analyses

This report presents a largely descriptive and univariate analysis of the 1996/97 Health Survey. In a number of sections ethnic differences in health status and health service utilisation are evident. The over-representation of Māori (and Pacific people) in lower socioeconomic status groups (Te Puni Kōkiri 1998) means that these differences in health status are likely to be explained, in part at least, by differences in socioeconomic status. The best way to tease apart the overlapping contribution of ethnicity and socioeconomic status in a survey such as this is to use multivariate analyses such as logistic and linear regression. The results of such analyses were not included in this report due to their complexity and technical nature, making them less suitable for a general overview report. However, some multivariate analyses of the 1996/97 Health Survey carried out by Ministry of Health staff will be published, and references to these can be found on the Ministry of Health website ([www.moh.govt.nz](http://www.moh.govt.nz)) as these become available. Other analyses are likely to be undertaken by independent researchers in due course.

## Weighting and age/sex standardisation

The analysis was performed on the dataset provided by Statistics New Zealand, for which sample survey weights had been calculated. The sample survey weight uniquely applied to each respondent adjusted for individual probability of selection, differential non-response at a regional level, and the age, sex and RHA distribution of the sample so that it was consistent with the March 1997 New Zealand population estimates. This final sample survey weight was applied in the calculation of all unadjusted rates and scores.

Age has a marked effect on health status. Therefore, when making comparisons between population subgroups, the different age and/or sex distribution of the comparison populations (for example, Māori are a younger population than non-Māori) can be a confounding variable. This confounding is removed through the process of age- and sex-standardisation, whereby the age- and sex-specific estimates are weighted by a standard population. In the case of this survey, the sample survey weights of comparison groups were standardised to the New Zealand population as at March 1997 (a new weight was derived for each comparison of interest).

## Sample design, confidence intervals and standard errors

Statistical analysis packages such as SAS® (SAS Institute Inc) assume that sample unit record data are the independent products of a simple random sampling process. Complex surveys such as this one, with stratified, clustered designs, violate this assumption. While this does not present a problem for the estimates of proportions or means, estimates of variance (for example, standard error: SE) will often be underestimates, and any significance tests based on error estimation will be biased accordingly, unless this 'design effect' is adjusted for. This analysis therefore used the statistical software package SUDAAN® (Research Triangle Institute), designed for the analysis of clustered data, for the accurate estimation of all standard errors, confidence intervals and significance tests.

Measures such as standard errors and confidence intervals give the reader an indication of how close an estimate obtained from the survey, such as the prevalence estimate of current smokers in the population, is likely to be to the 'true' prevalence rate. The issue here is that this is a sample survey. That is, these estimates were not obtained by asking all New Zealanders whether or not they smoked (as in a Census), but by asking a sample of them. The larger the sample, the more likely it is to be representative of the population and the smaller the standard error and confidence intervals.

In this survey the weighted estimate of the prevalence of current smokers was 24.9%, with a 95% confidence interval of 23.5-26.3%. This means that there is a 95% probability of the true population prevalence rate for current smokers falling within the range of 23.5% and 26.3%. Expressed another way, if this sample survey were to be repeated 100 times (with a different sample being drawn from the population each time), on 95 occasions the sample estimate for smoking prevalence would be between 23.5 and 26.3%. Confidence intervals are provided in this report for all estimates, and are depicted on the graphs (see Appendix 2: Notes to Figures and Tables, for guidance on the interpretation of confidence intervals in the graphs).

Standard errors were used to construct the confidence intervals about the estimate, calculated using the conventional formula of: the estimate  $\pm 1.96 \times$  SE. The appropriateness of this formula (applicable to estimates that are approximately normally distributed) was checked by examining the sampling distribution of the estimates (proportions and SF-36 means) through 100,000 bootstrap simulations. Standard errors are provided for all estimates in the tables of results provided on the Ministry of Health's website ([www.moh.govt.nz](http://www.moh.govt.nz)).

The appropriate Chi-squared tests of significance, adjusted for the survey design, were used to test whether the proportional estimates differed significantly across the levels of a given sociodemographic variable (eg, ethnicity). Tests of contrasts between individual levels of the variable were not undertaken. The level of significance adopted was the probability value (of the result having occurred by chance) of 5% or less ( $p < .05$ ).

### Item non-response

Specific prevalence estimates and confidence intervals were calculated after excluding respondents who were unable or unwilling to provide an answer to a given question. In almost all cases, this was less than 1% of respondents for any specific question.

### SF-36 analysis

#### *Mean scores*

For each survey participant, responses to the 36 questions (items) comprising the SF-36 questionnaire were scored and summed according to a standardised scoring protocol, and transformed into eight (0-100) scale scores (higher scores represent better self-reported health). Scores were averaged across population groups; the SF-36 results presented in the tables and graphs are therefore the subgroup mean scale scores. This contrasts with the remainder of the 1996/97 Health Survey, which was analysed to provide estimates of the proportions of the population or subgroup endorsing a particular response (for example, the proportion of the population who are current smokers).

#### *Skewed score distributions*

The distribution of the scale scores was generally very skewed towards the 'healthy' end of the scales, with significant proportions of the population having the maximum score of 100 on several of the scales (see Appendix 3: Psychometric Properties of the SF-36, for the frequency distributions). Nevertheless, the approximately normal sampling distribution of the mean scores (checked in bootstrap simulations) meant that the tests of whether subgroup means significantly differed from each other could be performed using the parametric normal test (constructing a z score for the difference between the means). These tests were carried out in cases where the 95% confidence intervals of the comparison groups were overlapping.

#### *Stratification of analysis by sex and Māori/non-Māori*

The decision whether to stratify the SF-36 results by sex and/or ethnic group (Māori versus non-Māori) was made on the basis of an analytical strategy. For each of the variables by which the SF-36 was analysed, this tested whether there was an interaction of sex and ethnic group in the relationship between the variable concerned (for example, family income) and the SF-36 scale scores. The presence of such an interaction means that the relationship between the variable and the SF-36 scores differs for males and females within Māori and non-Māori groups, suggesting that collapsing results across sex or ethnic group would not be appropriate. Such an interaction was found in each case. These tests of interaction were performed using analysis of variance (unbalanced design) through the regression analysis procedure in SUDAAN® (the p values of the resulting F tests are reported in the text). Although the skewed nature of the SF-36 data violates the assumptions of such parametric tests, analysis of the data after applying a negative log transformation, which removed the skew, obtained very similar significance levels for the analysed effects.

Information on the responses of Pacific people on the SF-36 is provided in the analysis of SF-36 by ethnic group (European/Pākehā; Māori and Pacific people). The further stratification of all other SF-36 analyses (for example, SF-36 by family income) by ethnic groups other than Māori and non-Māori, was not possible due to the smaller size of the Pacific and Other ethnic group samples.

### *Principal component summary scores*

The SF-36 results reported in the tables in this report include both the eight scale scores, together with the mean score for two summary measures: the physical and mental component summary scales (PCS and MCS). These summary scores were derived using principal component factor analysis (specifying two factors to extract, and orthogonal rotation), with observations weighted using the sample survey weights. Factor analysis tests whether a questionnaire measures the underlying constructs or 'factors' it is supposed to measure, in this case, physical and mental health. For the total sample, the Physical Functioning, Role Physical, Bodily Pain and General Health scales clustered on the 'physical' factor; the Mental Health, Role Emotional, Social Functioning and Vitality scales clustered on the 'mental' factor. This is the basis for the aggregation of the summary physical and mental health summary measures. The measures were calculated by standardising the eight scales using a z score transformation, aggregating the z scores after multiplying each by the appropriate factor score coefficient (derived from this sample), and then transforming the aggregated scores to have a mean of 50 and a standard deviation of 1.0. This process is described in Ware et al 1994.

Due to lack of space, few of the tables of SF-36 results are included in this report, but these tables, including the summary scores, can be found on the Ministry of Health website ([www.moh.govt.nz](http://www.moh.govt.nz)). For a description of the differing factor structure of the SF-36 across ethnic groups in New Zealand (European/Pākehā; Māori; Pacific) see Scott et al 1999.

### *Reliability and validity of SF-36*

An extensive analysis of the psychometric performance of the SF-36 (in terms of its acceptability, reliability and construct validity) in the New Zealand population was also carried out on these data. The SF-36 was found to perform as well or better in the total New Zealand population, compared with other countries, although the construct validity of the SF-36 among Pacific people and older Māori may be questionable (Scott et al 1999). A summary of some of the results of the psychometric analysis can be found in Appendix 3, and more detail on the analysis is reported in Scott et al (in press).

## **Selected variables: explanatory notes**

### *Age group*

In the stratification of results by age group, the standard age group categories used by the Ministry of Health were used: 15–24 years; 25–44 years; 45–64 years, 65–74 years; and 75+ years (see Appendix 1: Demographic Characteristics of Sample, for the proportions of the sample in each age group). Occasionally the 65–74 and 75+ age groups were combined when the numbers in the 75+ group were too small.

For the age-standardised comparisons, the age groups used in the standardising procedure were: 15–24; 25–34; 35–44; 45–54; 55–64; 65+; and the proportions in each of these age groups were, respectively, 18.7%, 20.4%, 20.0%, 15.8%, 10.8% and 14.3%.

### *Ethnicity*

The classification of ethnic group adopted was that supplied by Statistics New Zealand. This classification was based on individuals themselves indicating which ethnic group or groups they felt they belonged to. Where only one ethnic group was given by the respondent, that category was coded. In cases where respondents stated that they belonged to more than one ethnic group, then a single ethnic category was assigned to that person using a system of priority recording of ethnicity. The following prioritised rules were used:

1. If Māori was one of the groups reported, then the respondent was assigned to ‘**Māori**’.
2. If any Pacific Island group was one of the groups reported, then the respondent was assigned to the ‘**Pacific**’ group.
3. If any group other than a European/Pākehā group was one of the groups reported, then the respondent was assigned to ‘**Other**’.

Where the sample size has allowed, the results have been stratified by four ethnic groups: European/Pākehā; Māori; Pacific; Other (see Appendix 1 for the proportions of the sample in each ethnic group). In other analyses where sample size was a problem, the number of ethnic groups used in stratification of results was reduced to either three (excluding Other), or two (Māori and non-Māori).

### *Education*

There are four categories of educational status:

- **no qualification:** where an adult has no secondary school qualification and no post-school (vocational or tertiary) qualification
- **school qualification only:** where an adult has a secondary school qualification but no post-school (vocational or tertiary) qualification
- **post-school qualification only:** where an adult has no secondary school qualification but has post-school (vocational or tertiary) qualification
- **school and post-school qualification:** where an adult has secondary and post-school (vocational or tertiary) qualifications.

In the majority of the analyses in this report, school qualification only and post-school qualification only were collapsed into a single **school or post-school qualifications only** category.

### *Socioeconomic status*

Three variables were selected as the main indicators of socioeconomic status in this analysis.

#### *Family income*

Income is clearly a key indicator of socioeconomic status, being a major determinant of living standards. Family income (as opposed to individual income) was seen as the best indicator of income status; for example, the low individual income of spouses/partners who are not in paid employment does not tell us very much about their living standards. It was decided not to equivilise the family income measure (weight total income to adjust for the different size and composition of families) as this might introduce as many biases as it is designed to remove. ‘Family’ is defined as two or more persons who are members of the same household and who constitute either a couple, parent/child relationship, or both.

#### *Education*

Level of education is widely used as an indicator of socioeconomic status, particularly in countries where the collection of information on income is not possible/acceptable. Education has the advantage over income as a measure of greater stability. Classification of education status is not without its problems, however, with neither a qualification-based (used here) or number of years of education-based categorisation being entirely satisfactory.

### *NZDep96*

The NZDep96 variable is an area-based index of deprivation (Salmond et al 1998). It measures the level of deprivation for each meshblock (small geographical unit containing a median of 90 people) according to a combination of the following Census variables: income; transport (access to a car); living space; ownership of home; employment status; qualifications; support (sole-parent families); and access to a telephone. Although NZDep96 scores apply to areas rather than individuals, they have been assigned to the individual respondents in this survey on the basis of the PSU in which the individual lives. For this analysis we have used a scale of 1–4 (1 = least deprived areas; 4 = most deprived areas), based on the quartile distribution of the principal component scores. The subgroup classified as NZDep96 level 4 are therefore defined as living within the most deprived 25% of areas in New Zealand.

Although other variables included in the survey may also be considered as indicators of socioeconomic status, they were not included for a variety of reasons. For example, occupation was problematic because it only includes current occupation and so excludes the large proportion of the sample who are not currently employed or part of the labour force. (See Appendix 1 for a comparison of the socioeconomic characteristics of the Māori sample with the Census data.)

### *Labour force status*

The three categories of labour force status used in the analysis of the SF-36 are **employed** (full- and part-time); **unemployed**, and **not in the labour force**. The definition of **employed** includes working for pay, or working for a family business or farm without pay. The definition of **unemployed** requires that the respondent be looking for paid work, with specification of methods used to look for work. Those who did not fit either the employed or unemployed category were allocated to the **not in the labour force** category.

### *Self-reported health status*

There are two indicators of generic (not illness- or condition-specific) self-reported health status in the 1996/97 Health Survey. One is the single, self-rated health question: 'In general, would you say your health is: excellent/very good/good/fair/poor?'. Most of the topic areas covered in this report includes an analysis of the health measure of interest (for example, smoking) by this self-rated health question.

This single question is one of the 36 items from the SF-36 health status questionnaire. The SF-36 questionnaire is the other, much more comprehensive measure of generic, self-reported health included in the 1996/97 Health Survey. The SF-36 has been analysed by a number of socioeconomic and health status variables (see Chapters 10 and 11).

## **Structure of this report**

This report groups the survey results under three main sections: Health-Related Risk Factors, Health Status and Health Service Utilisation, with chapters within each section on specific topic areas (for example, smoking, diabetes, GP use). Key points are contained at the beginning of each chapter, and key points from the survey as a whole are contained in the Executive Summary. Methodological and statistical matters are covered in Chapter 1.

Results relating to Māori are presented alongside other analyses relating to a given topic (for example, smoking), rather than being grouped together in a separate chapter. This avoids repetition of material, but may make it more difficult to gain an overall impression of Māori health status. To assist in the highlighting of results for Māori, there is a blue band down the side of all pages where Māori-specific results have been presented.

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