



New Zealand Health Survey

The New Zealand Health Survey

Objectives and Topic Areas
August 2010

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Part 1: Background

The New Zealand Health Survey (NZHS) is an important data collection tool for monitoring the health of the population. The information collected is an important source of supporting evidence for health and health service policy and strategy development.

The Health and Disability Intelligence Unit (HDI) within the Ministry of Health's Strategy and System Performance Directorate develops the objectives and design of the NZHS, in consultation with stakeholders and an internal advisory group. Fielding of the NZHS is outsourced to a specialist survey provider. Analysis and dissemination of the survey data are led by HDI.

The NZHS forms part of the Programme of Official Social Statistics. This programme was established by Statistics New Zealand to develop and co-ordinate official social statistics across government. As a signatory of the Protocols of Official Statistics (Statistics New Zealand 1998), the Ministry of Health employs best-practice survey techniques to produce high-quality information through the NZHS. Standard frameworks and classifications with validated questions are used where possible, to allow for the integration of the NZHS data with data from other sources.

Development of the New Zealand Health Survey

Previously the NZHS has consisted of individual surveys conducted once every three or four years. The wider survey programme has also included Adult and Child Nutrition Surveys, Tobacco, Alcohol and Drug Use Surveys, Te Rau Hinengaro (the New Zealand Mental Health Survey) and an Oral Health Survey (Ministry of Health 2009).

From 2011 the NZHS and the various surveys that are part of the wider survey programme will be integrated into a single survey which will be in continuous operation. The sample design and mode of data collection will be similar to the 2006/07 NZHS (Ministry of Health 2008).

The survey will comprise a set of core questions combined with a flexible programme of rotating thematic/topic modules. The questionnaire will be administered (face-to-face and computer assisted) to adults aged 15 years and older as well as to children aged 0 to 14 years, generally through their primary caregiver who acts as a proxy-respondent. Consideration will also be given to collecting some information directly from school-aged children.

Advantages of an integrated continuous health survey

The rationale for moving to an integrated survey that will be in continuous operation is to make more effective use of available resources and improve the monitoring of the health of the New Zealand population and associated health inequalities. In particular the new approach allows for greater flexibility of content and more frequent updating of information. The ability to add survey questions on a range of topics of emerging policy

interest, and to monitor outcomes before and after any period, will enhance the survey's contribution to the evidence base for health policy.

Data analyses

With a continuous survey it will also be possible to pool survey data sets across years. Pooling data sets will improve both the statistical precision of estimates for Māori and ethnic minorities (including Pacific and Asian ethnic groups), and the range and statistical quality of analyses that can be undertaken at regional or district level.

The new approach will deliver a similar array of data products to previous surveys while providing an opportunity for different approaches to be taken. For example, rather than collecting data in great detail but relatively infrequently (as previous surveys did), a continuous survey will allow the more frequent collection of less detailed data on a topic. Information 'packages' could be produced each year based on annual data sets and the results of each topic module. Comprehensive, detailed information packages could be produced every two or three years.

The questionnaire

The questionnaire for adults will take approximately one hour to complete. The questionnaire for children will be undertaken in households from which an adult has been recruited for the survey and is expected to take an additional 30 minutes approximately.

A subset of questions from the most recent health survey (2006/07) will be used to make up the core component of the questionnaire to allow for the addition of more in-depth topic/thematic modules. The core component will retain most topic areas included in the 2006/07 NZHS (with many questions unchanged) to allow comparisons to be made over time. For example, for adults, elements of the most recent health survey that will be retained in the core survey include long-term health conditions (eg, heart disease, diabetes) and their related risk and protective factors (eg, tobacco smoking), health care service utilisation (eg, access to primary care), anthropometric measures (height and weight) and demography.

Similarly for children, the core questionnaire will be based on questions used in the 2006/07 NZHS, with topic areas to include long-term health conditions (eg, asthma) as well as risk and protective factors (eg, breastfeeding, nutrition and physical activity). However, the Child Health Questionnaire Parent Form (CHQ-PF28) used in the 2006/07 NZHS will be included only as a module. This instrument collects data on 12 aspects of children's quality of life and wellbeing to produce two summary scales: physical wellbeing and psychosocial wellbeing (Landgraf et al 1999).

The core questionnaire will take up approximately 30 minutes of the adult interview time, and the more in-depth modules another 20 to 30 minutes. In addition, one to three minutes of interview time could be used for questions on an emerging or pressing issue.

For more detail on the core component and in-depth topic/thematic modules, see Part 2.

Objective measures

In addition to the questionnaire, it is expected that the survey will periodically include some more complex objective data collections, in line with World Health Organization (WHO) recommendations (WHO 2005). Including such collections offers the advantage of reducing bias and improving data accuracy (eg, blood, urine and saliva samples, blood pressure, physical activity monitoring). Objective measures of this kind will usually be collected as part of the operation of a specialist topic module (eg, physical activity or nutrition) but may not necessarily be confined to these periods.

Provision of survey field activities

While the Ministry is responsible for the survey design, analyses and publications, the field activities (door-to-door recruitment and face-to-face interviews) are generally contracted to a professional survey provider. A range of specialist survey services, for example in relation to nutrition, are contracted to other organisations such as universities and medical laboratories.

With the current survey programme, set-up and project management costs are replicated across a number of survey projects. Undertaking one competitive procurement process to select a single survey provider (for probably an initial period of approximately five years) will significantly reduce transaction costs and overheads for both the Ministry and survey providers. Importantly, the quality of data collected should improve through a longer contract with one survey provider, creating the potential to increase the stability and quality of the survey field workforce. The selected provider would be expected to work collaboratively with providers of other specialist survey services and objective tests.

Part 2: Goal, Objectives and Information Domains

Goal

The goal of the NZHS is to support the formulation and evaluation of policy through the provision of timely, reliable and relevant health information that cannot be collected more efficiently from other sources, and that covers population health, health risk and protective factors and health service utilisation.

Objectives

To achieve this goal, the NZHS requires well-defined and measurable objectives.

Thirteen high-level objectives have been identified for the NZHS:

1. Monitor the physical and mental health of New Zealanders and the prevalence of selected long-term health conditions.
2. Monitor the prevalence of risk and protective factors associated with these long-term health conditions.
3. Monitor the use of health services, and patient experience with these services, including access to services.
4. Monitor trends in health-related characteristics including health status, risk and protective factors and health service utilisation.
5. Monitor health status and health-related factors that influence social wellbeing outcomes.
6. Examine differences between population groups, as defined by age, gender, ethnicity and socioeconomic position.
7. Provide a means for rapid collection of data to address emerging issues related to the health of the population.
8. Enable follow-up surveys of at-risk population or patient groups identified from the NZHS, as required to address specific information needs.
9. Measure key health outcomes before and after a policy change or intervention.
10. Facilitate linkage of NZHS to routine administrative data collections to create new health statistics and address wider information needs.
11. Provide data for researchers and health statistics for the general public.
12. Allow comparison of New Zealand data with international health statistics.
13. Evaluate methods and tools to improve survey quality, including the implementation of objective tests to capture information not accessible to self report.

Information domains

To meet the high-level objectives of the NZHS (in particular the first six), detailed information will be collected across nine information areas or domains. These nine domains are:

1. health status
2. long-term health conditions
3. risk and protective factors
4. nutrition
5. mental health
6. oral health
7. health service utilisation
8. patient experience
9. sociodemographics.

Each of these domains is described in more detail below.

Inevitably there will be cross-over between some domains. For example, aspects of mental health and oral health could be included within the long-term health conditions domain, and nutrition within the risk and protective factors domain. Generally, categorisation as a separate information domain reflects the breadth and complexity of a health-related area. Consideration includes the complexity of data collection; for example, oral health and nutrition involve specialised methodologies, such as dental examinations for oral health and 24-hour dietary recall and biochemical measures for nutrition.

Health status domain

Improving the level and distribution of population health is the defining goal of the health system. So monitoring the health status of the population provides useful information to evaluate the performance of the health system, identify unmet need for health services, evaluate the impact of the determinants of health and uncover health problems requiring further investigation.

Self-reported health measures, based on an individual's own perception of their health status and functioning, provide an alternative source of data to objective measures of health, such as hospital rates and disease prevalence. Self-reported measures introduce an element of subjectivity into health status measurements which is useful for providing a more consumer-centred view of health and for placing more emphasis on quality of life and wellbeing.

The WHO defines a 'health state' as a multidimensional attribute of an individual that indicates his or her level of functioning across all important physiological, psychological and psychosocial dimensions of life. The relevant dimensions are those defined in the International Classification of Functioning, Disability and Health (ICF) (WHO 2001; Ministry of Health 2007).

Various survey instruments have been developed to tap into these dimensions. For example, the Medical Outcomes Study Short Form 36 Questionnaire (SF-36) (Ware 2000) is used internationally to measure health-related quality of life in adults. Another relevant instrument is the Child Health Questionnaire Parent Form 28 (CHQ-PF28) which captures health-related quality of life in children aged 5–14 years (Landgraf et al 1999; Raat et al 2004).

The overall objective of the health status information domain is to monitor patterns in the distribution of the population across the health states defined by the ICF.

Long-term health conditions domain

Long-term health conditions cover any ongoing or recurring health problem, including physical and mental illness, that has a significant impact on the life of a person and/or the lives of family/whānau or other carers. These are conditions generally not cured once acquired. For the purposes of monitoring population trends, they are further defined as a doctor-diagnosed health condition that has lasted, or is expected to last, for more than six months. Examples include asthma, arthritis, diabetes and heart disease.

Many long-term health conditions result in extensive use of health services. The prevalence of long-term health conditions is projected to rise, driven by the ageing population and people living longer with the conditions. A major goal of the health system is to prevent long-term health conditions as much as possible and, when they do occur, to slow their progression and actively manage their impact. Monitoring population trends in long-term health conditions, and their associated risk factors, supports the development, implementation and evaluation of strategic health policy.

The overall objective of the information domain of long-term health conditions is to monitor patterns in the distribution of long-term conditions in the population.

Risk and protective factors domain

The role of risk and protective factors (both behavioural and biological) in the causation of disease and injury is well understood – the risk factors of today are the diseases of tomorrow. Examples include tobacco consumption, alcohol consumption, drug use and raised cholesterol levels. Therefore, monitoring trends in exposure to risk and protective factors (including assessing population risk profiles) is useful in informing the development and evaluation of health policy, especially health promotion, disease prevention and primary health care policy. The measurement of risk and protective factors forms part of the internationally recognised minimum standards for health surveys, the World Health Organization's STEPwise Approach to Surveillance of risk factors for non-communicable diseases (STEPS) (WHO 2005).

The overall objective of the information domain of risk and protective factors is to monitor patterns in the distribution of exposure to risk and protective factors in the population.

Nutrition domain

Food and nutrition play a key role in maintaining health and preventing disease. Excess intake of energy and specific types of macronutrients (such as saturated fat) are associated with major chronic diseases including obesity, type 2 diabetes, coronary disease, stroke and certain cancers. Micronutrient deficiencies and inadequate intake of some nutrients (such as vitamin D, iodine, folate, iron, calcium) are also associated with health outcomes.

Collecting data on food and nutrient intakes is the only means of measuring the intake of macronutrients and micronutrients at a population level. These data can also be used to inform the development, evaluation and monitoring of nutrition-related policy, for example, by indicating the impact of mandatory iodine fortification and voluntary folic acid fortification of bread. Information on intake of foods and nutrients from 24-hour diet recalls is used in dietary modelling to assess the possible impact on the population's nutrient intake from changes to the food supply through fortification, supplementation and changes in formulation of food products.

Food consumption patterns influence nutrient intake and nutritional status. Therefore factors associated with dietary intake, including food security and eating patterns, will also be monitored.

The overall objective of the nutrition information domain is to monitor food and nutrient intakes and assess nutritional status in the population.

Mental health domain

Mental health conditions can cause enormous suffering and impose considerable costs on the health system. However, high levels of unmet need for mental health services mean that we cannot rely on administrative data (based on contacts with the health system) to monitor this burden. Population-based surveys allow the use of diagnostic instruments to measure the prevalence of different mental health conditions at a population level. These diagnostic instruments can be administered by lay interviewers. The information obtained from the survey can then be used, alongside administrative and other data, to monitor the prevalence of mental health conditions, the level of need for mental health care, the degree of access to and utilisation of mental health services, and the impact of mental illness on the quality of life.

The overall objective of the mental health information domain is to monitor patterns in the mental health status of the population.

Oral health domain

Oral diseases are among the most prevalent of the chronic diseases. They are important public health problems because of their impact on individual wellbeing and the cost of their treatment. Dental caries and periodontal diseases have historically been considered the most important oral health conditions.

Monitoring of the oral health status of the population helps to evaluate whether current policies are succeeding in reducing the prevalence of tooth decay and tooth loss. These data also inform future development of strategies to improve oral health for both children and adults.

The overall objective of the oral health domain is to monitor the oral health status of the population, exposure of the population to risk and protective factors for oral health, and the degree of access to and utilisation of oral health services.

Health service utilisation domain

The utilisation of appropriate and effective health care is an important determinant of population health; among the specific factors of interest are the range and comprehensiveness of services, their accessibility, availability and affordability, and the continuity and co-ordination of care. A particular focus is the utilisation of primary health care providers as they are usually the first point of contact with the health system.

The overall objective of the information domain of health service utilisation is to monitor patterns of use of health care by the population.

Patient experience domain

The quality of health care delivery is an important determinant of population health. Patient experience includes the processes or events that occur (or do not occur) in the course of a specific episode of care. Quality of health care from the patient's perspective can be considered to comprise two dimensions: access to care and the responsiveness of care. Responsiveness of care includes the cultural competence of health care workers by way of their respect for the beliefs, attitudes and behaviours of their patients. Estimation of the patient experience can be medical condition based or setting based. The NZHS facilitates the latter approach. The focus in the NZHS will be patient experience in the primary health care setting as patient experience in

secondary care and tertiary can be better captured by surveys administered by district health boards immediately after the point of contact with these services.

The overall objective of the patient experience information domain is to measure the quality of health care delivery through patient experience.

Sociodemographics domain

Health status, health risks and health service utilisation are strongly patterned by socioeconomic, cultural and demographic forces. Understanding the sociodemographic structure of the population is essential for interpreting survey data and applying this evidence to inform policy.

Statistics New Zealand has developed a sociodemographic core module for use in all household social surveys forming part of the official statistics system. The sociodemographics domain will closely follow the Statistics New Zealand model. In addition to self-reported variables, the NZHS records variables derived from the census area unit/meshblock of the household (eg, area deprivation (NZDep) and rurality).

The overall objective of the sociodemographics domain is to understand how data relating to the other health information domains vary by demography, socioeconomic position and ethnic group.

Part 3: Core and Module Survey Components

A fundamental principle of the NZHS is that the core component of the questionnaire will include items from all nine domains.

The questionnaire will comprise the majority of areas in the sociodemographics domain and key topic areas from each of the other domains, covering basic information on key variables. More detailed information will be included in the rotating module related to each domain.

Although it is important to retain flexibility, the 'standard' set of rotating modules will consist of:

- health status
- long-term health conditions
- risk and protective factors
 - physical activity
 - tobacco use
 - alcohol consumption
 - drug use
 - problem gambling
 - sexual and reproductive health
- nutrition
- mental health
- oral health
- health service utilisation
- patient experience
- social determinants of health (ie, sociodemographic non-core content).

Because of its size and importance, the risk and protective factors domain has been split into a number of modules, which means that the total number of modules exceeds the number of health information domains. Some shorter modules may run concurrently, for example problem gambling, tobacco, drugs and alcohol use.

Shorter clip-on modules

By rotating thematic/topic modules, it is also possible to incorporate shorter (1–3 minutes) clip-on modules to address, for example, an urgent emerging issue or an important topic area where policy development or monitoring requires information that can be obtained through a small number of questions. These clip-on modules could be a topic area that would ordinarily be part of a larger module or could be a stand-alone topic that does not sit within an existing module.

Topic areas included within each domain

A number of more detailed items or topic areas have been identified for inclusion within each of the nine information domains (in either the core or module component of the survey, or in both areas). Examples are heart disease within the long-term health conditions domain, tobacco use within the risk and protective factors domain, and access to primary care within the health service utilisation domain.

The core questionnaire will always include at least one topic area from each domain.

Some topic areas may appear in more than one information domain. For example, aspects of the mental health domain (eg, anxiety disorders) are also captured within the long-term health conditions domain; access to oral health services is included as a topic area within the oral health domain as well as the health service utilisation domain; and fruit and vegetable intake is included in the risk and protective factors domain as well as the nutrition domain.

Constraints on topic areas included

The following constraints have been taken into account when assessing topic areas for inclusion in the NZHS and the questions that in turn will be developed.

Questionnaire limitations

Questionnaires are not able to readily gather very complex and detailed information. Where possible, they are best designed using closed questions with predetermined tick-box responses.

Respondent burden and resistance

The questionnaire has to be designed so that New Zealanders are willing to participate in the survey. To achieve high response rates, it must be possible to complete the questionnaire in a reasonable amount of time (approximately one hour). In addition, the survey generally avoids topics that offend or annoy people, and questions that people cannot answer easily or that they find complex and difficult to understand.

Continuity and relevance

The NZHS needs to continue to monitor population health over time (by comparing data from one NZHS to the next) and, at the same time, be able to remain relevant to the information needs of the Ministry of Health. Possible new topics are assessed by the criteria listed below.

Integration

The NZHS uses standard frameworks and classifications with validated questions where possible, to allow for the integration of NZHS data with data from other sources.

Criteria for including a new topic

All possible new topics for the NZHS are assessed against the following criteria to determine whether to include them in the questionnaire.

- **The NZHS is the most appropriate source for the information.** The data cannot be collected more effectively and efficiently by other means (eg, an epidemiological study). The information is required for monitoring over time (as opposed to a one-off research project).
- **The information collected is needed to inform decisions made by the government, Ministry of Health, district health boards or other agencies that have an impact on the health of the nation.** The data should be relevant to current priority areas for the Ministry of Health.
- **Quality information can be collected.** The data collected by the questions will provide information of an acceptable quality.

Criteria for placement of topic area in the core questionnaire versus module component of the questionnaire

The criteria for determining which topics will be included in the core survey each year, and which will be included on a rotating basis only, are outlined below.

- **Impact:** The topic has high impact on health, on health policy, or on health care costs.
- **Measurability:** The topic lends itself to robust measurement, including high reliability and validity, and responsiveness to change.
- **Decomposability:** The data on the topic that can be collected will allow analysis by social group or region.
- **International comparability:** The topic lends itself to meaningful international benchmarking.

Table 1 below shows the outcome of an assessment of the topic areas in terms of their placement in the core survey or a module.

Note that a number of questions addressing these topic areas will be confined to certain age groups within the adult or child questionnaire, for example, breastfeeding, osteoporosis and heart disease.

Table 1: Topic areas included in the core New Zealand Health Survey versus a rotating module

CORE		MODULE	
Health status			
Common to adult and child General health		Common to adult and child Vision, hearing	
Adult only Physical functioning Chronic pain Distribution of psychological distress Depression, anxiety	Child only	Adult only Communication Cognition Self care, sleep Social functioning, role fulfilment	Child only Physical wellbeing Psychosocial wellbeing Family functioning and cohesion
Long-term health conditions			
Common to adult and child Asthma Diabetes		Common to adult and child Other long-term conditions Other serious mental health disorders	
Adult only Arthritis Anxiety disorders, mood disorders Heart disease, stroke	Child only Anxiety, depression, autism Attention deficit disorders Eczema	Adult only Chronic obstructive pulmonary disease (COPD) Dementia Osteoporosis, spinal disorders	Child only Birth conditions Rheumatic heart disease

CORE		MODULE	
Risk and protective factors			
Common to adult and child Body size (anthropometry) Physical activity		Common to adult and child Sun-safe behaviours, sleep Second-hand tobacco smoke exposure	
Adult only Blood pressure, blood cholesterol Fruit and vegetable intake Tobacco consumption Alcohol consumption Drug use	Child only Sedentary activity Infant feeding practices; soft drink/fast food consumption (see Nutrition Module) Discipline	Adult only Blood glucose and glycosolated protein Urinary protein Prescription drug abuse Alcohol, tobacco and drug use patterns Problem gambling Sexual and reproductive health	Child only Social participation Baby sleeping arrangements Child bullying
Nutrition			
Common to adult and child Body size (measured height and weight)		Common to adult and child Food and nutrient intake Dietary sources of nutrients Dietary habits Food security Nutritional status – biochemical, anthropometric and clinical measures	
Adult only Adult only Dietary food groups – fruit and vegetables	Child only Child only Infant feeding practices Fizzy/soft drink consumption Fast food/takeaway consumption Breakfast/lunch consumption		

CORE		MODULE	
Mental health			
Common to adult and child Utilisation of mental health services Access to mental health services		Common to adult and child Substance use disorders, eating disorders Major psychotic disorder, suicidal behaviour Risk factors for mental illness Utilisation/experience of mental health services Perceptions of stigma and discrimination related to mental illness	
Adult only Anxiety disorders Mood disorders	Child only Anxiety, depression Attention deficit disorders Autism	Adult only Organic brain syndromes (eg, Alzheimers)	Child only Anxiety disorders Mood disorders Other behavioural or conduct disorders
Oral health			
Common to adult and child Oral health status – tooth loss, removed, edentulism Use of/access to dental services		Common to adult and child Oral health status requiring dental examination Quality of life related to oral health Oral health behaviours (eg, self care – teeth brushing)	
	Child only Dental treatment present – fillings		

CORE	MODULE					
Health service utilisation						
<p>Common to adult and child</p> <p>Primary care</p> <p>Enrolment with primary care provider</p> <p>Frequency of use of services</p> <p>Services accessed within primary care provider</p> <p>Reason for last visit</p> <p>Prescription of medication; collection of prescribed medication</p> <p>Reasons for inability to access primary care provider</p> <p>Use of out-of-hours service</p> <p>Dental services access</p> <p>Use of other primary care services</p> <p>Secondary care</p> <p>Public or private</p> <p>Outpatient, inpatient, emergency department, day care</p>	<p>Common to adult and child</p> <p>GP referral to and choice of specialist provider</p> <p>Use of other health services/workers</p> <p>Reasons for inability to access other health services</p> <p>Insured or non-insured access to private care</p> <p>Informal and supported self-care</p> <table border="1" data-bbox="1122 678 2089 1043"> <thead> <tr> <th data-bbox="1122 678 1606 732">Adult only</th> <th data-bbox="1610 678 2089 732">Child only</th> </tr> </thead> <tbody> <tr> <td data-bbox="1122 735 1606 1043"></td> <td data-bbox="1610 735 2089 1043">Use of well child services including Tamariki Ora</td> </tr> </tbody> </table>		Adult only	Child only		Use of well child services including Tamariki Ora
Adult only	Child only					
	Use of well child services including Tamariki Ora					

CORE	MODULE
Patient experience	
Common to adult and child	Common to adult and child
<p>Primary care Barriers to accessing facilities including organisational, timeliness, financial, cultural (discrimination), geographic, informational, language</p>	<p>Primary care Comprehensiveness of services Continuity of care Communication experience with the primary health care professional including being treated with dignity and respect; protection of confidentiality and privacy Level of trust in health care professional Having a choice of health care professional Access to social support</p>

CORE	MODULE
Sociodemographic*	
<p>Common to adult and child Age (date of birth), sex, ethnicity Nativity (year of arrival if overseas-born) English language competence (not children) Highest educational qualification (primary caregiver for child interview) Employment status (primary caregiver for child interview) Personal and household income Sources of income (including benefit status/type)</p>	<p>Common to adult and child Nationality and resident status Social and material living standards Social isolation/social support Discrimination/stigmatisation Domicile five years ago (residential mobility) Housing quality (includes heating)</p>
	<p>Adult only</p>

CORE	MODULE	
Housing tenure Household size and composition (relationship of household members to index) Household and family type (living arrangements) Shared care and/or custody arrangements Household crowding index (derived) Domicile (region, urban/rural) (derived) Area deprivation (derived)	Adult only	Child only Child care outside home Early childhood arrangements Languages child can speak

Note:

* For the child interview, many of these variables are taken from the adult component of the survey carried out in the same household as the child.

Criteria for order of module rotation

Given the number of potential modules, some of which are 'short' and can be paired with another 'short' module (while others are 'long' and cannot be so paired), it will be necessary to plan in terms of a rolling 10-year cycle.

Initially, however, it was considered sufficient to identify the proposed first module for inclusion, that is, health service utilisation and patient experience combined as one module. The remaining modules have been grouped according to their likely inclusion within the first two years of the survey start; then the next three to five years; and finally more than five years after the survey start.

The following criteria assisted in assessing the module sequencing.

1. What has been surveyed recently?¹
2. What is needed urgently from a policy perspective?
3. What is amenable to accurate measurement given currently available instruments?
4. What is suitable for a 'short' (approximately 10–15 minutes) rather than a 'long' (approximately 25–40 minutes) module?

Based on the four criteria above, modules were prioritised for possible inclusion in the periods outlined in Table 2, with health service utilisation and patient experience combined as the first module.

¹ The New Zealand Health Survey in 1992/93, 1996/97, 2002/03 and 2006/07; Adult Nutrition Surveys in 1996/97 and 2008/09; Child Nutrition Survey in 2002/03; Tobacco Use Surveys in 2006, 2007 and 2009; Alcohol and Drug Use Survey in 2007/08; Te Rau Hinengaro (the NZ Mental Health Survey) in 2003; the Oral Health Survey in 2009.

Table 2: Prioritisation and relative length of modules

Module	Module length	Years 1–2 (2011–12)	Years 3–5 (2013–15)	Years >5 (>2015)
1 Health status (including WHO-Long Form, hearing and vision tests, mobility and dexterity tests)	Long		✓	
2 Long-term health conditions (including arthritis, other musculoskeletal conditions, respiratory conditions)	Short		✓	
3 Nutrition	Long			✓
4 Mental health (including anxiety, mood, substance use and eating disorders)	Long			✓
5 Oral health (including full dental examination)	Long			✓
6 Health service utilisation*	Short	Yr 1 12 months		
7 Patient experience (primary care)*	Short			
Risk and protective factors				
8 Physical activity	Long		✓	
9 Tobacco**	Short	Yr 2 6 months		
10 Alcohol consumption**	Short	Yr 2 6 months		
11 Drug use**	Short	Yr 2 6 months		
12 Problem gambling [#]	Short	Yr 1 6 months		
13 Sexual and reproductive health	Long		✓	
Sociodemographics				
14 For example, discrimination, living standards, housing quality	Short		✓	

Notes:

* These can be considered as comprising a single module, given the high degree of overlap.

** These can possibly be combined as a single module to allow more frequent rotation.

A short clip-on module in year 1.

References

Landgraf JM, Abetz L, Ware JE, 1999. *Child Health Questionnaire (CHQ): A user's manual*. Boston, MA: HealthAct.

Ministry of Health. 2007. *Measuring Health States. The World Health Organization – Long Form (New Zealand Version) Health Survey: Acceptability, reliability, validity and norms for New Zealand*. Public Health Intelligence. Occasional Bulletin No. 42. Wellington: Ministry of Health. URL: <http://www.moh.govt.nz/moh.nsf/indexmh/measuring-health-states?Open>

Ministry of Health. 2008. *A Portrait of Health. Key results of the 2006/07 New Zealand Health Survey*. Wellington: Ministry of Health. URL: <http://www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health>.

Ministry of Health. 2009. Data and statistics. URL: <http://www.moh.govt.nz/moh.nsf/indexmh/hdi-publications#surveys>.

Raat H, Botterweck AM, Landgraf JM, et al. 2004. Reliability and validity of the short form of the child health questionnaire for parents (CHQ-PF28) in large random school based and general population samples. *Journal of Epidemiological Community Health* 59: 75–82.

Statistics New Zealand. 1998. *Protocols of Official Statistics*. Wellington: Statistics New Zealand.

Ware JE, Kosinski M, Dewey JE. 2000. *How to Score Version 2 of the SF-36 Health Survey (Standard and Acute Forms)*. Lincoln, RI: QualityMetric Incorporated.

WHO. 2001. *International Classification of Functioning, Disability and Health*. Geneva: World Health Organization.

WHO. 2005. STEPwise approach to surveillance (STEPS). URL: http://www.who.int/ncd_surveillance/steps/en/.