

Measuring disability in New Zealand: Current status and issues

A discussion document for the Working Group on Disability Data and Evidence

Statistics New Zealand

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# Contents

[Purpose 4](#_Toc427768945)

[1. National disability data collections 4](#_Toc427768946)

[1.1 The New Zealand Disability Survey 4](#_Toc427768947)

[1.2 NZ Census of Population and Dwellings 5](#_Toc427768948)

[1.3 New Zealand Health Survey 6](#_Toc427768949)

[1.4 Disability in administrative data sources 6](#_Toc427768950)

[2. Catalysts for Change 6](#_Toc427768951)

[Clarifying data needs 6](#_Toc427768952)

[Meeting data needs 7](#_Toc427768953)

[International considerations 8](#_Toc427768954)

[The Disability Data and Evidence Working Group 8](#_Toc427768955)

[3. Measuring disability in population surveys 9](#_Toc427768956)

[3.1 A conceptual framework for disability measurement 9](#_Toc427768957)

[3.2 Washington Group on Disability Statistics 10](#_Toc427768958)

[3.3 Disability in surveys that are not disability-specific 11](#_Toc427768959)

[3.4 Disability in a population census 11](#_Toc427768960)

[3.5 Threshold issues: are some screening questions better than others? 12](#_Toc427768961)

[4. Comparing two disabled populations 15](#_Toc427768962)

[4.1 Prevalence rates 15](#_Toc427768963)

[4.2 Demographic characteristics and outcomes for disabled people 17](#_Toc427768964)

[4.3 Population overlap 19](#_Toc427768965)

[References 20](#_Toc427768966)

[Appendix 1 21](#_Toc427768967)

[Screening questions in the 2013 NZ Disability Survey 21](#_Toc427768968)

[Appendix 2 24](#_Toc427768969)

[Disability questions in the 2013 Census 24](#_Toc427768970)

[Appendix 3 24](#_Toc427768971)

[Washington Group Short Set 24](#_Toc427768972)

# Purpose

There is an enduring need for high quality and timely information about disabled people in New Zealand. Meanwhile, the context and practices for obtaining this information, both nationally and internationally, continue to change. This paper aims to inform discussion about identifying and addressing disability data needs in a new and changing environment.

Section 1 outlines the current status of national disability data collections while Section 2 summarises key drivers of change in both disability data needs and the ways in which these needs might be met.

The other two sections of this paper focus on issues that arise when measuring disability in population surveys. While national surveys are not the only way in which disability data needs can be met, they have an important place at the core of this project. Section 3 gives details on some of the issues that arise when setting up surveys that include disability measurement and, in the last section, a comparison is presented of two national disabled populations identified in New Zealand in 2013.

1. National disability data collections

## 1.1 The New Zealand Disability Survey

The New Zealand Disability Survey (NZDS) has been run in the same year as the Census of Population and Dwellings since 1996. The survey is the official source of statistics on disability prevalence rates across key demographic groups in New Zealand and provides information on socio-demographic characteristics of disabled people. It also collects data on met and unmet need for support and assistive equipment, and on outcomes and barriers to participation across a range of social and economic activities.

The NZDS has two parts – the larger part is a survey of selected adults[[1]](#footnote-1) and children living in private households or in group homes[[2]](#footnote-2) (Household Disability Survey) and the smaller part is a survey of selected adults living in residential care facilities (Disability Survey of Residential Facilities).[[3]](#footnote-3)

The NZDS used similar methods and had similar content in the years 1996, 2001 and 2006. The survey that was scheduled to take place in 2011 was delayed, along with the Census of Population and Dwellings, as a result of the Christchurch earthquakes that occurred in February of that year. Planning for the 2011 survey was well advanced when the decision was made to delay. In 2013 the survey was run after the Census with little change to the plan for 2011.

The definition of disabled people used in the 2013 NZ Disability Survey was:

“A disabled person is someone with an impairment that has a long-term, limiting effect on their ability to carry out day-to-day activities. ‘Long-term’ is defined as six months or longer. ‘Limiting effect’ means a restriction or lack of ability to perform.”[[4]](#footnote-4)

In practice, surveyed people are not considered to have a disability if an assistive device (such as glasses, hearing aid, walking stick, etc.) entirely eliminates any limiting effect of their impairment.

In the 2013 NZDS there were 23 screening[[5]](#footnote-5) questions used to identify disabled adults (15 years or more) and 14 questions to identify children. The screening questions are shown in [Appendix 1](#_Appendix_1).

In view of developments relating to disability measurement both internationally and in New Zealand, the 2011 Disability Survey project included a review of content and method to help ensure that statistics generated were relevant to current and emerging needs and conformed to international best practice. This review involved consultation with relevant government and non-government agencies and took place in 2008. In the survey that followed, some depth was sacrificed to gain more breadth of information within a similar interview time.

The main changes to the survey between 2006 and 2013 were:

* Child screening questions were aligned with those for adults which focus largely on whether the respondent can carry out certain tasks. Questions based on having specified medical conditions or using specified assistive devices were dropped from the child screening questions.
* In 2013 ethnicity variables were derived as total response rather than prioritised.[[6]](#footnote-6)
* Safety, Social Contact, and Leisure were new topic modules for adults and Leisure and Carers were two new topic modules for children. Other topic modules were restructured for 2013.
* No data on underlying health conditions of disabled people was collected in 2013.
* The selected sample size was reduced from 40,000 to 20,000 people (approximately). Over-sampling of Pacific people carried out in earlier years was dropped and the size of the over-sample for Māori reduced.
* The sample selection method for residential care facilities was improved.

## 1.2 NZ Census of Population and Dwellings

Each time the NZDS was run, a representative sample of people living in private households was selected from a sample frame[[7]](#footnote-7) based on data from the Population Census of the same year. The Census run in March provided the sample frame for the Household Disability Survey (HDS) carried out in July to September.

Two questions on disability status have been included in the Census since 1996 to inform the sample design of the HDS. The main reason for not releasing data based on the census questions has been the view that these questions do not identify disabled people well enough to provide a robust source of data about the disabled population.

The justification for using census questions to support the sample design of the survey is that, for small population groups, a very large sample would be needed to find the people of interest. Those identified in the census as disabled are given a higher likelihood of selection for the survey sample. This helps to ensure that sufficient disabled people are included in the survey to generate robust estimates. This argument is thought to be particularly relevant for disabled children who made up just 11 percent of the child population in 2013.[[8]](#footnote-8)

An advantage of using the census to provide the sample frame is the ability to then add census responses to the survey dataset by matching on census records. This reduces respondent burden as these questions do not have to be asked again in the survey.

In 2013 the census questions were changed with the goal of achieving a better match between disabled people identified in the census and those identified in the survey. However, the changes did not appear to improve this relationship. The questions are shown in [Appendix 2](#_Appendix_2). A comparison of survey and census disabled populations is presented in section 4.

## 1.3 New Zealand Health Survey

Disability screening questions were included in the 2013/14 New Zealand Health Survey. The questions used were designed to match those used in the 2013 NZDS as closely as practicable. Findings from these questions have not yet been released. The Ministry of Health website has information on the [NZ Health Survey](http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/surveys/current-recent-surveys/new-zealand-health-survey).

## 1.4 Disability in administrative data sources

In 2007 a stocktake was carried out in which organisations that held data on disabled people were asked to provide Statistics New Zealand with metadata on their collections. The purpose was to investigate the potential for using administrative sources of data to produce official statistics. The report of findings is called the [Disability Stocktake.](http://www.stats.govt.nz/browse_for_stats/health/disabilities/disability-stocktake.aspx)

The criteria for inclusion of disabled people in administrative data is eligibility for the services on offer and the criteria differ across providers or funders of different services. As a result coverage of these data sources is limited to people who are eligible for and use the service, and information about unmet need, disability prevalence and social and economic outcomes cannot be determined from them.

When the February 2011 Christchurch earthquakes lead to the postponement of the census until 2013, consideration was given to whether administrative data could address at least some user needs. The unmet data needs were extensive and it was decided to run a disability survey after the census in 2013.

Administrative data sources are most likely to have value if they can be linked to survey data. Issues of access, confidentiality and data quality would need to be addressed. Alternatively, these sources can provide aggregated summaries of the uptake of disability services.

1. Catalysts for Change

## Clarifying data needs

When the NZDS was set up in the mid-1990s the primary focus was on measuring the prevalence and causes of disability as well as identifying unmet need for support services and equipment. While these purposes remain important, the growing interest in monitoring social and economic outcomes of disabled people has influenced the role of survey data collections around the world.

Significant domestic drivers of this wider focus have been the need to report progress against objectives of the NZ Disability Strategy and government obligations under the UN Convention on the Rights of Persons with Disabilities, ratified by New Zealand in 2008. In addition, interest in quality information about disability at a sub-national level has grown along with local government and health authorities’ increased involvement in ensuring good outcomes for local disabled populations. Organisations that support and advocate for disabled people have also been increasingly active in seeking data to help them advance the needs of disabled people in their local communities.

More complex and varied data needs in a context of continued fiscal restraint require us to find varied and innovative solutions. The first step is to clarify customer needs and arrive at a shared understanding of how they should be prioritised and addressed.

## Meeting data needs

The growing importance of data and evidence to inform decision making and monitor progress sharpens the focus on finding cost effective ways to support our customers. Some of the relevant changes affecting the availability of disability data are outlined here.

In June 2012 the Government approved a Statistics New Zealand funding proposal for the continued production and modernisation of social statistics. This proposal included funding for one post-censal survey after each population census with Te Kupenga (the Maori Social Survey) to be run in 2018. This means that a disability-specific survey is scheduled to be run as a post-censal survey in 2023 and intended to be every 10 years thereafter.

As part of its programme to explore [future approaches to population and social statistics](http://www.stats.govt.nz/methods/research-papers/topss.aspx), Statistics NZ is investigating administrative data sources and ways in which such sources might be improved to make person-centred administrative data more usable.[[9]](#footnote-9) This reflects an across- government focus on the reuse of existing data.

The [Integrated Data Infrastructure](http://www.stats.govt.nz/browse_for_stats/snapshots-of-nz/integrated-data-infrastructure.aspx) (IDI) represents an important development in the tools available for analysis across multiple data collections in New Zealand. The IDI combines information from a range of organisations to provide the insights government needs to improve social and economic outcomes for New Zealanders.[[10]](#footnote-10) Both survey and administrative datasets have been added to the IDI and the extent to which this integrated data environment can support research on disabled populations needs to be explored.

Making use of more sophisticated statistical techniques can help to ensure that we maximise the value of data collections. Statistics New Zealand is starting to use small domain estimation methods to meet customer needs for data on population sub-groups for which direct data collection would be prohibitively expensive.

Recent work lead by the Ministry of Justice has resulted in the approval of definitions for a ‘*Service delivery needs data standard*’. The standard is intended for use across the justice sector (and hopefully by other service agencies) to identify impairments and other relevant characteristics of people who engage with government services. This work has been carried out with an eye to both the service delivery and the monitoring function of the data collection.

Adding disability status questions to other Statistics New Zealand surveys (such as the Household Labour Force Survey and the General Social Survey) and by making available data collected in the census have both been the subject of submissions to Statistics NZ at different times. The issues that need to be resolved in moving to multiple sources of official disability statistics are extensive (see details in section 3 below). Nevertheless, this approach may present a cost-effective way to address important data needs.

Different collections will identify different, albeit overlapping, disabled populations. An example of this is provided in section 4. These comparability issues and a growing awareness of time series inconsistencies with data from the NZDS justify a review of the way in which disabled people are identified in New Zealand with an eye on international developments.

## International considerations

Achieving clarity on what is meant by ‘disability’, and consistency in the way disabled people are identified in data collections are both discussed widely in the literature but no simple solutions are presented.

Lack of internationally comparable prevalence rates amongst developed countries, as well as the scarcity and poor quality of data on disability in developing countries, provided the impetus for formation of the UN Washington Group on Disability Statistics in 2001.[[11]](#footnote-11)

The Washington Group has now produced a short question set (WGSS) which has been through a rigorous development process and extensive testing. The WGSS was recommended for use by the UN in their *Principles and Recommendations for Population and Housing Censuses.*[[12]](#footnote-12) It has also been advanced as an appropriate way to identify disabled people for monitoring progress against the UNCRPD.[[13]](#footnote-13)

While ensuring that national relevance is retained, the use of international standards and practice where possible is desirable. This is particularly so when reporting against international conventions. The benefits of adopting concepts, definitions and methods that have been the subject of considerable intellectual effort at an international level are considerable.

## The Disability Data and Evidence Working Group

Given the changes outlined above, it is timely for people with an interest in disability to explore appropriate and cost-effective solutions in the New Zealand context. Reviewing information needs and identifying how best to address those needs should be the focus of this working group.

1. Measuring disability in population surveys

“One of the principal difficulties in measuring outcomes for disabled people is the identification of those people to be classified as ‘disabled’.”[[14]](#footnote-14)

## 3.1 A conceptual framework for disability measurement

Any discussion of disability concepts usually opens with a description of two models for understanding what it means to be disabled. These are commonly referred to as the social model and the medical model.

‘The *medical model* views disability as a feature of the person, directly caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals. Disability, on this model, calls for medical or other treatment or intervention, to 'correct' the problem with the individual.

The *social model* of disability, on the other hand, sees disability as a socially created problem and not at all an attribute of an individual. On the social model, disability demands a political response, since the problem is created by an unaccommodating physical environment brought about by attitudes and other features of the social environment.’[[15]](#footnote-15)

In 2001, the World Health Organisation endorsed a revision of the classification system used for disability related concepts. In this process, the International Classification of Functioning, Disability and Health (ICF) replaced the International Classification of Impairment, Disability and Handicap (ICIDH).

The ICF classifies how well people function across three elements of a healthy life: body functions and structures; ability to perform day-to-day activities; and ability to participate in the social domain. Problems in these areas are referred to as: impairments; activity limitations; and participation restrictions respectively. ICF also identifies environmental and personal factors in recognition of the impact, positive or negative, that these factors can have on an individual's ability to function.[[16]](#footnote-16)

A model based on the ICF has had growing acceptance as a useful attempt to synthesise social and medical perspectives. This model of disability, referred to as the *biopsychosocial model*, represents an integration of medical and social. ‘ICF provides, by this synthesis, a coherent view of different perspectives of health: biological, individual and social.’[[17]](#footnote-17)

The ICF framework, which has been described as ‘…less a conceptual model that it is a classification system of health status with a range of theoretical influences’[[18]](#footnote-18) steers clear of the medical / social debate by not specifying the cause of disability.

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Internationally there has been a strong move towards accepting the conceptual definitions outlined in the ICF. Canada, Australia and Ireland explicitly state that their specialist disability surveys use the ICF as the conceptual framework. Some of the changes made to the 2013 New Zealand Disability Survey were aimed at better aligning it with the ICF.[[19]](#footnote-19)

International agreement on use of the ICF as a conceptual basis for understanding disability has not automatically lead to a single operational definition or consistent set of screening questions.

## 3.2 Washington Group on Disability Statistics

Early work of the Washington Group on Disability Statistics drew attention to the importance of understanding the purpose of the data collection before deciding on the relevant question set. The Washington Group identified the assessment of equalization of opportunity as the purpose for measuring disability that can best be achieved in a population census.[[20]](#footnote-20) Questions developed were intended to identify ‘persons who are at greater risk than the general population of experiencing limited social participation because of difficulties with certain basic actions’.[[21]](#footnote-21)

Having agreed on this purpose the Washington Group developed a short question set of questions (WGSS) for use in census and surveys that are not disability-specific (see [Appendix 3](#_Appendix_3) for the WGSS questions).

While the six questions developed by the Washington Group for measuring the equalization of opportunities identify the majority of adults with disability, they do not identify all people who would fit the conceptual definition. The questions will not, for example, identify all people with intellectual or psychological functioning difficulties and they are not intended for use with children.[[22]](#footnote-22)

Work on an extended question set for adults, a question set suitable for children and a question set to identify people living with mental health difficulties are all underway[[23]](#footnote-23).

## 3.3 Disability in surveys that are not disability-specific

In recent submissions to Statistics New Zealand on survey content, interest has been expressed in the inclusion of questions to identify disabled people in household surveys that are not disability-specific. In particular, submissions have been received for inclusion of disability screening questions in the General Social Survey (GSS) and the Household Labour Force Survey (HLFS).

Surveys in which disability status is not the primary interest are used in many countries to collect information about disabled people (including Australia, Canada and the USA). This can be a relatively low-cost way of adding to available data and can also improve the frequency of data when disability-specific surveys are not run often.

The inclusion of disability identification in other social surveys can be done in two ways. One option is to add disability screening questions as a ‘module’ that is included for a specified period or ‘run’ of a survey collection. Countries that do this do not generally use the same question set for identifying disabled people as is used in their disability-specific survey. Interview time constraints and/or space limitations on the questionnaire generally prohibit this.

A module approach seem sensible if the objective is to disaggregate the target information of the survey by disability as a one-off exercise or perhaps to repeat periodically. Where the set of questions used differs from that used in the specialist disability survey issues of comparability between data sources will arise.

Another approach is to treat disability as if it were a demographic characteristic (like age, sex and ethnic group). This would mean including questions that establish disability status as part of the ‘core’ survey questions rather than using one-off or periodic modules. For this purpose survey designers want a set of questions shorter again than that used in a one-off or rotating module approach.

The extent to which disability can be regarded as a demographic characteristic is a matter of debate with strongly held positions on both sides.[[24]](#footnote-24) Whether a module is used periodically or a regular ‘core question’ approach is desired, the problem remains as to how disabled people should be identified, given constraints on the number of questions, and how to reconcile findings about the ‘disabled populations’ that are derived from multiple data sources using different question sets.

## 3.4 Disability in a population census

There are two reasons for the inclusion of disability questions in a population census. One is to assist in the selection of a survey sample, as we have done in New Zealand for all four occurrences of the NZDS. The other is to produce statistics on the disabled population to help meet user needs.

There has been interest in the availability of disability data from the population census since the questions were first included in 1996. However, as discussed above, the census questions were included for the sole purpose of supporting the survey sample selection.

Canada and Ireland have both used questions in their population census to support the sample selection for a disability-specific survey. However, neither of these countries currently use the approach used in New Zealand.

An important advantage of census data over survey data is that it can be disaggregated to small population groups for which survey sample size precludes robust estimates. However, due to differences in the populations identified by the census and survey questions, findings about the size of small disabled populations from a census (for example by geographic area or small age-groups) would not be consistent with prevalence estimates from the survey. The size of disabled groups, and resulting prevalence rates, are best estimated using a comprehensive set of screening questions not by the short set that it is possible to include in a population census.

The Washington Group short set, which is recommended by the UN for use in population censuses, has the specific purpose of assessing equality of outcomes. It is not intended for use in determining prevalence although it is often the only source of prevalence information in countries without the resources for a disability–specific survey.

## 3.5 Threshold issues: are some screening questions better than others?

There is no international consensus across statistical agencies on the best way to identify disabled people and agencies in most developed countries use their own unique set of screening questions. Even where there is a common definition of the population of interest it is the choice of screening questions that defines the population boundaries.

Daniel Mont, in the 2007 World Bank report on disability prevalence, notes the considerable variation in reported disability prevalence across countries and says that [measuring disability] ‘is complicated further by the idea that there is no single correct definition of disability, that the nature and severity of disabilities vary greatly, and that how one measures disability differs depending on the purpose for measuring it.’[[25]](#footnote-25)

### 3.5.1 Purpose of data collection

The World Programme of Action concerning Disabled Persons[[26]](#footnote-26) identified its three major goals as equalisation of opportunities, rehabilitation and prevention.

In turn, the UN Principles and Recommendations for Population and Housing Census (Revision 2) outlined three major classes of purposes for measuring disability in a census. These are:

1. To provide services, including the development of specific programs and policies for service provision and the evaluation of these programs and services…
2. To monitor the level of functioning in the population. Monitoring levels of functioning includes estimating rates and analyzing trends …
3. To assess equalization of opportunities...[[27]](#footnote-27)

Decisions about how to identify disabled people need to start by understanding the purpose or purposes for which the data is being collected.

### 3.5.2 Impairment screen verses functional screen

Impairment screens include, at the most basic level, the question: ‘Do you have a disability?’ or ‘Are you disabled?’. They may consist of a set of questions that include specified impairment types (deaf, blind, etc.) or specified medical conditions (such as Downs Syndrome). These screening questions are regarded as being based on a medical rather than social model of disability as they do not take into account the effects of impairment on functioning, (e.g. ability to carry out daily activities).

The objective of functional screens is to identify people with loss of functional capacity that results from a health condition rather than just the existence of a heath condition. For this reason a ‘functional’ screen is considered preferable.

In 2009 the Washington Group reported that “The earlier impairment-based, medical model approach that focused on medical conditions and asked some variation of the questions: ‘*Do you have a disability?’* is no longer satisfactory; and the focus of measurement has shifted to experienced *difficulties* in basic actions and *barriers* to participation.”[[28]](#footnote-28)

### 3.5.3 Range of functional limitations (domains) to include

Once it is decided to use a functional screen the number of questions used then depends on how many domains are included in the question set and how many questions are thought to be required to capture each domain fully. In the NZDS there are 9 domains for adults (vision, hearing, agility, mobility, intellectual, psychiatric/psychological, learning, speaking and remembering) and 9 for children (vision, hearing, agility, mobility, intellectual, psychiatric/psychological, learning, speaking and developmental delay). The number of questions used for each domain differs between the adult and child question sets with the result that adults are asked 23 screening questions and children 14 (answered by their parent or caregiver).

The number of domains included in the question set will clearly affect the number and type of people who are counted as disabled in any data collection. In addition, domains for which output statistics are required must be separately identified in the collection. The WGSS includes only basic action domains. This question set may not be able to provide statistical outputs on what are considered to be policy relevant domains.

### 3.5.4 Question response options

Another consideration in designing screening questions covers the choice of response options in the questions and, where there are a range of possible responses, how to decide on appropriate thresholds. Limiting responses to Yes / No rather than providing a scale of response options has been shown to greatly affect the results.

The World Health Organisation in its Training Manual for use of Disability Statistics (2008) reported that:

“Given a scaled option, people seem much more likely to recognise difficulty with activities than with a dichotomous, ‘Yes/No’ response since respondents tend not to report mild, or even moderate disabilities, mentally reserving ‘yes’ for severe disabilities. There is a strong motivation, therefore, for data collection designers to include scaling options as responses.”[[29]](#footnote-29)

In the NZDS adult questions the 3 part scale ‘easily, with difficulty, not at all’ is used in 16 of the 23 questions and Yes/No response options for 7 questions. People are counted as disabled if they answer ‘Yes’ or ‘with difficulty/Not at all’ to at least one of the screening questions.

The Washington Group short set uses a 4 part scale, ‘no difficulty, some difficulty, a lot of difficulty, cannot do it at all’. Their recommendation is that people are counted as ‘disabled’ if they respond ‘a lot of difficulty/cannot do it at all’ to at least one of the questions. This means that people with ‘some difficulty’ are not counted as disabled using the Washington Group questions however analysis can still be carried out on people who indicate ‘some difficulty’ regarding the activities included.

### 3.5.5 Treatment of assistive devices

The treatment of assistive devices in questions identifying disabled people will have a big influence on the size of the resulting disabled population.

‘Should people who use assistive devices or aids – such as reading glasses, contact lens, or hearing aids – which completely eliminate any restriction to their activities be counted as having a disability? And when assistive devices do not eliminate, but merely reduce activity restrictions, such as in the case of a crutch, cane or wheelchair, how will the severity of the disability be assessed?’[[30]](#footnote-30)

In New Zealand the Population Census questions ask people to respond to the vision question ‘even when wearing glasses or contact lenses’ and to the hearing difficulty question ‘even when wearing a hearing aid’. The NZDS includes assistive devices in the question wording for adults on hearing and vision and as an interview help note for walking (use of a stick or other aid). For child questions only vision has assistive devices in the question wording. No reference is made to other assistive devices such as prosthetic limbs.

The Washington Group short set includes assistive devices in the hearing and vision question wording.

### 3.5.6 Duration of disability

Should the disabled population include people for whom disability is not permanent or even ‘long-term’?

Neither the Washington Group short question set nor the ICF refer to the duration of disability. A definition that includes a time period filter will exclude people with a vast array of short-term, fluctuating, or episodic impairments. However, Article 1 of the UN Convention of the Rights of Persons with Disabilities (CRPD) states that: ‘Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.’[[31]](#footnote-31)

Question 16 in the 2013 Census refers to ‘… a health problem or condition you have (lasting 6 months of more)… while question 17 refers to ‘… a long-term disability (lasting 6 months or more)…’ The NZDS talks about ‘… difficulties that have lasted six months or more, or difficulties that are expected to last for six months or more.’

Again it is the purpose of the data collection that should be the decisive factor in making choices about threshold boundaries for the population of interest.

This section has outlined a number of issues that need to be considered when making decisions about how to identify disabled people in national data collections. Section four highlights some of these issues by comparing two disabled populations.

1. Comparing two disabled populations

As noted earlier there has always been interest in accessing the data on disability collected in the population census. The decision not to publish census data on disability was made to avoid releasing findings that conflict with those from the survey especially as the census questions were thought to be very poor at identifying the ‘true’ disabled population.

The 2013 Census included two questions on disability ([appendix 2](#_Appendix_2)). Responses to these questions were combined to create a census disability indicator. The indicator was used to ensure that sufficient disabled people were included in the sample for the 2013 Disability Survey.

The sections below compare the 2013 Survey disabled population with the 2013 Census disabled population. The first section gives prevalence rates and shows the considerable difference in the overall size of the two populations. Section 5.2 compares some demographic characteristics of the two groups and this is followed by findings for a selection of social and economic outcomes. In section 5.3 the extent of the overlap between the two disabled populations is explored.

## 4.1 Prevalence rates

Official disability prevalence rates are produced from data collected in the New Zealand Disability Survey. If prevalence rates are produced from the questions in the 2013 Census they are much lower for all population sub-groups. Numbers and rates for both disabled populations are shown in tables 1 and 2.

The population covered by the 2013 Disability Survey estimates in table 1 includes all usual New Zealand residents who were in a private dwelling (or group homes) in New Zealand on census night and all people living in residential care facilities.

**Table 1 Prevalence of disabled people by age and sex – 2013 Disability Survey**

|  |  |  |  |
| --- | --- | --- | --- |
| **Age group** | **Male** | **Female** | **Total population** |
| **Number** | **Rate** | **Number** | **Rate** | **Number** | **Rate** |
| Under 15 years | 60,000 | 13% | 35,000 | 8% | 95,000 | 11% |
| 15 to 44 years | 138,000 | 16% | 145,000 | 16% | 283,000 | 16% |
| 45 to 64 years | 149,000 | 28% | 165,000 | 28% | 314,000 | 28% |
| 65 years and over | 169,000 | 58% | 201,000 | 60% | 370,000 | 59% |
| All ages | 516,000 | 24% | 545,000 | 24% | 1,062,000 | 24% |

Source: Statistics New Zealand

For the 2013 census figures in table 2, the population includes all usual residents of New Zealand who were present in private or non-private dwellings on census night.

**Table 2 Prevalence of disabled people by age and sex – 2013 Census**

|  |  |  |  |
| --- | --- | --- | --- |
| **Age group** | **Male** | **Female** | **Total population** |
| **Number** | **Rate** | **Number** | **Rate** | **Number** | **Rate** |
| Under 15 years | 25,000 | 6% | 16,000 | 4% | 41,000 | 5% |
| 15 to 44 years | 81,000 | 11% | 76,000 | 10% | 157,000 | 10% |
| 45 to 64 years | 101,000 | 21% | 98,000 | 18% | 199,000 | 19% |
| 65 years and over | 97,000 | 37% | 119,000 | 39% | 215,000 | 38% |
| All ages | 304,000 | 16% | 308,000 | 15% | 612,000 | 16% |

Source: Statistics New Zealand

**Chart 1 Disability prevalence by age from the 2013 Disability Survey and the 2013 Census**

Source: Statistics New Zealand

The disabled population identified by the Census questions is smaller than that identified in the Survey. The sample for the survey is not just selected out of the Census disabled population. If this was the case then survey disabled population would have to be the same size or smaller than the census disabled population.

The survey sample is selected from both the Census disabled and Census non-disabled populations with those identified as disabled having a higher chance of selection for the survey. This ensures that non-disabled people are in the survey so that comparisons can be made for key social and economic outcomes. In addition, it is expected that some people who were not disabled according to the census questions will turn out to be disabled when they answer the longer and more detailed survey question set.

The lower number of disabled people identified in the 2013 Census compared with the 2013 Survey is consistent with the findings outlined earlier in this paper about the way in which different question sets affect the size of the disabled population.

## 4.2 Demographic characteristics and outcomes for disabled people

Despite their size difference, the two populations have similar distributions with regard to the three demographic characteristics shown in table 3.

**Table 3 Disabled people by demographic characteristics – 2013 Survey and Census[[32]](#footnote-32)**

|  |  |  |
| --- | --- | --- |
| **Demographic characteristics** | **2013 Survey disabled** | **2013 Census disabled** |
| **Number** | **Percentage of disabled people** | **Number** | **Percentage of disabled people** |
| Male | 516,000 | 49% | 304,000 | 50% |
| Female | 545,000 | 51% | 308,000 | 50% |
| Under 15 years | 95,000 | 9% | 41,000 | 7% |
| 15 to 44 years | 283,000 | 27% | 157,000 | 26% |
| 45 to 64 years | 314,000 | 30% | 199,000 | 33% |
| 65 years or more | 370,000 | 35% | 215,000 | 35% |
| Maori ethnic group | 176,000 | 17% | 101,000 | 17% |

Source: Statistics New Zealand

Data on a number of social and economic outcomes is collected in the census. Some of these variables are matched onto the survey data using census reference numbers. This can only be done for the cases selected from the census sample frame (that is, those living in private dwellings). The findings for census disabled and survey disabled populations can therefore be compared for people who usually live in New Zealand and who were in a private dwelling on census night.

**Table 4 Labour force status of disabled adults (aged 15 plus) – 2013 Survey and Census**

|  |  |  |
| --- | --- | --- |
| **Labour force status** | **2013 Survey** | **2013 Census** |
| **Number**  |
| Employed | 416,000 | 207,000 |
| Unemployed | 42,000 | 28,000 |
| In the labour force | 457,000 | 234,000 |
| Working age population |  917,000 | 527,000 |

Source: Statistics New Zealand

**Table 5 Labour force rates for disabled adults (aged 15 plus) – 2013 Survey and Census**

|  |  |  |
| --- | --- | --- |
| **Labour force rates** | **2013 Survey** | **2013 Census** |
| **Rate**  |
| Labour force participation rate | 50% | 45% |
| Employment rate | 45% | 39% |
| Unemployment rate\* | 9% | 12% |

Source: Statistics New Zealand

**Table 6 Personal incomes of disabled adults (aged 15 plus) – 2013 Survey and Census**

|  |  |  |
| --- | --- | --- |
| **Personal income group** | **2013 Survey disabled** | **2013 Census disabled** |
| **Number** | **Percent** | **Number** | **Percent** |
| Less than $20,001 | 384,000 | 44% | 253,000 | 51% |
| $20k to $50k | 321,000 | 37% | 170,000 | 34% |
| $50,001 or more | 160,000 | 18% | 71,000 | 14% |
| With income reported | 865,000 | 100% | 495,000 | 100% |

Source: Statistics New Zealand

**Table 7 Educational attainment of disabled adults (aged 25 plus)**

|  |  |  |
| --- | --- | --- |
| **Qualification level** | **2013 Survey disabled** | **2013 Census disabled** |
| **Number** | **Percent** | **Number** | **Percent** |
| No qualification  | 253,000 | 33% | 156,000 | 36% |
| School qualification | 228,000 | 30% | 129,000 | 30% |
| Post-school qualification | 184,000 | 24% | 100,000 | 23% |
| Bachelor degree or higher | 94,000 | 12% | 50,000 | 11% |
| With highest qualification reported | 759,000 | 100% | 436,000 | 100% |

Source: Statistics New Zealand

Lower rates of labour forces participation and employment as well as higher proportions with low income and no qualification suggest that census disabled may be a more disadvantaged population on average than survey disabled.

## 4.3 Population overlap

Using the survey records it is possible to examine the overlap between census disabled and survey disabled populations. This can only be done for those survey records for which data could be matched from the census. This group represents usual residents who were in New Zealand and in a private dwelling on census night and for whom census disability status is known.

**Table 8 Disabled and non-disabled people with Census and Survey status known – counts**

|  |  |  |  |
| --- | --- | --- | --- |
|   | Census disabled | Census not disabled | Total |
| Survey disabled | 429,000 | 554,000 | 983,000 |
| Survey not disabled | 169,000 | 3,137,000 | 3,306,000 |
| Total | 598,000 | 3,691,000 | 4,289,000 |

Source: Statistics New Zealand

**Table 9 Census status as percentage of Survey disabled**

|  |  |  |  |
| --- | --- | --- | --- |
|   | Census disabled | Census not disabled | Total |
| Survey disabled | 44% | 56% | 100% |

Source: Statistics New Zealand

Forty-four percent of people who were identified as disabled in the 2013 Survey had earlier also been identified as disabled in the 2013 Census. Fifty-six percent of people who were identified as disabled in the survey had been identified as ***not*** disabled in the census.

**Table 10 Survey status as percentage of Census disabled**

|  |  |  |  |
| --- | --- | --- | --- |
|   | Survey disabled | Survey not disabled | Total |
| Census disabled | 72% | 28% | 100% |

Source: Statistics New Zealand

Seventy-two percent of people who were identified as disabled in the census went on to be identified as disabled in survey while 28% went on be de identified as ***not*** disabled in the survey

These numbers show that the size of the two populations is not the only consideration. The overlap group, those who were identified as being disabled in both the census and the survey, made up an estimated 10% of all people for whom disability status is known in both collections.

This analysis provides an example of the effects decisions on threshold criteria can have on disability data collections.

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# Appendix 1

## Screening questions in the 2013 NZ Disability Survey

Response options:

|  |  |
| --- | --- |
| Type A | Type B |
| * easily
* with difficulty
* not at all
* don’t know
* refused
 | * Yes
* No
* don’t know
* refused
 |

|  | **Screening Questions for Adults (15 years and over)** | **Impairment type** | **Response option**  |
| --- | --- | --- | --- |
| 1 | Can the selected adult hear what is said in a conversation with one other person? | Hearing | Type A |
| 2 | Not counting noisy places such as a café, can the selected adult hear what is said in a group conversation with three other people? | Hearing | Type A |
| 3 | Because of a long-term condition or health problem does the selected adult have any difficulty speaking and being understood? If other people have difficulty understanding the person, select 'yes' | Speaking | Type B |
| 4 | Can the selected adult see ordinary newspaper print (using their glasses or contact lenses if they wear them)? | Seeing | Type A |
| 5 | Can the selected adult clearly see the face of someone across a room, that is, from four metres away (using their glasses or contact lenses if they wear them)? | Seeing | Type A |
| 6 | Can the selected adult walk the distance around a rugby field, without resting, that is about 350 metres? If they can walk 350 metres easily using a walking stick or some other aid, select 'easily' | Mobility | Type A |
| 7 | Can the selected adult walk up and down a flight of stairs, that is, about 12 steps? | Mobility | Type A |
| 8 | Can the selected adult carry something as heavy as a 5 kilogram bag of potatoes, while walking for 10 metres. That is about the length of three cars parked alongside the footpath? | Mobility | Type A |
| 9 | Can the selected adult move from one room to another? If they can move from room to room easily in a wheelchair or using some other aid, select 'easily' | Mobility | Type A |
| 10 | Can the selected adult stand for 20 minutes? If they can stand easily using crutches or another aid, select 'easily' | Mobility | Type A |
| 11 | Can the selected adult bend down and pick something up off the floor? | Mobility | Type A |
| 12 | Can the selected adult get in and out of bed by themselves? | Mobility | Type A |
| 13 | Can the selected adult reach in any direction, for example above their head? | Agility | Type A |
| 14 | Can the selected adult dress and undress themselves? | Agility | Type A |
| 15 | Can the selected adult cut their own fingernails or toenails? If they have difficulty ONLY because nails are very tough, select 'easily'. If they can cut their fingernails but cannot reach their toenails, select 'easily'. | Agility | Type A |
| 16 | Can the selected adult use their fingers to grasp or handle things like scissors or pliers? | Agility | Type A |
| 17 | Can the selected adult cut their own food, for example meat or fruit? | Agility | Type A |
| 18 | Does the selected adult have a long-term condition that makes it hard in general for them to learn? This question is about the capacity to learn new things. If they have difficulty ONLY because of physical barriers or physical limitations, select 'no' | Learning | Type B |
| 19 | Does the selected adult have a long-term condition or health problem that causes them on-going difficulty with their ability to remember? Excluding occasional memory lapses. | Memory | Type B |
| 20 | Does the selected adult need support or help from other people or organisations because of an intellectual disability? If they get support from an individual, or an organisation/group such as IHC or People First, select 'yes'. | Intellectual | Type B |
| 21 | Did the selected adult go to a special school or receive special education because of an intellectual disability? | Intellectual | Type B |
| 22 | Does a long-term emotional, psychological, or psychiatric condition cause the selected adult difficulty with everyday activities that people their age can usually do? Common conditions include depression, anxiety, or bipolar disorder. | Psychiatric/psychological | Type B |
| 23 | Does a long-term emotional, psychological, or psychiatric condition cause the selected adult difficulty communicating, mixing with others, or socialising? | Psychiatric/psychological | Type B |

|  | **Screening Questions for Children (under 15 years)** | **Impairment type**  | **Response** **option**  |
| --- | --- | --- | --- |
| 1 | Can the selected child hear? | Hearing | Type A |
| 2 | Because of a long-term condition or health problem, does the selected child have any difficulty speaking and being understood? | Speaking | Type A |
| 3 | Can the selected child see (with glasses if wears them)? | Seeing | Type A |
| 4 | Can the selected child stand? (If they can stand easily with braces or crutches then select 'easily'). | Mobility | Type A |
| 5 | Compared with other children their age, can the selected child bend down? | Mobility | Type A |
| 6 | Can the selected child move from one room to another at home? | Mobility | Type A |
| 7 | Compared with other children their age, can the selected child walk on a flat footpath? | Mobility | Type A |
| 8 | Can the selected child use their hands to grasp an object such as a spoon or a crayon/pencil? | Agility | Type A |
| 9 | The selected child has difficulty taking off their T-shirt. Is that because they have difficulty raising their arms? | Agility | Type A |
| 10 | Does a condition or health problem make it difficult for the selected child in general to learn? | Learning | Type B |
| 11 | Does the selected child have a recognised intellectual disability? | Intellectual | Type B |
| 12 | Most children have occasional emotional, nervous or behavioural problems. Does the selected child have any of these problems long-term that limits the type or amount of activity that they can do? | Psychiatric/psychological | Type B |
| 13 | Does a long-term psychological or mental health condition make it difficult for the selected child to do everyday activities? | Psychiatric/psychological | Type B |
| 14 | Has the selected child been diagnosed with a disorder or impairment that significantly delays their development? | Developmental delay | Type B |

# Appendix 2

## Disability questions in the 2013 Census



# Appendix 3

## Washington Group Short Set

The next questions ask about difficulties you may have doing certain activities because of a HEALTH PROBLEM.

1. Do you have difficulty seeing, even if wearing glasses?
2. Do you have difficulty hearing, even if using a hearing aid?
3. Do you have difficulty walking or climbing steps?
4. Do you have difficulty remembering or concentrating?
5. Do you have difficulty (with self-care such as) washing all over or dressing?
6. Using your usual (customary) language, do you have difficulty communicating, for example understanding or being understood?

The response options for each question are:

* No – no difficulty
* Yes – some difficulty
* Yes – a lot of difficulty
* Cannot do at all
1. Adults are 15 years or over [↑](#footnote-ref-1)
2. A group home is a community or independent-living household. Group home of less than five occupants were included in the 2013 Household Disability Survey. [↑](#footnote-ref-2)
3. Further information and outputs from the NZDS can be found at: <http://www.stats.govt.nz/browse_for_stats/health/disabilities.aspx> [↑](#footnote-ref-3)
4. See Definitions section of the 2013 Disability Survey Information Release at: <http://www.stats.govt.nz/browse_for_stats/health/disabilities/DisabilitySurvey_HOTP2013/Definitions.aspx> [↑](#footnote-ref-4)
5. Screening questions are used to determine the disability status of survey participants. [↑](#footnote-ref-5)
6. Prioritised ethnic group attributes one ethnic group to each person regardless of how many they identify with. Priority order is: Māori, Pacific, Asian, European, other [↑](#footnote-ref-6)
7. A sample frame is a list of potential survey participants [↑](#footnote-ref-7)
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32. For comparing demographic characteristics of census disabled and survey disabled populations the same populations as for the prevalence rates are used. [↑](#footnote-ref-32)