Severe Housing Deprivation: The problem and its measurement

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Abstract

This paper presents a new methodology for measuring severe housing deprivation (also known as homelessness). The methodology encompasses a conceptual definition, a classification, and an operational definition. We applied it to census data and administrative data from emergency housing providers to produce statistics on the size and characteristics of the 2001 and 2006 severely housing deprived populations.

The size of the severely housing deprived population in 2006 was 34,000 people, which is close to 1 in 120 New Zealanders. Between 2001 and 2006, the prevalence increased by 9 percent. Severely housing deprived people were predominantly children and young adults, ethnic minorities, and part of sole-parent families or not accompanied by family. Most were living as guests with friends or family in severely crowded dwellings, and almost half of all severely housing deprived adults were working, studying, or both. An estimated 12,900–21,100 dwellings would be required to house the 2006 severely housing deprived population.

These are the first national severe housing deprivation statistics for New Zealand. The findings are consistent with the broader picture of poverty, but they shed new light on an extremely disadvantaged population that is usually statistically invisible. Many people in this population do not appear in poverty, unemployment, or living standards statistics because they do not live in permanent private dwellings. Many are not on social housing waiting lists. This research has important implications for policy, official data collections, and future research.

Keywords
Severe housing deprivation, homelessness, definition, classification, methodology, prevalence, count, unmet housing need, New Zealand

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Last, but certainly not least, we thank all the people on the front line in emergency accommodation services, who took time away from their usual work to provide data about the people they assist. We hope this research will contribute to more effective policy, so that New Zealanders can realistically expect, and easily access, the quality, secure, affordable housing they deserve.

Statistics New Zealand security statement

This research was approved by the Government Statistician as an Official Statistics Research Project, including analysis of New Zealand census data in Statistics NZ’s Data Lab (according to Statistics NZ’s microdata access protocols). Access to the census data used in this study was provided by Statistics NZ under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. All content presented in this paper and subsequent publications are the work of the authors, not Statistics NZ.

Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>CNOS</td>
<td>Canadian National Occupancy Standard</td>
</tr>
<tr>
<td>ETHOS</td>
<td>European Typology of Homelessness and Housing Exclusion</td>
</tr>
<tr>
<td>FEANTSA</td>
<td>European Federation of National Organisations working with the Homeless</td>
</tr>
<tr>
<td>HNZC</td>
<td>Housing New Zealand Corporation</td>
</tr>
<tr>
<td>JEAF</td>
<td>Jensen Equivalised Annual Family (income)</td>
</tr>
<tr>
<td>JEAH</td>
<td>Jensen Equivalised Annual Household (income)</td>
</tr>
<tr>
<td>JEAP</td>
<td>Jensen Equivalised Annual Personal (income)</td>
</tr>
<tr>
<td>LAMAH</td>
<td>Lack of access to minimally adequate housing</td>
</tr>
<tr>
<td>MELAA</td>
<td>Middle Eastern, Latin American, and African (ethnic group)</td>
</tr>
<tr>
<td>MSD</td>
<td>Ministry of Social Development</td>
</tr>
<tr>
<td>NZDep</td>
<td>New Zealand Deprivation Index</td>
</tr>
<tr>
<td>TA</td>
<td>Territorial authority</td>
</tr>
<tr>
<td>UNCESCR</td>
<td>United Nations Committee of Economic, Social, and Cultural Rights</td>
</tr>
<tr>
<td>UNECE/EUROSTAT</td>
<td>United Nations Economic Commission for Europe / Statistical Office of the European Communities</td>
</tr>
</tbody>
</table>
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Executive summary

What is severe housing deprivation?

Severe housing deprivation refers to people living in severely inadequate housing due to a lack of access to minimally adequate housing (LAMAH). This means not being able to access a dwelling to rent, let alone buy. Minimally adequate housing is that which provides the basics in at least two of the core dimensions of housing adequacy – habitability, privacy and control, and security of tenure.

Severe housing deprivation is a new term that replaces ‘homelessness’. Homelessness is defined in various ways – some of which are similar to the definition of severe housing deprivation proposed in this paper. However, the word ‘homeless’ is burdened by stereotype. The image of a homeless person as someone sleeping on the street is entrenched, evocative, and not reflective of the vast majority of people experiencing serious housing need.

Statistics NZ published a definition and classification of homelessness in 2009, called the New Zealand Definition of Homelessness. This present study reviews this definition, and develops a new approach that overcomes its conceptual shortfalls.

How was severe housing deprivation measured?

We developed a new methodology for measuring severe housing deprivation. We analysed 2001 and 2006 Census data, as well as client data from emergency accommodation providers. We identified people living in severely inadequate housing, and then applied two proxies to identify people living in such housing due to a LAMAH. These proxies were: having no other address; and having a low income. For people living in permanent private dwellings, we also used severe crowding as a proxy for LAMAH.

There is no international standard for measuring severe housing deprivation or homelessness. Measures vary considerably across the world, and most have conceptual flaws. Severe housing deprivation statistics cannot be compared internationally at this stage.

How many people are severely housing deprived?

In 2006, 34,000 people were severely housing deprived (close to 1 in 120 New Zealanders). The prevalence of severe housing deprivation increased by 9 percent between 2001 and 2006. An estimated 12,900–21,100 dwellings would be required to house the 2006 severely housing deprived population.

Who are severely housing deprived people?

In both 2001 and 2006, severely housing deprived people were predominantly children and young adults, ethnic minorities, and part of sole-parent families or not accompanied by family.

Severe housing deprivation is associated with being a new migrant to New Zealand, particularly from the Pacific or North Asia, high residential mobility, being unemployed, being out of the labour force, having an unskilled job, and having a low level of education. Of all
severely housing deprived adults, 49 percent were working, studying, or both – but did not have enough resources to obtain a minimally adequate home for themselves or their family.

**What types of housing are severely housing deprived people living in?**

In 2006, 65 percent of severely housing deprived people (~22,000) were sharing with others, usually extended family, in severely crowded permanent private dwellings; 18 percent (~6,300) were living in commercial accommodation (such as boarding houses or camping grounds) or marae; 15 percent (~5,000) were living on the street or in improvised or mobile dwellings. Only 2 percent (~700) were living in emergency accommodation (such as night shelters or women’s refuges).

**Where are severely housing deprived people?**

Most severely housing deprived people were in main urban centres (75 percent). The majority were in the upper North Island, with 44 percent in Auckland. The prevalence of severe housing deprivation was relatively consistent across rural and urban areas.

**Conclusions**

The scale of severe housing deprivation in New Zealand in 2006 indicates that provision of affordable and social housing must be a top government priority. This figure is highly likely to have increased since 2006, due to the Global Financial Crisis and low domestic growth rates, worsening housing affordability, and the Canterbury earthquakes.

The characteristics of the severely housing deprived population are consistent with other evidence on income poverty and deprivation in New Zealand. This supports the validity of the methodology proposed in this paper.

The size and characteristics of the severely housing deprived population should continue to be monitored using the methodology in this paper. The same definition and classification should be used by agencies that serve severely housing deprived people. These include social and community housing providers (including Housing New Zealand Corporation), emergency housing providers, Ministry of Social Development, Work and Income New Zealand, and community social services.

Amendments to the census and other data collections are recommended to improve measurement of severe housing deprivation. This includes supporting emergency accommodation providers to collect and report client data.

More research is required to further understand the causes and consequences of severe housing deprivation, and to identify the most effective interventions.
1 Introduction

Severe housing deprivation refers to people living in severely inadequate housing due to a lack of access to minimally adequate housing (LAMAH). This means not being able to access a dwelling to rent, let alone buy. Some authors refer to this state as ‘homelessness’. However, there are many different definitions of homelessness, and no international agreement. The word ‘homeless’ is also burdened by stereotype – the image of a homeless person as someone sleeping on the street is entrenched, evocative, and not reflective of the vast majority of people experiencing serious housing need. For these reasons, we use the term ‘severe housing deprivation’, except when discussing texts that use the word homelessness.

Homelessness was conceptually defined and classified by Statistics NZ, Housing New Zealand Corporation (HNZC), and the Ministry of Social Development (MSD) in the New Zealand Definition of Homelessness (Statistics NZ, 2009a). These agencies noted that homelessness statistics are needed so that “government and community groups can make well-informed decisions...facilitate assessment of options for intervention, including identifying the demographics of those most in need, and the level of response required” (Statistics NZ, 2009a, p4). The Review of Housing Statistics (Statistics NZ, 2009b) identified information about homelessness as “the most pressing need” (p29) in the area of housing suitability.

Severe housing deprivation is related to a number of other housing issues recently highlighted as major problems in New Zealand. These include housing shortages and unaffordability (New Zealand Productivity Commission, 2012), household crowding (Baker et al, 2012; Baker et al, 2013; Statistics NZ, 2012b), poor housing quality (Children’s Commissioner’s Expert Advisory Group on Solutions to Child Poverty, 2012), and the devastating Canterbury earthquakes that began in 2010 and left thousands without access to adequate housing (Ministry of Business, Innovation and Employment, 2013).

The aims of this project were to review the concept of homelessness published in the New Zealand Definition of Homelessness, develop a revised conceptual definition and classification of homelessness if necessary, and apply these to produce valid severe housing deprivation statistics for New Zealand. In addressing these aims, we developed a new analytical method, and identified ways to improve information on severe housing deprivation.

The paper has four sections:

- We briefly analyse the New Zealand Definition of Homelessness, and develop a new conceptual definition and classification of severe housing deprivation.
- We present the method used to produce severe housing deprivation statistics.
- We present findings on the size and characteristics of the severely housing deprived population.
- We discuss the findings, and draw conclusions for policy, research, and data collection.

A more detailed account of this research will soon be available in a doctoral thesis (Amore, in preparation).
2 A conceptual definition and classification of severe housing deprivation

2.1 Introduction

There is no international standard for measuring severe housing deprivation. Operational definitions vary across the world, and most are not conceptually grounded. The few conceptual definitions and classifications of homelessness that do exist have major weaknesses. Definitions of homelessness tend to reflect flawed logic and are often poorly justified (Amore, in preparation). Classifications of homelessness tend to fail at least one of the standard requirements of statistical classifications (Amore, in preparation)\(^1\). In this context, it was important to ensure that we used a robust definition and classification to derive New Zealand severe housing deprivation statistics.

The New Zealand Definition of Homelessness (Statistics NZ, 2009a) made an important contribution to advancing discussion about homelessness in New Zealand, but its theoretical foundation is unclear. The definition sets out four categories of homelessness, but fails to explain exactly what these categories have in common – that is, what defines the situations as homelessness:

Homelessness is defined as living situations where people with no other options to acquire safe and secure housing: are without shelter, in temporary accommodation, sharing accommodation with a household or living in uninhabitable housing (Statistics NZ, 2009a, p6).

The New Zealand Definition of Homelessness was “adapted from the European typology of homelessness and housing exclusion (ETHOS)” (Statistics NZ, 2009a, p4). It frames homelessness as existing as “the intersection” (p4) of deprivation in three housing domains – physical, legal, and social. According to the New Zealand Definition of Homelessness, a homeless person is someone living in housing that is deficient in two or more of the three domains, and has “no other options to acquire safe and secure housing” (p6).

However, the classification of homelessness presented in the New Zealand Definition of Homelessness does not seem to reflect the concept it is ostensibly based on. For example, the authors describe the ‘uninhabitable housing’ category of homelessness as situations where people “do not have habitable housing in the physical domain” (Statistics NZ, 2009a, p6). This housing is deficient in one domain. According to the ‘intersection’ concept described above, people only qualify as homeless if they are living in housing that is deficient in two or more domains.

Given the apparent weakness of the New Zealand Definition of Homelessness, it was necessary to develop a more robust concept, which we present in this chapter.

\(^1\) International definitions of homelessness are not detailed in this paper, but are critically reviewed in Amore (in preparation).
2.2 Conceptual definition

In the literature, there is a high degree of consensus that homelessness (severe housing deprivation) refers to people living in severely inadequate housing due to a LAMAH (though the language used to express this concept varies). This concept is made up of two criteria:

1. A person is living in severely inadequate housing (that is, housing below a minimum adequacy standard) due to
2. A lack of access to housing that meets the minimum adequacy standard (rather than living in such circumstances as a matter of choice).

The first criterion includes two factors on which there is also a high level of agreement. Firstly, a minimum adequacy standard for housing indicates that severe housing deprivation can and should be objectively defined. This is reflected in contemporary homelessness literature, in policy, and in common usage. Secondly, the idea that homelessness refers to severely inadequate living conditions is a common thread in the literature, and is consistent with public expectations. For example, people living in housing that lacks efficient heating are generally not thought of as homeless. Homelessness relates to living conditions that are grossly inadequate – it does not encompass housing that has just any kind of inadequacy. Less-severe manifestations of housing deprivation, such as living in cold, damp, or unaffordable housing, are very important. This research, though, is focused solely on severe housing deprivation.

In the following sections, the two criteria are discussed in more detail.

Criterion one: Living in severely inadequate housing

Defining severely inadequate housing involves developing a minimum adequacy standard for housing. In turn, this involves identifying which dimensions of housing are core expectations, and setting a threshold for how many of these should be lacking for housing to qualify as severely inadequate.

We identified three core dimensions of adequate housing: habitability (structural features), privacy and control, and security of tenure. We identified these by examining homelessness and human rights literature, material deprivation indicators, a globally applicable housing classification (United Nations, 2008), as well as New Zealand statistical standards, legislation, and research. These three dimensions are similar, but not identical, to those identified as the core dimensions of ‘home’ in the European ETHOS (Edgar, 2009) and Australian Bureau of Statistics (2012b) definitions of homelessness. However, these two approaches did not justify why these dimensions should be selected over others (such as affordability). In addition, neither of these approaches defined the dimensions to a level of detail that would facilitate consistent application across datasets and across nations.

There are many factors that contribute to housing adequacy (and inadequacy). The most authoritative concept of adequate housing is the United Nations Committee of Economic, Social, and Cultural Rights’ (UNCESCR) General Comment No. 4 on the Right to Adequate Housing (1991), which lists seven factors as central to housing adequacy in all contexts: legal security of tenure; availability of services, materials, facilities, and infrastructure; affordability; habitability; accessibility; location; and cultural adequacy. We considered these factors in relation to two living situations: living rough (on the street); and living in a night shelter. People living in these situations are generally understood to be homeless or severely housing deprived. Severe deprivation relates to a lack of access to basic needs, so
the dimensions in which these housing types are deficient must be the basic housing adequacy requirements.

Both these types of housing are generally affordable (free or low-cost), well located (often inner-city), and physically accessible (especially living rough). However, it would be meaningless to frame these housing types as adequate, because they fail to meet more basic adequacy requirements. People living rough lack the structural aspects of housing that make it habitable in the most basic sense – a structure that encloses them and has basic amenities. People living rough or living in night shelters have limited, if any, security of tenure, and also lack privacy and control compared with people living in conventional dwellings. These three dimensions – habitability (structural features), privacy and control, and security of tenure – are core dimensions of housing adequacy. Other dimensions of housing, such as affordability, are secondary. They are only meaningful if applied to housing that satisfies core adequacy requirements.

We propose criteria for each of these three dimensions in table 1. This is the basic set of conditions that housing must satisfy to be regarded as minimally adequate. These criteria should be internationally applicable because they are grounded in human rights principles. In societies where minimum expectations of housing are higher, extra criteria may be added within the dimensions, but none of the criteria listed in table 1 should be taken away. The definition of habitability, for example, depends on the environment. In an extremely cold environment, insulation may be vital for a dwelling to be considered habitable; in a warm environment, it is unlikely to be. However, in both environments, enclosure and basic amenities are necessary if housing is to provide a basic level of privacy and dignity. Local housing practices will also determine how each criterion is interpreted: an adequate toilet in Uganda, for example, will probably look different to an adequate toilet in Japan.

In keeping with the understanding that homelessness is severe housing deprivation, we contend that living situations below the minimum adequacy standard are those that are lacking in multiple core dimensions – that is, two or more of the three dimensions. Figure 1 illustrates how we identified the severely housing deprived population, conceptually. Severe housing deprivation exists in the intersections of the habitability (structural features), privacy and control, and security of tenure dimensions.

**Criterion two: Lack of access to minimally adequate housing**

All concepts of deprivation and poverty include the notion of a lack of access (or enforced lack). In other words, having no choice but to live in a situation that lacks necessities (Mack & Lansley, 1985). Most definitions of homelessness include a lack of access criterion, though it is not always explicitly stated. In the New Zealand Definition of Homelessness, the lack of access criterion is referred to as “no other options to acquire safe and secure housing” (Statistics NZ, 2009a, p6). In the Australian Bureau of Statistics’ Statistical Definition of Homelessness, it is called “[h]aving [no] access to accommodation alternatives” (2012b, p7).

People living in severely inadequate housing are not necessarily severely housing deprived. People may choose to live, for short or long periods of time, in housing that deviates from societal norms, but the fact that they have the capacity to choose such housing over more adequate options means they should not be considered deprived. For example, a person who chooses to live in a tent because they are travelling around New Zealand is living in severely inadequate housing, but they are not severely housing deprived. However, if a person is living in a tent because they cannot access any conventional housing, such as a private or social rental, they are severely housing deprived.
Table 1 The three core dimensions of housing adequacy, broken down into the basic criteria for each dimension

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Basic requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitation (structural features)</td>
<td>1 Enclosure &amp; 2 Basic amenities &amp; 3 The dwelling is managed by the resident/s on a day-to-day basis (not by an external party) – ie it is a private dwelling; and 4 The person is a permanent resident (ie not staying in the dwelling on a temporary basis).</td>
</tr>
<tr>
<td>Privacy and control</td>
<td>1 The dwelling is enclosed (as per habitability criterion 1); and 2 The dwelling has all basic amenities (as per habitability criterion 2); and 3 The dwelling is managed by the resident/s on a day-to-day basis (not by an external party) – ie it is a private dwelling; and 4 The person is a permanent resident (ie not staying in the dwelling on a temporary basis).</td>
</tr>
<tr>
<td>Security of tenure</td>
<td>Legal termination of tenancy rights are equal to the minimum provided to people living in private housing (in New Zealand, a periodic tenancy).</td>
</tr>
</tbody>
</table>

Figure 1 Conceptual model of severe housing deprivation

Note: This figure relates the three core dimensions of housing adequacy only. People may be deprived in other dimensions of housing adequacy, such as affordability.

Data source: Adapted from Edgar (2009, p16)
2.3 Classification

Once a population has been defined, it can be classified into subgroups. A classification is the meaningful and systematic organisation of a population into subgroups according to a selected characteristic(s). Statistical classifications should be demonstrably systematic and exhaustive, and be made up of well-described, mutually exclusive categories (Hoffmann & Chamie, 1999). Classifications of homelessness typically divide the population by housing type. The classification of severe housing deprivation proposed here follows this approach.

We developed a classification of severe housing deprivation by systematically applying the definition described in section 2.2 to arguably the most comprehensive classification of housing available – that published in the most recent United Nations’ Principles and Recommendations for Population and Housing Censuses (2008). This yielded the classification shown in table 2. Table 3 shows how each category qualifies as severely inadequate housing. Full explanation of this process will be published in Amore (in preparation).

As tables 2 and 3 show, severe housing deprivation covers a range of living situations, representing varying types and depths of deprivation. We identified living situations as severely inadequate on theoretical grounds, but individual experiences of deprivation will vary within the classification and within categories. The concept of severe housing deprivation does not cover all types of housing deprivation, and there will be many people outside this classification who are experiencing serious housing-related hardship.

It is also important to note that the classification is not intended as a scale of deprivation. People living without accommodation due to a LAMAH (category 1 in table 2) are theoretically the most severely deprived, because their housing is lacking in all three core dimensions of housing adequacy. However, the order in which the other living situations are listed should not be interpreted as an order of deprivation severity.
Table 2 Classification of severe housing deprivation by broad and specific living situation

<table>
<thead>
<tr>
<th>Broad living situation</th>
<th>Specific living situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Living without accommodation due to a LAMAH(^{(1)})</td>
<td>a. Living rough (not in an enclosed structure)</td>
</tr>
<tr>
<td></td>
<td>b. Living in housing that is enclosed but lacks one or more basic amenities (in which residents lack minimally adequate security of tenure)(^{(2)})</td>
</tr>
<tr>
<td>2 Living in a non-private dwelling due to a LAMAH</td>
<td>c. Living in a night shelter</td>
</tr>
<tr>
<td></td>
<td>d. Living in a women’s refuge</td>
</tr>
<tr>
<td></td>
<td>e. Living in other accommodation targeted at people who LAMAH</td>
</tr>
<tr>
<td></td>
<td>f. Living in an institution that is not targeted at people who LAMAH</td>
</tr>
<tr>
<td></td>
<td>g. Living in a camping ground or motor camp</td>
</tr>
<tr>
<td></td>
<td>h. Living in other commercial accommodation</td>
</tr>
<tr>
<td></td>
<td>i. Living in other non-private accommodation</td>
</tr>
<tr>
<td>3 Living as a temporary resident(^{(3)}) in a private dwelling due to a LAMAH</td>
<td>j. Living as a temporary resident in a private dwelling that has all basic amenities</td>
</tr>
<tr>
<td>4 Living in housing that lacks one or more basic amenities (with minimally adequate security of tenure) due to a LAMAH</td>
<td>k. Living in housing that lacks one or more basic amenities (with minimally adequate security of tenure)</td>
</tr>
</tbody>
</table>

1. People in categories 1, 2, and 3 lack minimally adequate security of tenure. As per table 1, the minimum adequacy standard is legal termination of tenancy rights equal to a periodic tenancy in private housing.
2. This classification includes residents of any dwelling that lacks one or more basic amenities – under two categories: Category b (if they lack minimally adequate security of tenure); and Category k (if they have minimally adequate security of tenure).
3. At the conceptual level, a certain length of stay does not define being a temporary resident. Rather, temporary residency is based on expectations that the living situation will not be long term, and that the length of stay is ultimately controlled by those who live in the dwelling permanently.
Table 3 How each housing type qualifies as severely inadequate housing

<table>
<thead>
<tr>
<th>Specific living situation(1)</th>
<th>Habitability (structural features)</th>
<th>Privacy and control</th>
<th>Security of tenure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enclosure</td>
<td>Basic amenities</td>
<td>Enclosure</td>
</tr>
<tr>
<td>a. Living rough (not in an enclosed structure)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>b. Living in housing that is enclosed but lacks one or more basic amenities (in which residents lack minimally adequate security of tenure)</td>
<td>✓</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>c. Living in a night shelter</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>d. Living in a women’s refuge</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>e. Living in other accommodation targeted at people who LAMAH</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>f. Living in an institution that is not targeted at people who LAMAH</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>g. Living in a camping ground or motor camp</td>
<td>✓</td>
<td>✓/x</td>
<td>✓</td>
</tr>
<tr>
<td>h. Living in other commercial accommodation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>i. Living in other non-private accommodation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>j. Living as a temporary resident in a private dwelling that has all basic amenities</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>k. Living in housing that lacks one or more basic amenities (with minimally adequate security of tenure)</td>
<td>✓</td>
<td>x</td>
<td>✓</td>
</tr>
</tbody>
</table>

1. This table describes how we identified the housing types that are included in the severe housing deprivation classification. It is important to note that not everyone living in these housing types qualifies as severely housing deprived – only those who are doing so due to a LAMAH.

Key: ✓ Satisfies criterion  
     x Fails criterion  
     - Criterion not applicable because the housing type has already failed a criterion in the same dimension
2.4 Summary

In this chapter, we presented a conceptual definition and classification of severe housing deprivation that rests on six main arguments:

1. Severe housing deprivation means living in severely inadequate housing due to a lack of access to minimally adequate housing (LAMAH).
2. There are three core dimensions of adequate housing – habitability (structural features), privacy and control, and security of tenure.
3. Housing that lacks basic features in two or more of these core dimensions is severely inadequate.
4. Not everyone living in severely inadequate housing is severely housing deprived – only those living in such housing due to a LAMAH.
5. A classification of severe housing deprivation (or any phenomenon) should reflect systematic, exhaustive application of the defining criteria, and be made up of well-described, mutually exclusive categories. The classification in this chapter seeks to satisfy these requirements.

The next chapter describes how we translated the concept of severe housing deprivation into a method for identifying severely housing deprived people in routinely collected data.
3 Method for measuring severe housing deprivation in New Zealand

3.1 Introduction

Building on the conceptual definition and classification developed in the previous chapter, this chapter explains the method we developed to measure severe housing deprivation in New Zealand in 2001 and 2006. We analysed census\(^2\) data, as well as administrative data from providers of accommodation targeted at people who lack access to minimally adequate housing (LAMAH), (hereafter referred to as ‘emergency accommodation’ for brevity, acknowledging that this is a less-accurate term). The first part of this chapter explains why we used these data sources. The remainder of the chapter explains the analysis: first, the analysis of census data; and second, the methods used to collect and analyse client data from emergency accommodation providers.

3.2 Data sources for measuring severe housing deprivation

In New Zealand, as in many countries, the national census is the only source of data on all people\(^3\) living in all types of housing. This includes people living in non-private dwellings and those living without accommodation.\(^4\) As such, the census is the key dataset for measuring severe housing deprivation.

It was possible to identify most severe housing deprivation categories (table 2) in the Statistical Standard for Occupied Dwelling Type (Statistics NZ, 2009c). The census classifies the housing that people are living in on census night according to this statistical standard, so it was possible to measure most categories of severe housing deprivation using census data. However, we could not identify five categories:

1. People living in night shelters.
2. People living in women’s refuges.
3. People living in other accommodation targeted at people who LAMAH.
4. People living in an institution that is not targeted at people who LAMAH.
5. People living in housing that lacks one or more basic amenities (with minimally adequate security of tenure).

We measured the first three using administrative data, but could not measure the final two. The reasons we could not identify these categories in census data are explained below.

Night shelters

Night shelters are emergency accommodation targeted at people who LAMAH, where the residents do not have 24-hour access to the accommodation. In other words, residents cannot access the accommodation during the day (see appendix 1 for full definition). The Statistical Standard for Occupied Dwelling Type has a category for night shelters, defining them as:

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\(^2\) Throughout this report, the ‘New Zealand Census of Population and Dwellings’ is abbreviated to ‘census’.

\(^3\) Approximately 98 percent of New Zealanders (Statistics NZ, 2007a).

\(^4\) Traditional censuses tend to be better for reaching people living without accommodation, compared with register-based censuses. This is an important consideration for measuring severe housing deprivation, as register-based censuses are likely to become more widespread (Baptista, et al, 2012).
Establishments that provide low-cost or free emergency accommodation for people who do not have a usual residence. Accommodation is short term and on a night-by-night basis (Statistics NZ, 2009c).

This description does not specify the ‘no access during the day’ criterion that distinguishes night shelters from other kinds of emergency accommodation. As such, the census night shelter category probably includes a broader range of dwellings. This is supported by the finding that the census night shelter category includes a much greater number of dwellings than the number we identified in a comprehensive survey of night shelters (which is discussed later in the chapter). For 2006, the number of dwellings in the census night shelter category was twice the number we identified in the survey; for 2001, this ratio was 4.5:1.

The characteristics of many people in the census night shelter category also suggest that many of the dwellings in the category are probably not night shelters. Night shelters typically only accommodate adult men, but there are relatively high percentages of women and children in the census night shelter category, both in 2001 and 2006. These women and children are much more likely to be living in other types of emergency accommodation, not true night shelters. Through the survey discussed later in the chapter, we found that women and children are the target group for many emergency accommodation services.

To summarise, the populations in the census night shelter category seem to reflect a broader population than just those living in actual night shelters. We therefore measured the night shelter population using client data collected by night shelters.

Women’s refuges and other accommodation targeted at people who lack access to minimally adequate housing

In the *Statistical Standard for Occupied Dwelling Type*, there are no dwelling categories for women’s refuges or other accommodation targeted at people who LAMAH. The census treats women’s refuges as private dwellings for confidentiality reasons. Other accommodation targeted at people who LAMAH probably comes under a number of different dwelling types, such as night shelter and welfare institution. However, these categories also include other types of dwellings. We therefore measured the women’s refuge, and other accommodation targeted at people who LAMAH, populations using client data collected by these services.

Institutions not targeted at people who LAMAH

Many institutions qualify as severely inadequate housing because their residents have substandard privacy, control, and security of tenure, compared with people living in conventional housing. Accordingly, institutions are generally considered inappropriate for long-term housing, unless a person requires the service the institution provides.

However, identifying the severely housing deprived people in these institutions means specifically identifying the people living there due to a LAMAH. For example, a person in hospital for treatment is not severely housing deprived. A hospital may be severely inadequate housing, but the person is in hospital due to their need for treatment, not due to their LAMAH. However, if they stay if hospital after their treatment has finished because there is no minimally adequate housing to discharge them to, then they qualify as severely housing deprived. They are severely housing deprived at this stage because they are staying in the hospital due to a LAMAH.
In census data, it is possible to identify institutions not targeted at people who LAMAH (e.g., hospitals, nursing homes, prisons, and student accommodation), but it is not possible to identify people living in these institutions due to a LAMAH. For this reason, we removed residents of all institutions from the subject population for the census analysis (see section 3.3).

**Housing that lacks one or more basic amenities**

There are currently no nationally representative data on the quality of dwellings in New Zealand, including no information on basic amenities. As such, it was not possible to identify the population living in housing that lacks one or more basic amenities.

There are a number of reasons why housing quality data should be available. The presence or absence of basic amenities is ostensibly a criterion by which all New Zealand housing is classified in census data (Statistics NZ, 2009c), as recommended by the United Nations (2008). As such, basic amenities data should already be available for all housing. Housing quality is also tier 1 statistic, which means the housing quality statistics are considered “essential to critical decision-making” and “of high public interest” (Statistics NZ, 2013b, p1). Housing quality was identified as a key statistical development area in the *Review of Housing Statistics Report 2009* (Statistics NZ, 2009b), but little progress has been made toward improving housing quality information (Statistics NZ, 2011).
### Table 4: Classification of severe housing deprivation and the corresponding housing types in New Zealand for which data are available

<table>
<thead>
<tr>
<th>Broad living situation</th>
<th>Specific living situation</th>
<th>Corresponding housing types for which data are available</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Living without accommodation due to a LAMAH</td>
<td>a. Living rough (not in an enclosed structure)</td>
<td>a. Living rough (not in an enclosed structure)</td>
<td>Census</td>
</tr>
<tr>
<td></td>
<td>b. Living in housing that is enclosed but lacks one or more basic amenities (in which residents lack minimally adequate security of tenure)</td>
<td>b. Improvised and mobile housing (no data on amenities for mobile housing – assumed to be lacking one or more basic amenities)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Living in a night shelter</td>
<td>c. Night shelters</td>
<td>Emergency housing providers</td>
</tr>
<tr>
<td></td>
<td>d. Living in a women’s refuge</td>
<td>d. Women’s refuges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Living in other accommodation targeted at people who LAMAH</td>
<td>e. Other accommodation targeted at people who LAMAH</td>
<td></td>
</tr>
<tr>
<td>2 Living in a non-private dwelling due to a LAMAH</td>
<td>f. Living in an institution that is not targeted at people who LAMAH</td>
<td>No data available. These institutions can be identified but not the residents living in them due to a LAMAH.</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>g. Living in a camping ground or motor camp</td>
<td>g. Dwellings in camping grounds and motor camps</td>
<td>Census</td>
</tr>
<tr>
<td></td>
<td>h. Living in other commercial accommodation</td>
<td>h. Boarding houses, hotel, motel, guest accommodation, and commercial vessels</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. Living in other non-private accommodation</td>
<td>i. Marae</td>
<td></td>
</tr>
<tr>
<td>3 Living as a temporary resident in a private dwelling due to a LAMAH</td>
<td>j. Living as a temporary resident in a private dwelling that has all basic amenities</td>
<td>j. Permanent private dwellings (no data on amenities – assumed to have all basic amenities)</td>
<td></td>
</tr>
<tr>
<td>4 Living in housing that lacks one or more basic amenities (with minimally adequate security of tenure) due to a LAMAH</td>
<td>k. Living in housing that lacks one or more basic amenities (with minimally adequate security of tenure)</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
3.3 Applying the definition of severe housing deprivation to census data

Subject populations

The subject populations were the 2001 and 2006 Census night populations, excluding four groups: absentees⁵ (because including them would result in double counting); residents of night shelters (who were counted using administrative data); residents of other institutions, including camps (because people staying in institutions due to a LAMAH cannot be identified in census data); and residents of misclassified student accommodation (because student accommodation is a type of institution not targeted to people who LAMAH).

The usually resident population (people who live in New Zealand, excluding overseas visitors) is the typical subject population for research on the characteristics of New Zealanders. In this study, we used the census night population (all people in New Zealand on census night) instead, because one of the steps in the analysis is identifying misclassified student accommodation. Many residents of student accommodation report that their usual address is overseas, despite tertiary students being instructed to report the student accommodation as their usual address (Statistics NZ, 2006b). Many of these ‘overseas visitor’ residents also answer the study participation question. It was important that we did not exclude these residents when deciding whether a dwelling was student accommodation or not. In many cases, excluding them would have meant basing the assessment of the nature of the dwelling on the characteristics of only a small minority of its residents. At a later stage in the analysis, we identified people who usually live overseas as ‘not severely housing deprived’, thus they are not included in the severe housing deprivation statistics (see figure 3). In chapter 4, we compare the severely housing deprived population with the New Zealand usually resident population.

Identifying and excluding residents of misclassified student accommodation from the subject population

One of the housing types that corresponds to the ‘living in other commercial accommodation’ category of severe housing deprivation is ‘boarding house’ (table 4, category h). The Statistical Standard for Occupied Dwelling Type describes this category as: “Boarding houses, including establishments hosting foreign students” (Statistics NZ, 2009c, p5). This description signalled that some student accommodation (a type of institution) might have been classified as boarding houses (a type of non-institutional, non-private accommodation) in census data.

Institutions are non-private dwellings designed to house groups of people who are bound by “either a common public objective or a common personal interest” (United Nations, 2008, p196). Student accommodation is a type of institution because it is targeted at a particular group (students), with the intent of providing support (a public objective). The support services provided to residents of student accommodation are “over and above the services that a landlord must provide” (Residential Tenancies Amendment Act 2010, section 5B).

In student accommodation, only those living there due to a LAMAH qualify as severely housing deprived. However, in census data, it is not possible to distinguish these people from people living in student accommodation by choice. Thus, like other types of institutions

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⁵ An absentee is “a person who is identified on the census dwelling form as usually living in a particular dwelling but who did not complete a census individual form at that dwelling because they were elsewhere in New Zealand or overseas at the time of the census. A person listed as an absentee on a census dwelling form may complete a census individual form elsewhere in New Zealand” (Statistics NZ, 2006b, p2).
not targeted to people who LAMAH, we had to identify residents of student accommodation, and exclude them from the subject population.

We found that the 2001 and 2006 Census boarding house categories contain dwellings with high proportions of students – these seem likely to be student accommodation. We tested the other types of 'other commercial accommodation' (table 4, category h), and found that they too included dwellings with high proportions of students. Thus, we applied the method for identifying student accommodation consistently to all types of other commercial accommodation: boarding houses; hotel, motel, or guest accommodation; and commercial vessels. The rule we applied to identify student accommodation is: if at least 75 percent of the census night population in a dwelling classified as 'other commercial accommodation' were full-time students, the dwelling was student accommodation. We excluded residents of dwellings identified as student accommodation from the subject population (figure 2).

Figure 2 Identifying student accommodation misclassified as other commercial accommodation

![Diagram](image)

Study participation is the sole identifier of student accommodation in the rule. This has strong face validity – naturally, most residents of student accommodation should be students. We also tested various rules using typical student age ranges, but these posed too great a threat to specificity. Not all young people living in commercial accommodation are students. Thus, if we had used a young-age rule to identify student accommodation, we may have misclassified youth hostels as student accommodation, wrongfully excluding them from further analysis. We assumed that students living in student accommodation were likely to be full-time students, supported by the finding that in the 'educational institution' category, the vast majority of people who reported being students were full-time students (97 percent in 2006; 84 percent in 2001). We set the threshold for full-time students as a proportion of all census night residents in a dwelling at 75 percent to allow for managers (including residential assistants) and visitors.

6 This rule reclassified only a negligible number of commercial vessels as student accommodation, as expected. Student accommodation is, obviously, unlikely to be misclassified as a commercial vessel.
Identifying and excluding residents of student accommodation from the subject population is an important part of this analysis. Students tend to have low incomes, and we used low income as one of the filters to identify severely housing deprived people (see figure 3). If we had not identified and excluded student accommodation misclassified as boarding houses, it is likely that many students would have been wrongly classified as severely housing deprived. These dwellings can be large, sometimes with hundreds of residents, so these students could have falsely inflated the severely housing deprived population by a significant degree.

Admittedly, it is difficult to clearly distinguish institutional student accommodation (where supervision and personal development services are provided) from commercial accommodation that targets the student market. Thus, we may have wrongfully excluded some commercial accommodation from the subject population through this step. However, we judged the risk of falsely inflating the severely housing deprived population with students living in student accommodation to be greater than the risk of excluding severely housing deprived people living in non-private dwellings with high proportions of students.

**Identifying the severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined populations**

Figure 3 shows the algorithm for dividing the subject population into three categories: severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined. This algorithm translates the two conceptual criteria of severe housing deprivation – 1) Living in severely inadequate housing, due to 2) A lack of access to minimally adequate housing – into four operational criteria:

1. Living in severely inadequate housing
2a. Having no other place to live
2b. Having a low income
2c. Living in a severely crowded dwelling (applied only to temporary residents in conventional dwellings)

The algorithm also includes a step for proportionally allocating children living in non-private dwellings into each of the three categories. A more detailed version is included as appendix 2, and the algorithm is explained in the following sections.
Figure 3 Algorithm for dividing the subject population into severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined categories

1. The ‘living in severely inadequate housing?’ filter appears twice in the algorithm: at the beginning, to separate people not living in severely inadequate housing from everyone else; and at the end, to separate people who are living in severely inadequate housing from those whose housing deprivation status is unknown.

2. The ‘living in a severely crowded dwelling?’ filter applies only to temporary residents of permanent private dwellings. Temporary resident is operationally defined as a person who is neither an owner nor the reference person of a dwelling, nor are they in the nuclear family of an owner or the reference person (see figure 4 and discussion later in the chapter).

3. The ‘pro rata allocation of children’ filter only applies to children (people younger than 15 years) in non-private dwellings.
Severe housing deprivation: The problem and its measurement

Criterion one: Living in severely inadequate housing

We identified six categories of severely inadequate housing in census data. Table 5 shows the census dwelling types that correspond to each of these six categories.

Table 5 Housing types in which severely housing deprived people can be identified using census data, and the corresponding census dwelling types

<table>
<thead>
<tr>
<th>Housing type</th>
<th>Census dwelling type(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Living rough (not in an enclosed structure)</td>
<td>1314 Roofless or rough sleeper</td>
</tr>
<tr>
<td>&amp;</td>
<td>1313 Improvised dwelling or shelter</td>
</tr>
<tr>
<td>b. Housing that is enclosed but lacks one or more basic amenities (in which residents lack minimally adequate security of tenure)</td>
<td>1312 Mobile dwelling not in a motor camp</td>
</tr>
<tr>
<td>g. Camping ground or motor camp</td>
<td>1311 Dwelling in a motor camp</td>
</tr>
<tr>
<td></td>
<td>2213 Motor camp/camping ground</td>
</tr>
<tr>
<td>h. Other commercial accommodation</td>
<td>2211 Hotel, motel, or guest accommodation</td>
</tr>
<tr>
<td></td>
<td>2212 Boarding house</td>
</tr>
<tr>
<td></td>
<td>2217 Commercial vessel</td>
</tr>
<tr>
<td>i. Other non-private accommodation</td>
<td>2218 Marae complex</td>
</tr>
<tr>
<td>j. (Temporary resident in a) private dwelling that has all basic amenities</td>
<td>10 Occupied private dwelling, not further defined</td>
</tr>
<tr>
<td></td>
<td>11 Separate house</td>
</tr>
<tr>
<td></td>
<td>12 Two or more flats / units / townhouses / apartments / houses joined together</td>
</tr>
</tbody>
</table>


The census dwelling types do not perfectly match the categories of severe housing deprivation (table 2). In this section, we first outline the assumptions involved in analysing some of the dwelling types listed in table 5. Then, we discuss the extra filter applied to permanent private dwellings to restrict the population to people living in severely inadequate housing.

Assumptions

Housing types b and j (table 5) rely on information about basic amenities. Type b relates to housing that lacks one or more basic amenities, and type j to housing that has all basic amenities. Information on basic amenities is lacking in census data, so we assumed that dwellings classified as ‘improvised dwelling or shelter’ or ‘mobile dwelling not in a motor camp’ were lacking at least one basic amenity. Improvised dwellings are lacking at least one basic amenity by definition (Statistics NZ, 2009c), but the mobile dwelling category likely includes some dwellings that have all basic amenities.

It should also be noted that housing types a and b are combined into the same category in table 5. It was not possible to separately identify people living rough (type a) in 2006 Census data, because collectors were instructed to classify them as living in "makeshift accommodation" (type b) (Statistics NZ, 2006a). The very small number of people identified as living rough in 2001 Census data suggests a similar practice. We therefore analysed ‘roofless or rough sleeper’ and ‘improvised dwelling or shelter’ as a single category for both 2001 and 2006 Census data.
Severe housing deprivation: The problem and its measurement

Housing type j concerns permanent private dwellings, which are dwelling types 11 and 12 in census data. We assumed that the dwellings in type 10 (occupied private dwelling, not further defined) are also permanent private dwellings, based on the description of this category as: “includ[ing] vague responses (eg state house) that could not be classified as separate or joined dwellings, as well as dwellings joined to businesses or shops, and baches, cribs and other holiday homes” (Statistics NZ, nd-b).

Identifying temporary residents in permanent private dwellings

Housing type j (table 5) relates to temporary residents in permanent private dwellings. Unlike permanent residents, temporary residents do not have adequate privacy, control, or security of tenure, and therefore qualify as living in severely inadequate housing.

In census data, the best variables for distinguishing temporary residents (guests) from permanent residents (hosts) are those that relate to tenure status. In both 2001 and 2006, the census included a question asking adults if they own the dwelling they live in. We assumed that people who reported owning the dwelling they were living in were permanent residents. If the owner lived with their nuclear family (partner and/or children), we assumed they were permanent residents too.

There is no equivalent variable to identify tenure holders in rental dwellings, so we assumed that the reference person (the person who fills out the census dwelling form) was the tenure holder, and thus a permanent resident. If the reference person lived with their nuclear family, we assumed they were permanent residents too. These assumptions are based on the notion that a permanent resident (a person who rents or owns the dwelling) is more likely to fill out the census dwelling form than a guest. This is supported by the finding that in owner-occupied permanent private dwellings, the reference person was usually an owner or in an owner’s nuclear family (in 88 percent of cases in 2006, and 87 percent in 2001). The main limitation of this proxy is that many people can be tenure holders in rented dwellings (eg in flats), but only one can be the reference person. This means that we may have falsely identified many people as temporary residents. However, we excluded the residents of most flats from the potentially severely housing deprived population later in the algorithm at the severe crowding filter (most flats are not severely crowded).

To summarise, we identified temporary residents in permanent private dwellings as people who were:

- not an owner of the dwelling or in an owner’s nuclear family
- not the reference person or in the reference person’s nuclear family (figure 4).

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7 The following dwellings were excluded from the calculation: dwellings in which the residents were certain to be the owner or in owner’s nuclear family (one-person and one-family owner-occupied households); and dwellings in which the residents were certain to not be the owner or in the owner’s nuclear family (visitor-only dwellings). These dwellings were excluded to avoid overstating the relationship between the variables.
Criterion two: Lacking access to minimally adequate housing

Some data collections could include a direct question about why a person is living in severely inadequate housing. However, national censuses are very unlikely to contain such a question, so we had to apply proxies for ‘a LAMAH’. Even living without any dwelling at all or living without ready access to basic amenities (eg in a tent) does not in and of itself indicate severe housing deprivation. Assuming so would mean that we should have regarded anyone living in a tent at the time of enumeration as severely housing deprived, without any consideration of his or her circumstances.

Using census data, a LAMAH is best indicated by:

2a) Having no other place to live
2b) Having a low income

We also applied another indicator for people identified as temporary residents in permanent private dwellings:

2c) Living in a severely crowded dwelling.

The indicators are explained in the following sections.
2a) Having no other place to live

Once we had identified the population living in severely inadequate housing, we restricted this population to those with no other address – that is, they reported their usual address as ‘same as census night address’ or ‘no fixed abode’.

If a person living in severely inadequate housing reports that it is their usual residence, or that they have no fixed abode,\(^8\) it is reasonable to assume they have no other place to live except the severely inadequate housing. The corollary of this assumption is that if a person reports having a usual address elsewhere (whether in the same country or overseas), we make two assumptions: they have access to that place; and the housing meets the minimum adequacy standard. Both these assumptions have face validity, but are unlikely to be able to verified using most data sources.

Having no other place to live is not sufficient to identify people who LAMAH. Such an assumption would see many people who choose to live in non-conventional housing (e.g. house-buses) classified as severely housing deprived. It would reflect an expectation that everyone should be living in conventional housing, which is unrealistic. People may choose a house-bus or a boarding house as their usual accommodation to suit their needs and desires at the time. A single person may live in a boarding house because it offers an independent style of living and is close to their work; a person who has just moved to an area may share with friends or relatives while looking for a house of their own. Therefore, we applied another indicator of a LAMAH – low income – to identify people living in severely inadequate housing by necessity.

2b) Having a low income

The amount of money a person has to spend on housing is a major determinant of their access to adequate housing. Many other factors may act as barriers to adequate housing, such as discrimination on the basis of age, ethnicity, or disability. But even in the face of discrimination, having more money to spend usually gives people more housing options – whether renting or buying. For people who have left their usual accommodation to escape domestic violence, their lack of access to that housing may have nothing to do with money. However, money is an important determinant of their access to alternative permanent housing. Economic deprivation, or having a low level of disposable income in reference to the society in which one lives, is therefore a key indicator of a LAMAH.

Internationally, the most widely used indicator of economic deprivation is ‘low income’ or ‘income poverty’ – that is, having a disposable income (adjusted for household size and composition) under a ‘poverty line’. A low level of income in relation to one’s own society indicates a lack of access to a “minimum acceptable way of life” (Perry, 2012, p89).

While income is one of the variables most commonly used to measure deprivation, it has well-known limitations. Many other factors contribute to a person’s or household’s financial position, such as: wealth (financial and physical assets); non-monetary assistance from friends, family, or agencies; special costs, such as medical costs or debt repayments; geographical variation in costs; and varying budgeting skills. Due to these unmeasured factors, the mismatch between inadequate living standards measured by income and inadequate living standards measured by more direct, non-monetary indicators is commonly found to be of the order of 50–60 percent (Perry, 2002).

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\(^8\) Also referred to as ‘no place of residence’ or ‘no place of usual residence’.
However, in this measure of severe housing deprivation, we used low income as a proxy for a LAMAH, not as a proxy for inadequate living conditions per se. We applied a low-income filter to people already identified as living in severely inadequate housing with no other place to live. Used in this more straightforward sense, and as part of a composite measure, low income should be a relatively accurate indicator of severe housing deprivation. It is generally accepted that materially deprived people are economically deprived, and people with low reported incomes who do not LAMAH (eg retirees with wealth or people evading tax) are unlikely to be living in severely inadequate housing.

The low-income threshold we used in this study follows an approach developed by the authors of the NZDep (deprivation) index to identify people with low incomes in census data (Crampton, Salmond, & Kirkpatrick, 2004; Salmond, Crampton, & Atkinson, 2007). This method sets the ‘poverty threshold’ at a value equivalent to 60 percent of the median disposable JEAH income, before adjusting for housing costs. The low-income thresholds we applied were $20,001 in 2001, and $25,001 in 2006. These same thresholds were used in the NZDep deprivation indexes (Crampton, Salmond, & Kirkpatrick, 2004; Salmond, Crampton, & Atkinson, 2007).

Income poverty measures usually use household income information. This posed two problems for this study. Firstly, we could not use household income data for temporary residents in permanent private dwellings because it reflects the incomes of both the temporary residents (potentially severely housing deprived) and the permanent residents (the hosts – not severely housing deprived), when only the incomes of the temporary residents were of interest. Secondly, household income data were not available for many people in the subject population, because they either lived in non-private dwellings (where no household data are collected) or were part of households whose income was unknown. If one adult household member did not report their individual income, a household income value would not be available for that household, except if the combined income of the other household members was in the top income band (ie more than $100,000). The personal income question has a high overall rate of non-response relative to other census questions (10 percent in 2006; 11 percent in 2001) (Errington et al, 2008), but the rate of non-response was even higher among the potentially severely housing deprived population: 24 percent in 2006; and 28 percent in 2001. This supports existing knowledge that people who are socio-economically deprived are less likely to report their income (Statistics NZ, 2008).

In order to overcome these challenges, we developed a composite low-income measure, which allowed us to assess the subject population’s incomes against thresholds approximating the ‘60 percent of the median disposable JEAH income, before housing costs’ poverty line. The composite low-income measure comprises four variables, which are listed below. Table 6 shows which living situations each of these indicators were applied to.

- Jensen Equivalised Annual (gross) Household income (JEAH income < poverty line)
- Jensen Equivalised Annual (gross) Family income (JEAF income < poverty line)
- Jensen Equivalised Annual (gross) Personal income (JEAP income < poverty line)
- Receiving a means-tested benefit.

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9 ‘Poverty threshold’, ‘poverty line’, and ‘low-income threshold’ tend to be used interchangeably. In this report, we use ‘low-income threshold’, unless referring to a text in which the word ‘poverty’ is used.

10 JEAH income = Jensen Equivalised Annual Household income. This refers to household incomes equivalised according to the size and composition of the households using the Revised Jensen Index (Jensen, 1988), which is the standard equivalisation index used in New Zealand.

11 The ‘potentially severely housing deprived population’ refers to people who satisfied criteria 1 and 2a (that is, were living in severely inadequate housing and had no other place to live).
www.statsphere.govt.nz

Table 6 Units of analysis and low-income indicators by housing type

<table>
<thead>
<tr>
<th>Housing type</th>
<th>Unit of analysis (economic unit)</th>
<th>Low-income indicators applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living rough, in improvised, mobile, or private dwelling in a camping ground</td>
<td>Household</td>
<td>JEAH income &lt; poverty line</td>
</tr>
<tr>
<td>– Part of a household</td>
<td></td>
<td>Means-tested benefit</td>
</tr>
<tr>
<td>Living rough, in improvised, mobile, or private dwelling in a camping ground</td>
<td>Individual</td>
<td>JEAP income &lt; poverty line</td>
</tr>
<tr>
<td>– Not part of a household or family</td>
<td></td>
<td>Means-tested benefit</td>
</tr>
<tr>
<td>(Temporary resident in a) permanent private dwelling – Accompanied by family</td>
<td>Family</td>
<td>JEAF income &lt; poverty line</td>
</tr>
<tr>
<td>(Temporary resident in a) permanent private dwelling – Not accompanied by family</td>
<td>Individual</td>
<td>JEAP income &lt; poverty line</td>
</tr>
<tr>
<td>Non-private dwelling</td>
<td>Individual</td>
<td>JEAP income &lt; poverty line</td>
</tr>
</tbody>
</table>

JEAF income and JEAP income are both abbreviations we developed for this project, not established terms. We developed these terms to indicate that we applied Jensen equivilisation to different economic units – family (JEAF) and individuals (JEAP – personal income). In certain living situations (see table 6), we effectively treated families and individuals as households, meaning their income could be assessed against the standard household-level low-income threshold.

We used receipt of a means-tested benefit as a proxy for low income for households, families, and individuals with unknown incomes. We assessed the following means-tested benefits: sickness benefit; domestic purposes benefit; invalid’s benefit; unemployment benefit; and student allowance. The ‘receiving a means-tested benefit’ rule we applied is: if at least one person in the economic unit (household, family, or individual, as appropriate – see table 6) was receiving a means-tested benefit, the economic unit had a low income.

2c) Living in a severely crowded dwelling

For people identified as temporary residents in permanent private dwellings with no other place to live and a low income, it was necessary to apply another filter to identify people those in this situation due to a LAMAH. Without an extra filter, we would have classified a large proportion of low-income people in rented accommodation as severely housing deprived (including many students in student flats).

We identified severe household crowding as the best available proxy for ‘sharing by necessity’. The assumption underpinning selection of this variable is that if people were living together out of unconstrained choice, there would be an appropriate number of bedrooms for the number of residents, and thus the dwelling would not be crowded. Household crowding is a well-recognised form of housing inadequacy, particularly in terms of its association with infectious disease (Baker et al, 2013).
The preferred measure of crowding for New Zealand is the Canadian National Occupancy Standard (CNOS) (Goodyear, Fabian, & Hay, 2011). Using CNOS, crowding is expressed in terms of ‘bedroom deficit’, and the categories commonly used are one-bedroom deficit (crowded) and two-or-more-bedroom deficit (severely crowded).

We only classed people living in severely crowded dwellings (two-or-more-bedroom deficit) as LAMAH. We excluded dwellings with a one-bedroom deficit because such a deficit is a relatively insensitive indicator of deprivation. For example, a five-year-old boy and four-year-old girl sharing a bedroom is a one-bedroom deficit, if all other bedrooms in the dwelling are being used. This situation does not breach societal expectations in New Zealand.

**Pro rata allocation of unallocated children in non-private dwellings**

Once we had applied the two major criteria of severe housing deprivation to census data, there remained a significant number of unallocated children in non-private dwellings. These children (people younger than 15 years) were living in severely inadequate housing and had no other place to live. However, the low-income filter could not be applied because income and income source data are not collected from children. In addition, family data are not collected from non-private dwelling residents, so even if the child was living with their parents in a non-private dwelling, they are not linked to their parents in census data (and thus are not linked to their parents’ income).

We assumed that people operating commercial accommodation would be unlikely to accommodate unaccompanied minors under the age of 15 – adults would have accompanied most of these children. Thus, we proportionally allocated the unallocated children into the severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined categories, according to how adults in the same dwelling had been categorised. In figure 3, this filter is called pro rata allocation of children.

The importance of this step can be illustrated by the hypothetical example of a boarding house containing 20 people – 10 adults and 10 children – all reporting that they usually live there. Without the pro rata filter, we would have categorised as housing deprivation status cannot be determined, even if we had categorised all 10 adults as severely housing deprived. Applying the pro rata allocation rule, we would also categorise the 10 children as severely housing deprived. The equations that make up this step are included in appendix 2.

### 3.4 Applying the definition of severe housing deprivation to administrative data

Three types of housing were identified as ‘accommodation targeted at people who LAMAH’ (or emergency accommodation): night shelter; women’s refuge; and other accommodation targeted at people who LAMAH (table 4). The definitions of each of these housing types are in appendix 1. This section explains how we identified the providers of these types of accommodation and collected data from them.

**Identifying providers**

We questioned government and non-government agencies about the existence of a comprehensive register of emergency accommodation, but none existed. It was therefore necessary to identify providers of such accommodation so that administrative data could be collected from them.
Figure 5 depicts the process followed. We constructed an initial list of possible services based on the authors’ existing knowledge of the sector, plus 16 other sources. We screened each identified agency for inclusion by reviewing their website. If the agency did not have a website, or the website was unclear about the nature of the service provided, we conducted a brief telephone interview with the manager. HNZC regional project managers and a HNZC housing access manager from each region then reviewed the refined list to check the identified agencies met the inclusion criteria and to identify any missing agencies.

Figure 5 Process for identifying and collecting data from emergency housing providers

We then surveyed the managers of all accommodation on the now-further-refined list about their agency and asked them to provide anonymised client data. We gave each manager a list of providers in their area and asked them to identify any missing ones; we added newly identified providers to the survey frame.

We also took steps to determine the status of providers that appeared on the initial list but which we could not screen because they had neither a website nor a working phone number. We searched the Ministry of Economic Development’s online register of societies.

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[12] See Amore (in preparation) for list of these sources.

and trusts (www.societies.govt.nz) for these agencies. We found that some no longer existed and excluded them. Three agencies did not appear on the register, so we asked local Citizens Advice Bureaux if they had any knowledge of them, which they did not. It is reasonable to assume these providers no longer existed, though they may have been open in 2001 or 2006, and may have met the inclusion criteria.

It should be noted that every service we identified as emergency accommodation had restrictions on who they accommodated, and many were not ‘emergency’ accommodation, in the sense of taking referrals 24/7 or accommodating people on the day they sought help. All the services we identified provided temporary accommodation, targeted at people who LAMAH. We use the term ‘emergency accommodation’ in this paper because it is concise and familiar.

Collecting data from providers

We surveyed managers about their agency by telephone, email, or post (the mode determined by their preference). We pretested the questionnaire, and then piloted it with three services. We asked each surveyed provider to provide anonymised client data for 2001 and 2006 census nights, as well as 1 October 2009, a randomly selected weekday that was in the recent past at the time of the survey. The most recent date was included to assess the providers’ ability to provide recent records, informing recommendations about future use of data from these providers.

For services that came under the umbrellas of The Salvation Army or the National Collective of Independent Women’s Refuges, client data were supplied by the national organisation. We requested seven variables from all services: sex; age; ethnicity; employment; study participation; means-tested benefit receipt; and family status (household type).

Analysis

Given that these types of accommodation were targeted at people who LAMAH, we assumed that all residents LAMAH, and hence met the criteria for severe housing deprivation.

In terms of response rates, most services were unable to provide 2001 data, but the proportion of services that provided data was higher for the 2006 date (62 percent overall) and higher again for the 2009 date (72 percent overall) (table 7). We only include sex, age, ethnicity, and family type for 2006 in the results of this paper. We did not analyse employment, study participation, or mean-tested benefit data, due to lack of clarity about how these variables were defined by providers, and wide variation in how they were reported.

The profile of people living in emergency accommodation in 2006 (by sex, age, ethnicity, and family type) is reported in the next chapter. This profile was similar to 2009, despite a lower overall response rate in 2006 than 2009 (appendix 3). Therefore, the population in this type of accommodation for whom data were available is likely to be broadly representative of the wider population in this accommodation. We also report variable-specific rates of non-response in appendix 3.
Table 7 Number and percentage of emergency accommodation providers that provided client data, by accommodation type and year

<table>
<thead>
<tr>
<th>Accommodation type</th>
<th>2001</th>
<th>2006</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Night shelter</td>
<td>5/7 (71%)</td>
<td>6/8 (75%)</td>
<td>7/8 (88%)</td>
</tr>
<tr>
<td>Women’s refuge</td>
<td>7/63 (11%)</td>
<td>43/64 (67%)</td>
<td>44/65 (68%)</td>
</tr>
<tr>
<td>Other accommodation targeted at people who LAMAH</td>
<td>11/31 (35%)</td>
<td>24/45 (53%)</td>
<td>37/49 (76%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23/101 (23%)</strong></td>
<td><strong>73/117 (62%)</strong></td>
<td><strong>88/122 (72%)</strong></td>
</tr>
</tbody>
</table>

3.5 Summary

This chapter translated the conceptual definition and classification into a method for identifying severely housing deprived people in routinely collected data (census and administrative). We designed the method to be as consistent as possible with measures of deprivation commonly used in New Zealand and overseas, incorporating established measures of income poverty and household crowding. Table 8 summarises the method, describing the operational definition of each severe housing deprivation category.

The next chapter presents the results of this analysis.
### Table 8 Operational definitions of the severe housing deprivation categories

<table>
<thead>
<tr>
<th>Severe housing deprivation category</th>
<th>Operational definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Living without accommodation due to a LAMAH</td>
<td><strong>Census data</strong>&lt;br&gt;1. Living rough, in an improvised dwelling, or in a mobile dwelling not in a motor camp; and&lt;br&gt;2. Usual address ‘same as census night’ or ‘no fixed abode’; and&lt;br&gt;3. Low income (household-level, or individual-level if not part of a household); or&lt;br&gt;4. Income unknown and receiving a means-tested benefit (household-level, or individual-level if not part of a household).&lt;br&gt;&lt;br&gt;<strong>Targeted at people who LAMAH</strong>&lt;br&gt;Administrative data from emergency housing providers&lt;br&gt;All people identified as living in night shelters, women’s refuges, or other accommodation targeted at people who LAMAH on census night.</td>
</tr>
<tr>
<td>2 Living in a non-private dwelling due to a LAMAH</td>
<td><strong>Census data</strong>&lt;br&gt;1. Living in a camping ground, motor camp, boarding house, hotel, motel, guest accommodation, commercial vessel, or marae; and&lt;br&gt;2. Dwelling is not misclassified student accommodation (&lt;75% of census night residents in dwelling studying full-time); and&lt;br&gt;3. Usual address ‘same as census night’ or ‘no fixed abode’; and&lt;br&gt;4. Low income (family-level if accompanied by family, individual-level if not); and&lt;br&gt;5. Income unknown and receiving a means-tested benefit (household-level (people in ‘private’ dwellings in camping grounds) or individual-level (people in all other dwellings)).&lt;br&gt;&lt;br&gt;<strong>Not targeted to people who LAMAH</strong>&lt;br&gt;PLUS&lt;br&gt;6. Children identified at pro rata step.&lt;br&gt;By non-private dwelling (those specified in step 1):&lt;br&gt;No. children who satisfied steps 1–3 multiplied by&lt;br&gt;(No. adults who satisfied steps 1–5 divided by no. adults who satisfied steps 1–3)&lt;br&gt;[Totalled across all non-private dwellings specified in step 1]</td>
</tr>
</tbody>
</table>
| 3 Living as a temporary resident in a private dwelling due to a LAMAH | **Census data**<br>1. Living in a permanent private dwelling; and<br>2. Not an owner or in an owner’s nuclear family; and<br>3. Not the reference person or in the reference person’s nuclear family; and<br>4. Usual address is ‘same as census night’ or ‘no fixed abode’; and<br>5. Low income (family-level if accompanied by family, individual-level if not); and<br>6. Dwelling is severely crowded (CNOS 2+ bedroom deficit).
4 Size and characteristics of the severely housing deprived population

4.1 Introduction

This chapter presents the results of the analysis of census and administrative data for 2001 and 2006, and is structured as follows.

- The first section describes how many people we identified as ‘severely housing deprived’, ‘not severely housing deprived’, and ‘housing status cannot be determined’.

- The second section describes the following aspects of the severely housing deprived population:
  - size
  - geographical distribution
  - demographic characteristics
  - socio-economic characteristics
  - place of birth and migration characteristics
  - housing tenure of the permanent private dwellings that severely housing deprived people were living in.

- The third section discusses how many dwellings would be required to house the identified severely housing deprived population.

There are three important caveats about the statistics in this chapter.

1. According to Statistics NZ confidentiality protocols, all numbers in the tables and figures derived from the census have been random rounded to base three. We then added children in non-private dwellings identified at the pro rata filter to the appropriate categories. These latter figures were not rounded because they do not represent counts of individuals, but proportions (see table 8 for calculation). We also added unrounded figures from the administrative data to the census figures, though not all variables were available in the administrative data. Due to rounding, percentages may not total 100 percent.

2. As these statistics were largely derived from the national census, we did not apply any tests of significance.

3. The number of children we identified as severely housing deprived in non-private dwellings at the pro rata filter contributed to the size of the severely housing deprived population. However, as this number does not represent actual individuals, it did not contribute to any of the results regarding characteristics of the population. These children only accounted for 1 percent of the severely housing deprived population.
4.2 Severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined

Percentages of the subject population identified as severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined were consistent from 2001 to 2006 (table 9). The vast majority of the population was not severely housing deprived (97 percent in both years), which fits with expectation. In a developed country such as New Zealand, we should expect most of the population to not be severely housing deprived. The percentage of people whose housing deprivation status we could not determine was a consistent 2 percent, more than double the level of severe housing deprived. This was mainly due to high levels of unknown income status (24 percent in 2006; 28 percent in 2001), despite the fact we used both means-tested benefit status and reported income to identify people with low incomes.

Table 9 Number and percentage of the census subject population identified as severely housing deprived, not severely housing deprived, and housing deprivation status cannot be determined, 2001 and 2006

<table>
<thead>
<tr>
<th>Category(1)</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Severely housing deprived</td>
<td>28,649</td>
<td>0.8</td>
</tr>
<tr>
<td>Not severely housing deprived</td>
<td>3,639,845</td>
<td>97.2</td>
</tr>
<tr>
<td>Housing deprivation status cannot be determined</td>
<td>76,038</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>3,639,845</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1. Figures in this table relate to the census subject population only. For total ‘severely housing deprived’ figures (including administrative data) see table 10.

Data source: Statistics NZ

Table 9 categorises the census subject population, which is the census night population, excluding absentees and residents of institutions. If, instead, the denominator were the usually resident population (people who live in New Zealand, excluding overseas visitors), there would be negligible change to the percentage of people in each category. People who usually live overseas make up less than 3 percent of the census night population (2.8 percent in 2006) – we excluded some of these from the subject population because they were in institutions, and the rest made up a very small proportion of the not severely housing deprived category.
4.3 Size

The next section presents the size of the severely housing deprived population in 2001 and 2006. The sections following that show the characteristics of the 2006 severely housing deprived population only. The profile of the severely housing deprived population in 2006 was similar to 2001, and differences reflected change in the general population. The 2001 data will be available in Amore (in preparation).

Size of the severely housing deprived population and its categories

On census night 2006, 33,946 people were severely housing deprived, representing a point prevalence of 84 per 10,000 people. The prevalence of severe housing deprivation in 2006 was 9 percent higher than 2001, when 77 per 10,000 people (28,917 people) were severely housing deprived (table 10). As noted in table 10, many more emergency housing providers provided data in 2006 than in 2001 – this difference accounts for 1 percent of the reported increase in the prevalence of severe housing deprivation between 2001 and 2006.

Table 10 Severely housing deprived population by broad living situation – count, percentage, and prevalence, 2001 and 2006

<table>
<thead>
<tr>
<th>Broad living situation</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. people</td>
<td>% of severely housing deprived pop'n</td>
</tr>
<tr>
<td>1 Living without accommodation due to a LAMAH</td>
<td>1,296</td>
<td>5</td>
</tr>
<tr>
<td>2 Living in a non-private dwelling due to a LAMAH</td>
<td>267</td>
<td>1</td>
</tr>
<tr>
<td>Emergency accomm.</td>
<td>651</td>
<td>2</td>
</tr>
<tr>
<td>Commercial accomm. and marae</td>
<td>8,073</td>
<td>28</td>
</tr>
<tr>
<td>3 Living as a temporary resident in a severely crowded, permanent private dwelling due to a LAMAH</td>
<td>19,284</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>28,917</td>
<td>101</td>
</tr>
</tbody>
</table>

1. Figures in the emergency accommodation category were derived from administrative data. The number of services that provided 2006 data was nearly three times higher than provided 2001 data, so the difference between the 2001 and 2006 numbers should not be interpreted as growth.

Data sources: Statistics NZ and emergency accommodation providers
There were both consistencies and changes in the types of housing occupied by severely housing deprived people in 2001 and 2006 (figure 6).

**Figure 6 Severely housing deprived population by living situation, 2001 and 2006**

**Data sources:** Statistics NZ and emergency accommodation providers

**Consistencies:**
- Two-thirds of people in the severely housing deprived population were living as temporary residents in severely crowded permanent private dwellings, in both 2001 and 2006.
- Most of these severely housing deprived people were sharing with extended family (64 percent in 2001; 75 percent in 2006), most often in dwellings that contained at least three generations of extended family.
- In both years, a very small percentage of the overall severely housing deprived population were living in emergency accommodation.

**Changes:**
Between 2001 and 2006, there was considerable change in the ‘without accommodation’ category, and the ‘commercial accommodation and marae’ category. Compared with 2001, people living without accommodation accounted for 10 percent more of the population in 2006, and people living in commercial accommodation and marae, 10 percent less. Over this period, the number of severely housing deprived people increased in all housing types that make up the without accommodation category (particularly mobile dwellings), and decreased in all housing types that make up the commercial accommodation and marae category (particularly camping grounds and motor camps). Possible explanations include a reduction in the number of camping grounds, boarding houses, and other non-private accommodation through gentrification between 2001 and 2006, or a reduction in the
willingness of these types of accommodation to accept people who are deprived, or both. Whatever the reason, it appears that people were increasingly being forced to live in more extreme living situations. Figure 7 shows the distribution of severe housing deprivation by specific housing type in 2006.

Figure 7 Severely housing deprived population by specific living situation, 2006

Data sources: Statistics NZ and emergency accommodation providers
4.4 Geographical distribution

This section describes the distribution of severe housing deprivation in New Zealand, by territorial authority (TA), regional council area, urban and rural area, and by area-level deprivation.

Severe housing deprivation by territorial authority and regional council areas

Severe housing deprivation was concentrated in the upper North Island in 2006, particularly Auckland (figure 8). Of all severely housing deprived people, 68 percent lived in regions in the upper North Island (Northland, Auckland, Waikato, Bay of Plenty, Gisborne), with 44 percent living in the area now governed by Auckland Council. The two TAs with the greatest numbers of severely housing deprived people were Manukau city (18 percent of the severely housing deprived population), and Auckland city (16 percent). Christchurch city had the third-highest number, with 6 percent of the severely housing deprived population (note this figure is for 2006, years before the Canterbury earthquakes).

In terms of severe housing deprivation as a proportion of the population (prevalence), TAs with the highest prevalence of severe housing deprivation were generally outside the main urban centres. The five highest rates of severe housing deprivation in 2006 were in Opotiki, Manukau, Kaikoura, Whakatane, and the Far North (see appendix 4).

Figure 9 shows the prevalence of severe housing deprivation by regional council area in 2006, highlighting the areas where there was considerable change from 2001. Prevalence of severe housing deprivation was consistently highest in the Northland, Auckland, and Gisborne regions, and its prevalence increased in all regions of New Zealand over this period; except Tasman and Nelson, where it declined by 18 percent and 14 percent, respectively. The greatest increases in the prevalence of severe housing deprivation were in Southland (71 percent), Taranaki (41 percent), Canterbury (38 percent), and Manawatu-Wanganui (31 percent). It should be noted that the number of severely housing deprived people per region was relatively small (less than 300 in a number of regions) so there is considerable risk that data collection differences between 2001 and 2006 influenced the magnitude of the observed changes. Appendix 5 provides more detail about the characteristics of severely housing deprived people in each regional council area.

Figures 10, 11, and 12 show the distribution of the three measurable severe housing deprivation categories, by TA. Severely housing deprived people living without accommodation were widely distributed, with the highest counts in the Far North, Whangarei, Manukau, Western Bay of Plenty, Tasman, and Christchurch (figure 10). Those living in non-private dwellings were concentrated in major cities (figure 11), and people sharing with others as ‘temporary residents in severely crowded permanent private dwellings’ were concentrated in the upper North Island, particularly Auckland (figure 12).
Severe housing deprivation: The problem and its measurement

Figure 8 No. of severely housing deprived people by territorial authority area, 2006

Figure 9 Prevalence of severe housing deprivation per 10,000 people by regional council area, 2006, and percentage change since 2001

Data sources: Statistics NZ and emergency accommodation providers
Severe housing deprivation: The problem and its measurement

Figure 10 No. of severely housing deprived people living without accommodation, by TA, 2006

Figure 11 No. of severely housing deprived people living in non-private dwellings, by TA, 2006

Figure 12 No. of severely housing deprived people living as temporary residents in severely crowded permanent private dwellings, by TA, 2006

Note: The position of the Chatham Islands is not geographically correct

Data sources: Statistics NZ and emergency accommodation providers (for figures 10, 11, and 12)
Severe housing deprivation by urban and rural area

Most severely housing deprived people were living in urban areas; the urban:rural ratio was about 6:1 in both 2001 and 2006. Three-quarters of all severely housing deprived people were located in main urban areas\(^{14}\) (figure 13). The caveat here is that one of the categories of severe housing deprivation likely to be most prevalent in rural areas – living in housing that lacks one or more basic amenities (with minimally adequate security of tenure) due to a LAMAH – was not able to be measured.

![Figure 13 Severely housing deprived population by urban/rural area, 2006](image)

**Data sources:** Statistics NZ and emergency accommodation providers

While the number of severely housing deprived people was much higher in main urban areas than elsewhere, the prevalence of severe housing deprivation was relatively consistent across urban and rural areas. Figure 14 shows the prevalence of severe housing deprivation was highest in rural centres (areas with 300 to 999 people) and lowest in secondary urban areas (with 10,000 to 29,999 people).

Figure 15 shows the composition of the severely housing deprived populations in urban and rural areas. Most of the urban/rural difference in severe housing deprivation related to the ‘without accommodation’ and ‘temporary resident in severely crowded permanent private dwelling’ categories. The more rural an area, the greater the proportion of severely housing deprived people living without accommodation; the more urban, the greater the proportion of severely housing deprived people sharing with others in permanent private dwellings. Ethnicity and age differences among the severely housing deprived populations in these different areas may explain some of the gradient.

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\(^{14}\) Main urban area – minimum population 30,000 people; secondary urban area – population of 10,000 to 29,999 people; minor urban area – population of 1,000 to 9,000 people; rural centre – population of 300 to 999 people; other rural – residual category, includes inlets, islands, inland waters, and oceanic waters outside urban areas and rural centres (Statistics NZ, 2006b).
Figure 14 Prevalence of severe housing deprivation per 10,000 people by urban/rural area, 2006

![Bar chart showing the prevalence of severe housing deprivation per 10,000 people by urban/rural area, 2006.](chart14)

**Data sources:** Statistics NZ and emergency accommodation providers

Figure 15 Severely housing deprived population by urban/rural area and living situation, 2006

![Bar chart showing the severely housing deprived population by urban/rural area and living situation, 2006.](chart15)

**Data sources:** Statistics NZ and emergency accommodation providers
Severe housing deprivation by area’s deprivation status

The level of socio-economic deprivation in an area seems to be an important explanatory factor for the geographical distribution of severe housing deprivation. The more deprived the area, the higher the prevalence of severe housing deprivation (figure 16). To put it another way, most severely housing deprived people were living in areas where the people around them were also socio-economically deprived.

Severe housing deprivation and deprivation in general (as measured by NZDep) are measured using an overlapping set of census-derived indicators (receiving a means-tested benefit, low income, and household crowding). Consequently, we would expect a high degree of correlation.

Figure 16 Prevalence of severe housing deprivation per 10,000 people by NZDep decile, 2006

Note: This chart excludes residents of emergency accommodation. We could not determine the NZDep decile of many emergency accommodation dwellings, because their locations are confidential. Residents of emergency accommodation were only 2 percent of the severely housing deprived population.

Data source: Statistics NZ
4.5 Demographic characteristics

This section presents the profile of the severely housing deprived population in terms of sex, age, ethnicity, iwi, family status, relationship status, and residential mobility. The first three variables are summarised in table 11, and discussed in turn, then the final three variables are summarised in table 12 and discussed in turn.

Table 11 Sex, age group, ethnicity, and iwi affiliation among the severely housing deprived population, compared with the usually resident population, 2006

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>Severely housing deprived population</th>
<th>Usually resident population</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percent</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
<td>50.6</td>
<td>51.2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>49.4</td>
<td>48.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Age group (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;15</td>
<td>25.2</td>
<td>21.5</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>15-24</td>
<td>26.9</td>
<td>14.2</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>25-34</td>
<td>14.6</td>
<td>12.9</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>10.1</td>
<td>15.3</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>45-54</td>
<td>7.9</td>
<td>13.6</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>55-64</td>
<td>7.6</td>
<td>10.3</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>65+</td>
<td>7.7</td>
<td>12.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>European / Other(^{(2)})</td>
<td>36.0</td>
<td>77.7</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Māori</td>
<td>34.5</td>
<td>14.6</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Pacific</td>
<td>25.0</td>
<td>6.9</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>16.5</td>
<td>9.2</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>MELAA(^{(3)})</td>
<td>1.4</td>
<td>0.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Iwi affiliation among Māori</td>
<td></td>
<td>80.2</td>
<td>75.6</td>
<td>1.1</td>
</tr>
</tbody>
</table>

1. This table presents total response ethnicity data. If a person reported more than one ethnicity, they are included in each ethnic group.
2. Other includes New Zealander.
3. MELAA is Middle Eastern, Latin American, and African.

**Data sources:** Statistics NZ and emergency accommodation providers
Sex

The number of males and females in the severely housing deprived population was almost even. Compared with males, females were more likely to be staying with friends or family (figure 17). Part of this imbalance is due to the high prevalence of sole-parent families in the severely housing deprived population. Women headed most of these families, and they were mostly staying with friends or family in severely crowded permanent private dwellings.

Figure 17 Severely housing deprived population by sex and living situation, 2006

Data sources: Statistics NZ and emergency accommodation providers

Age

The severely housing deprived population was relatively young. The median age group was 20–24 years in both 2001 and 2006, compared with a median age of about 35 years for the general population (Statistics NZ, 2007b, nd-a). More than half the severely housing deprived population was younger than 25 years, and half of these were children under 15 years. People younger than 35 years were over-represented in the severely housing deprived population, including children, despite likely underestimation of severe housing deprivation among children (see section 5.4).

Figure 18 shows the situations that severely housing deprived people of different ages were living in. Most severely housing deprived young adults were sharing with friends or family in severely crowded permanent private dwellings. Many of these young adults were parents accompanied by dependent children. It is conceivable that the presence of dependent children influences the willingness of friends and family to take them in. Older severely housing deprives people were more likely to be living without accommodation, in commercial accommodation, or marae. They were also more likely to be European.
Figure 18 Severely housing deprived adults by age group (years) and living situation, 2006

While cultural expectations are likely to play a significant role in people's responses to housing need, age is also likely to be an important factor. Compared with younger people, older people may be less likely to approach family and friends for accommodation, as there is a societal expectation that older people should be independent and look after themselves, at least among Europeans. Older people may also have fewer family and friends to approach, as lifestyle change over time may have weakened social connections. People who have been severely housing deprived for long periods of time would be included in the older age groups. They may have had periods staying with friends and family, but moved out when their welcome wore out.

Ethnicity

The three most common ethnicities among the severely housing deprived population were European/Other (36 percent), Māori (34 percent), and Pacific (16 percent). All ethnic minorities were over-represented in the severely housing deprived population, particularly Māori, Pacific, and Asian people. By contrast, European/Other was half as common in the severely housing deprived population as in the general population. The types of housing that severely housing deprived people were living in varied considerably by ethnicity (figure 19).

Data sources: Statistics NZ and emergency accommodation providers
Figure 19 Severely housing deprived population by ethnicity and living situation, 2006

The majority of severely housing deprived people who identified with an ethnicity other than European/Other were living with friends or family in severely crowded permanent private dwellings. Of all severely housing deprived people who identified with a Pacific ethnicity, 91 percent were sharing with others. This was also the case for 78 percent of Māori, 79 percent of Asian, and 69 percent of Middle Eastern, Latin American, and African people (MELAA).

By contrast, severely housing deprived people who identified with a European/Other ethnicity were living in more varied situations: about one-third in each of the without accommodation, commercial accommodation and marae, and permanent private dwelling categories. It is not surprising that levels of sharing with friends or family were high in cultures with strong kinship obligations. Of all severely housing deprived people in permanent private dwellings, 75 percent were sharing with extended family, which supports the idea that kinship obligation plays an important role in determining where people stay when they cannot access housing of their own. Most of these people (78 percent) were in dwellings that contained at least three generations of family. It is clear that a person's culture influences their response to housing need.

Iwi affiliation

Among severely housing deprived people identifying as Māori, 80 percent identified with at least one iwi (tribal group). Severely housing deprived Māori were more likely to identify with an iwi than the general Māori population.

Data sources: Statistics NZ and emergency accommodation providers
### Table 12 Family status, relationship status, and years at address among the severely housing deprived population, compared with the usually resident population, 2006

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>Severely housing deprived population</th>
<th>Usually resident population</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sole parent with dependent child/ren</td>
<td>38.0</td>
<td>10.5</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Adult not accompanied by family</td>
<td>34.4</td>
<td>20.8</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>Couple with dependent child/ren</td>
<td>15.1</td>
<td>38.4</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Couple without children</td>
<td>8.2</td>
<td>21.5</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Sole parent with adult child/ren (no dependants)</td>
<td>2.4</td>
<td>2.6</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Couple with adult child/ren (no dependants)</td>
<td>1.4</td>
<td>6.1</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>Family with children of unknown dependency status</td>
<td>0.4</td>
<td>0.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Relationship status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not partnered</td>
<td>70.0</td>
<td>38.7</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Partnered</td>
<td>30.0</td>
<td>61.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Years at address</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;1</td>
<td>47.7</td>
<td>24.8</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>1–4</td>
<td>28.7</td>
<td>32.9</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>5–9</td>
<td>12.8</td>
<td>17.4</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>10+</td>
<td>10.7</td>
<td>25.0</td>
<td>0.4</td>
</tr>
</tbody>
</table>

1. Family status, like all other variables in this chapter, is an individual-level variable. Thus, the percentages in this table relate to how many people were in each family status category, not how many families.

2. Family status data were not available for people living in non-private dwellings (16 percent of the severely housing deprived population).

3. Relates to adults only (people aged 15 or older).

4. The severely housing deprived population excludes residents of emergency accommodation because these variables were not available in the administrative data.

**Data sources:** Statistics NZ and emergency accommodation providers

### Family status

Most severely housing deprived people were either part of sole-parent families with dependent children, or adults not accompanied by family, both of which were over-represented compared with the general population (table 12). Being in a couple (with or without children) seems to be protective against severe housing deprivation.

Figure 20 shows the severely housing deprived population by family status and living situation. Families with dependent children were the most likely to be sharing with family or friends in permanent private dwellings, and couples without children were the most likely to be living without accommodation. Figure 20 also shows that emergency accommodation was targeted at specific types of households. Overall, this sector mainly accommodates families with dependent children and adults on their own. Given that these household types
Severe housing deprivation: The problem and its measurement

make up most of the severely housing deprived population, these services seem appropriately targeted, despite only providing accommodation for a small percentage of those in need.

**Figure 20 Severely housing deprived population by family status and living situation, 2006**

<table>
<thead>
<tr>
<th>Family status</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult not accompanied by family</td>
<td>21</td>
</tr>
<tr>
<td>Sole parent with dependent child/ren</td>
<td>7</td>
</tr>
<tr>
<td>Couple with dependent child/ren</td>
<td>21</td>
</tr>
<tr>
<td>Sole parent with adult child/ren (no dependants)</td>
<td>12</td>
</tr>
<tr>
<td>Couple with adult child/ren (no dependants)</td>
<td>0.4</td>
</tr>
<tr>
<td>Couple without children</td>
<td>29</td>
</tr>
<tr>
<td>Without accommodation</td>
<td>48</td>
</tr>
<tr>
<td>Emergency accommodation</td>
<td>45</td>
</tr>
<tr>
<td>Commercial accommodation and marae</td>
<td>7</td>
</tr>
<tr>
<td>Temporary resident in a severely crowded permanent private dwelling</td>
<td>0.3</td>
</tr>
</tbody>
</table>

**Data sources:** Statistics NZ and emergency accommodation providers

**Relationship status**

Severely housing deprived adults were nearly twice as likely to be unpartnered than the general population. This is not explained by the relative youth of the severely housing deprived population – all severely housing deprived people older than 24 years were much more likely to be unpartnered than the general population older than 24 years.

People who are unpartnered may be more likely to become severely housing deprived. For example, if they lose their job and can no longer afford to live in their home, they lack the security of partner who may still have a job or other links to resources that would allow them to stay in their home. In some cases, the end of a relationship (such as being widowed, separation, divorce, or fleeing domestic violence) may be at least part of the reason a person is severely housing deprived.
Residential mobility

Severely housing deprived people were more residentially mobile than the general population, with almost half having moved in the previous year. This ‘recently moved’ group is likely to include people who moved from another severely inadequate living situation (such as living rough to sharing with others), as well as those who entered or re-entered the severely housing deprived population. It is worth noting that a quarter of the severely housing deprived population had been living in the same severely inadequate housing for a long period of time – five or more years (figure 21). People who had been living in the same severely inadequate living situation for longer periods of time were more likely to be living in the most deprived conditions (without accommodation).

For people living in severely crowded permanent private dwellings, it is important to note that the dwelling may not have been severely crowded for all the time they were living there – it may be a recent change.

Figure 21 Severely housing deprived population by years at address and living situation, 2006

Note: Residents of emergency accommodation are excluded from this chart because this variable was not available in the administrative data.

Data source: Statistics NZ
Socio-economic characteristics

This section discusses the socio-economic characteristics of the severely housing deprived population, in terms of participation in work or study, occupation among those who were employed, and highest qualification gained. These characteristics are summarised in table 13 and discussed in turn.

Table 13 Socio-economic characteristics among the severely housing deprived population, compared with the usually resident population, 2006

<table>
<thead>
<tr>
<th>Characteristic(1)</th>
<th>Category</th>
<th>Severely housing deprived population</th>
<th>Usually resident population</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Working or studying or both</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>49.4</td>
<td>71.9</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Work (paid employment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not in the labour force</td>
<td>55.6</td>
<td>31.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Full-time employment</td>
<td>18.8</td>
<td>50.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part-time employment</td>
<td>13.6</td>
<td>14.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unemployed</td>
<td>11.9</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not studying</td>
<td>73.5</td>
<td>84.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Full-time study(3)</td>
<td>21.7</td>
<td>10.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part-time study</td>
<td>4.8</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Occupation among those employed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elementary occupations</td>
<td>31.5</td>
<td>11.8</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Clarks, service, &amp; sales workers</td>
<td>28.5</td>
<td>24.5</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Trades workers, plant &amp; machinery operators, &amp; assemblers</td>
<td>15.3</td>
<td>16.0</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Agriculture &amp; fishery workers</td>
<td>9.0</td>
<td>6.5</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
<td>9.2</td>
<td>26.8</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>Legislators, administrators, managers</td>
<td>6.5</td>
<td>14.3</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Highest qualification gained</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No qualification</td>
<td>42.5</td>
<td>25.0</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>40.9</td>
<td>39.6</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Certificate or diploma</td>
<td>10.4</td>
<td>19.6</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree or higher</td>
<td>6.2</td>
<td>15.8</td>
<td>0.4</td>
</tr>
</tbody>
</table>

1. All variables in this table relate to adults (people aged 15 or older).
2. The severely housing deprived population excludes residents of emergency accommodation because these variables were not available in the administrative data.
3. Full-time study includes two census categories: full-time study; and full-time and part time study.

Data source: Statistics NZ
Work and study

Almost half the adult severely housing deprived population was working in paid employment, studying, or both. However, compared with the general population, severely housing deprived people were less likely to be engaged in either or both these activities, including being 3.4 times more likely to be unemployed, and 1.8 times more likely to be not in the labour force (ie not employed and not looking for work). Both these findings might be expected, as the severely housing deprived population is low income by definition. The not in the labour force group potentially includes students, retirees, people caring for children, and people discouraged from work.

Looking at study and work separately, we can see that relatively low levels of work participation mask relatively high levels of study participation among severely housing deprived people when these variables are combined. Just over a quarter of severely housing deprived adults were students, with full-time study being twice as common among severely housing deprived adults than among the general adult population. This is surprising. Students are at risk of being misclassified as severely housing deprived because they usually have low incomes, but this may not reflect their level of resources if, for example, they receive in-kind support from family. However, students in the severely housing deprived population were not living in standard ‘student flat’ situations. Two-thirds of severely housing deprived students were living in severely crowded dwellings, just over a quarter in commercial accommodation or marae, and 7 percent were living without accommodation. These are not standard living situations, and students may very well be living in them due to a LAMAH.

About a third of severely housing deprived adults were working poor – in employment, but lacking enough resources to be able to obtain a minimally adequate home for themselves or their family. Compared with the general population, severely housing deprived adults in employment were much more likely to be in part-time work than in full-time work.

Occupation

Employed severely housing deprived adults were more likely to be working in unskilled and manual jobs than the general population. Of all employed severely housing deprived adults, 60 percent were working in elementary jobs, as clerks, or as service or sales workers.

Across different occupations, the distribution of living situations generally reflected that of the total severely housing deprived population, with two exceptions. The majority (61 percent) of severely housing deprived legislators, administrators, and managers were living in commercial accommodation or marae, compared with 18 percent of the total severely housing deprived population; and 35 percent of severely housing deprived agriculture and fishery workers were living without accommodation, compared with 15 percent of the total severely housing deprived population.

Education

Severely housing deprived adults had a low level of education compared with the general population, with people who had not finished high school (no qualification) particularly over-represented. However, it should be noted that people in the 15 to 19-years age group, who may be in the process of getting a high school qualification, are classified as adults in census data, and this group was over-represented among the severely housing deprived.

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15 Elementary occupations includes people who answered ‘unknown’ to the census question about occupation.
population. There was no clear relationship between the level of qualification gained and the type of housing severely housing deprived people were living in.

**Place of birth and migration characteristics**

This section presents the profile of severely housing deprived people for their place of birth, and, if born overseas, how long they had been living in New Zealand. These characteristics are summarised in table 14 and discussed below.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>Severely housing deprived population</th>
<th>Usually resident population</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of birth</td>
<td>New Zealand</td>
<td>66.7</td>
<td>77.1</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Overseas</td>
<td>33.3</td>
<td>22.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Place of birth among people born overseas</td>
<td>Pacific</td>
<td>36.7</td>
<td>15.4</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Northeast Asia</td>
<td>28.8</td>
<td>15.4</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>Europe</td>
<td>9.7</td>
<td>36.4</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>Southeast Asia</td>
<td>8.6</td>
<td>6.6</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>South-central Asia</td>
<td>6.0</td>
<td>6.6</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Australia</td>
<td>3.6</td>
<td>7.1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Sub-Saharan Africa</td>
<td>3.0</td>
<td>6.7</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Americas</td>
<td>2.3</td>
<td>3.9</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>North Africa / Middle East</td>
<td>1.3</td>
<td>1.9</td>
<td>0.7</td>
</tr>
</tbody>
</table>

1. The severely housing deprived population excludes residents of emergency accommodation because these variables were not available in the administrative data.

**Data source:** Statistics NZ

**Place of birth**

Two-thirds of severely housing deprived people were born in New Zealand. However, people born overseas were over-represented in this population, particularly people from the Pacific and Northeast Asia, who together accounted for about two-thirds of severely housing deprived migrants. Compared with New Zealand-born severely housing deprived people, severely housing deprived migrants were more likely to be living with friends or family in severely crowded permanent private dwellings, and less likely to be living without accommodation. This fits the pattern of severe housing deprivation by ethnicity.
Years in New Zealand

Among severely housing deprived people born overseas, most had been living in New Zealand for over a year, with nearly half having lived in New Zealand for five years or more. However, new migrants (those in New Zealand for less than a year) were over-represented among the severely housing deprived population, being 2.5 times more prevalent than among the general population.

Severely housing deprived people who had been in New Zealand for five years or more were more likely to be living without accommodation than recent migrants (figure 22). This pattern may reflect family and friends being more willing to host people who are relatively new to the country, especially those who moved to New Zealand through chain migration (i.e., migration arranged through family or friends who migrated earlier). Another explanation may be that migrants who have been in the country for longer are more likely to be living away from extended family and thus do not have access to them when they have a housing crisis.

Figure 22 Severely housing deprived population by number of years in New Zealand and living situation, 2006

Note: This chart excludes residents of emergency accommodation because this variable was not available in the administrative data.

Data source: Statistics NZ
Housing tenure

This variable relates to the tenure of housing that severely housing deprived people were living in. It only applies to the severely crowded permanent private dwellings that contained temporary residents. This variable reflects the circumstances of those who were hosting severely deprived people.

The most common forms of tenure of the permanent private dwellings occupied by severely housing deprived people were fairly evenly split between private rental (28 percent), owner-occupied (28 percent), and HNZC rental (26 percent) (table 15).

Table 15 Housing tenure among the severely housing deprived population in permanent private dwellings, compared with the usually resident population in permanent private dwellings, 2006

<table>
<thead>
<tr>
<th>Category</th>
<th>Severely housing deprived population</th>
<th>Usually resident population</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>Private rental</td>
<td>28.6</td>
<td>22.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Owned</td>
<td>28.1</td>
<td>53.9</td>
<td>0.5</td>
</tr>
<tr>
<td>HNZC(1)</td>
<td>25.9</td>
<td>4.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Other not owned</td>
<td>10.4</td>
<td>5.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Family trust</td>
<td>5.7</td>
<td>12.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Other government</td>
<td>0.9</td>
<td>0.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Council</td>
<td>0.5</td>
<td>0.4</td>
<td>1.1</td>
</tr>
</tbody>
</table>

1. There is a considerable census undercount of households renting through HNZC, so these percentages are indicative only.

Data source: Statistics NZ

Severely housing deprived people were particularly over-represented in HNZC housing (state social housing), which mostly accommodates people who are socio-economically deprived. This indicates that many people who are poor themselves take in people who are in housing need, signalling their strength of care, and in many cases, the strength of kinship obligation. In tenure types that are presumably less affordable than social housing, such as private rental and other not owned, taking in people who cannot access housing of their own (to the point where the dwelling becomes severely crowded) may be necessary for the hosts to be able to manage their housing costs.
Number of dwellings needed to house the 2006 severely housing deprived population

It was not possible to calculate exactly how many dwellings would be required to house the 2006 severely housing deprived population, because the relationships between severely housing deprived people in the same dwelling were often unknown. Instead, we estimated lower and upper bounds: 12,900 – 21,100 dwellings.

For the lower bound – 12,900 dwellings – we assumed that every severely housing deprived person living in the same dwelling could be housed together. This figure likely underestimates the required number of dwellings, because people living in dwellings that accommodate multiple households (such as boarding houses) are grouped together. If multiple severely housing deprived families were sharing with others in a permanent private dwelling, they are also grouped together.

For the upper bound – 21,100 dwellings – we assumed that every severely housing deprived family would require their own dwelling, and every severely housing deprived person not accompanied by a family would also require their own dwelling. This figure likely overestimates the required number of dwellings. This is because it assumes people not accompanied by family were on their own, when in fact many would have been accompanied by other people, who they may want to be housed with. All severely housing deprived people in non-private dwellings are also considered to be on their own because information about the relationships between people in non-private dwellings is not collected in the census.

4.4 Summary

This chapter has presented the statistics on the size and characteristics of the severely housing deprived population, and estimated how many dwellings would be required to house this population. These results are summarised and discussed in the next chapter.
5 Discussion and conclusions

5.1 Introduction

This chapter summarises the key findings of this research and considers their implications. The main strengths and limitations of the study are then detailed, and further research needs are identified. Finally, recommendations are made for improving measurement of severe housing deprivation.

5.2 Key findings

In this study, we sought to develop and apply a definition and classification of severe housing deprivation with strong conceptual validity. We found the new approach to be workable – we were able to apply it to census and administrative data to measure most categories of severe housing deprivation. We identified many severely deprived people who are usually statistically invisible because they are not living in permanent private dwellings. These people are excluded from most official data collections, meaning they do not appear in poverty, unemployment, or living standards statistics.

This new methodology identifies severely housing deprived people based on the type of housing they are living in on census night, their access to other accommodation, and their socio-economic position. The filters used to identify people lacking access to minimally adequate housing are: having no other place to live; low income; and, for temporary residents in permanent private dwellings, living in a severely crowded dwelling. In this approach, severely housing deprived people have low incomes by definition, and not being able to afford housing is assumed to be a large part of the reason for living in severely inadequate housing.

Approximately 34,000 people were identified as severely housing deprived in 2006 (84 of every 10,000 New Zealanders, or close to 1 percent of the population). The prevalence of severe housing deprivation increased 9 percent between 2001 and 2006, though 1 percent of this change was due to the different response rates of emergency accommodation providers. Two out of three severely housing deprived people were sharing with others, usually family, in severely crowded dwellings; 18 percent were living in commercial accommodation or marae; 15 percent were living on the street or in improvised or mobile dwellings; only 2 percent were living in emergency accommodation, such as night shelters or women’s refuges.

Most severely housing deprived people were living in main urban areas, particularly in the upper North Island, and especially in Auckland. However, rates of severe housing deprivation were found to be relatively consistent across urban and rural areas. Severe housing deprivation is associated with area-level deprivation: the more socio-economically deprived an area, the higher the rate of severe housing deprivation.

The severely housing deprived were predominantly children and young adults, ethnic minorities, and people in sole-parent families or not accompanied by family. Severe housing deprivation is associated with being a new migrant to New Zealand, particularly from the Pacific or North Asia, high residential mobility, being unemployed, being out of the labour force, having an unskilled job, and having a low level of education. Almost half of all severely housing deprived adults were engaged in employment or study, or both. About one-third of severely housing deprived adults were employed but did not have resources to be able to access minimally adequate housing.
Between 12,900 and 21,100 dwellings would be required to house the 2006 severely housing deprived population.

These findings are not surprising. They are consistent which other empirical evidence on income poverty and deprivation in New Zealand (see Perry, 2012), and have face validity. The external consistency supports the validity of this methodology for measuring severe housing depriviation.

5.3 Implications

The scale of severe housing depriviation in New Zealand in 2006 indicates that provision of affordable, adequate housing needs to be a top government priority. This is even more pressing because the scale of the problem is likely to have increased in the years since – evidenced by housing shortages and worsening housing affordability for people with low incomes, especially in Auckland and Christchurch (Ministry of Business, Innovation and Employment, 2013; New Zealand Productivity Commission, 2012), and a rise in unemployment (Statistics NZ, 2013a).

Severe housing depriviation is very likely to have negative health, social, and economic consequences. The best New Zealand evidence for detrimental effects of severe housing depriviation relates to living in crowded dwellings. A recent analysis found that household crowding in New Zealand causes at least 1,300 hospital admissions a year for severe infectious diseases, such as pneumonia, meningococcal disease, and gastroenteritis (Baker et al, 2013). Infectious disease risk is higher for those in more crowded houses (Baker et al, 2013), which is relevant here because the only people in crowded houses included in the severely housing depriviation population are those living in severely crowded dwellings. Evidence on the health risks of other types of severe housing depriviation is scarce. However, it is highly likely that providing affordable, adequate housing for those who are severely housing deprivied will improve their well-being.

We found that up to 21,000 dwellings would be needed to meet the 2006 level of unmet housing demand that the severe housing depriviation represents. These dwellings are in addition to the number needed to address other forms of housing need, and those required to keep up with underlying demand. The severe housing depriviation figures reflect only the most deprived in regard to housing, and do not account for those living in poor quality or unaffordable housing, whose needs are also of serious concern. While severe housing depriviation has been found to affect 1 percent of the population, serious housing needs are far more widespread in New Zealand. This study adds further evidence of the clear and urgent need for significant investment in developing quality housing that is affordable for people on low incomes.

Most severely housing deprivied people were living with family or friends. This signals New Zealanders’ compassion and generosity, even when sharing their home puts their own health at risk. Without such acts of generosity, many more people would be living in more extreme and visible forms of severe housing depriviation.

Though most severely housing deprivied people were not living rough, their need for affordable, adequate housing is no less important. Many of these people are children and young adults, so addressing their living conditions is crucial if detrimental effects on their development and learning, and long-term, flow-on effects on their lives, are to be avoided (Children’s Commissioner’s Expert Advisory Group on Solutions to Child Poverty, 2012). A decent standard of living is fundamental if young New Zealanders (who are disproportionately non-European) are to go on to reach their full potential. This includes
participating and thriving in the workforce, which will provide dividends not only for themselves and their families, but also for the growing older portion of New Zealand’s population. According to Jackson (2011), “New Zealand’s ability to respond to its ageing population depends very much on its investment in its youthful population” (p24, original emphasis).

Severe housing deprivation can and should be monitored in the future. Other studies of severe housing deprivation would further our understanding of its causes and consequences, as well as identifying the most effective interventions for reducing it.

5.4 Strengths and limitations

Strengths

The main strength of this analysis is that it is based on a conceptually rigorous definition and classification of severe housing deprivation, which is grounded in human rights principles and is consistent with established concepts of poverty and deprivation.

We used census and administrative data from emergency housing providers nationwide to measure severe housing deprivation, rather than a sample, so the results are likely to have high precision. This measure of unmet housing need is not subject to the biases of social housing waiting lists. Such waiting lists include only those who have approached housing agencies and managed to complete the application process, and exclude people who, for example, do not have New Zealand residency or have been suspended from assistance due to previous antisocial behaviour. Data collected by community agencies that provide services to severely housing deprived people are subject to similar biases.

The criteria we used to identify severely housing deprived people in census data were consistently applied, and indicators were selected to be congruent with other deprivation measures. Many of the criteria are strict, such as restricting the severely housing deprived population in permanent private dwellings to those living in severely crowded houses. Severely housing deprived people in non-crowded permanent private dwellings were not captured in these statistics because they could not be identified with confidence. Overall, this measure very likely underestimated the size of the severely housing deprived population, but people identified as severely housing deprived are likely to actually be so, due to the application of multiple indicators of deprivation.

The concept of severe housing deprivation described in this paper is applicable to various data sources and should be internationally applicable. The method developed for identifying severely housing deprived people in census data is also relatively straightforward, compared with international approaches at least. The remainder of this section discusses why this method has stronger validity than three prominent international approaches, focusing on two of the variables used as proxies for a LAMAH: no other place to live and low income.

No other place to live

The population we identified as having no other place to live includes both people who reported severely inadequate housing as their usual address and people who reported having no fixed abode. The strength of this filter is that people who consider the severely inadequate housing they are living in on census night to be their usual address are included in the analysis. By contrast, FEANTSA (2008) (following UNECE/EUROSTAT, 2006) recommended that only people with “no usual place of residence” (p11) should be counted
as homeless. According to the European census guidelines, a person’s usual residence is the place they have lived for at least 12 months, or intend to stay for at least 12 months (UNECE/EUROSTAT, 2006, p35). FEANTSA’s restriction of homelessness to people with no usual place of residence therefore excludes people who report their severely inadequate census night housing as their usual address. People who have been living in the same severely inadequate housing for a relatively long period of time will be excluded from the homeless population. There are other reasons why no fixed abode, on its own, is a poor proxy for a LAMAH – see Amore (in preparation) for a full discussion.

**Low income**

Low income is the best indicator of economic resources available in New Zealand census data. As economic resource is a key determinant of access to adequate housing, low income is the best indicator available to identify people who LAMAH. The Australian Bureau of Statistics (2012c) and Chamberlain and MacKenzie (2003; 2008) used many different socio-economic indicators to identify people who seemed likely to be living in inadequate housing for reasons other than a LAMAH. All these methods identify people who are not homeless, and count everyone else as homeless, even though there may be very little information on some people classified as homeless. This approach is clearly problematic, and is likely to falsely inflate the size of the homeless population. People should be identified as severely housing deprived (homeless) based on their stated characteristics. If it is not possible to make a reasonable determination of their status because crucial information is not available, they should be classified as housing deprivation status cannot be determined (as per figure 3).

The Australian Bureau of Statistics developed a rule for identifying ‘grey nomads’ (older people voluntarily travelling for extended periods) – a group they classify as not homeless. Grey nomads are operationally defined as people living in caravans, cabins, or houseboats – in which all people in the dwelling on census night were 55 years or older, reported having no usual address, and were not in the labour force. However, these characteristics are not specific to grey nomads, they also describe housing deprived older people.

Using a low-income filter is a more valid way to separate older people who live in mobile dwellings due to a LAMAH from grey nomads, who live in mobile dwellings because they are travelling. According to the method presented in this paper, a household that usually lives in a mobile dwelling whose only source of income was New Zealand Super would be classified as severely housing deprived. New Zealand Super rates are under (but close to) the ‘before housing costs poverty line’ (Perry, 2012). However, a household on such a low income is unlikely to be able to afford to become voluntary grey nomads and travel for an extended period. People with wealth are likely to be receiving income from their investments, which would put their reported income over the low-income threshold.

Carroll’s (2010) qualitative research on people living in informal housing (including public spaces, vans, sheds, and garages) in Coromandel and Auckland showed that older people living permanently in mobile dwellings, even those in holiday areas such as Coromandel, should not be assumed to be living in that situation by choice. A strength of the method presented in this paper is that it involves consistent application of criteria to people of all ages in all housing types. It uses people’s reported incomes as an indicator of their deprivation status, rather than making assumptions based on their age.

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16 Universal income support benefit for people aged 65 years or older.
Limitations

The method for measuring severe housing deprivation presented in this paper has a number of limitations, 10 of which are discussed below.

- There is no international standard for measuring severe housing deprivation or homelessness, which limits the comparability of the results presented in this paper. Differing types and contents of national censuses limit the replicability of the method – in particular, lack of income data collection in a number of censuses.

- Two categories of severe housing deprivation could not be measured: people living in institutions not targeted at people who LAMAH; and people living in housing that lacks one or more basic amenities (with minimally adequate security of tenure).

- The housing deprivation status of 2 percent of the New Zealand population could not be determined because key census questions were not answered. Income questions were key in this approach. Socio-economically disadvantaged people are less likely to answer census income questions, so the prevalence of severe housing deprivation is likely to be underestimated.

- Children (people aged under 15 years) not living with their nuclear family could not be assessed for housing deprivation status, because income and income source data are not collected from children. Thus, severe housing deprivation among children is likely to be underestimated. It is also likely that many ‘independent’ children living in precarious situations would not have completed census forms.

- Linking to the previous point, it is likely that many severely housing deprived people did not fill out census forms, either because they did not come into contact with a census collector or because they refused to complete one. This last point includes people having so much trouble completing the form they abandoned their effort. This data gap is likely to affect all categories of severe housing deprivation measured using census data. People living without accommodation were probably least likely to come into contact with a census collector; yet people living in severely crowded housing may have been especially reluctant to fill out a form if, for example, they were overstayers or did not want to reveal the true level of crowding in their house. Although the New Zealand census is the most comprehensive source of data on the whole population, some people are not counted. The number of uncounted severely housing deprived people cannot be calculated. The census post-enumeration survey, which estimates the size of the undercount of the New Zealand population, only includes people living in permanent private dwellings.

- Measuring the severely housing deprived population living in emergency housing was limited by the availability of administrative data. The more historical the data required, the greater the problem of data unavailability. We could not obtain data from 77 percent of known providers in 2001, 38 percent in 2006, and 28 percent in 2009. All surveyed providers reported collecting basic demographic data, and acquiring these data is likely to be less of a problem for future monitoring. Some providers are very small, with very limited resources and considerable pressure on their time, so they are likely to need support if they are to provide data to contribute to future severe housing deprivation statistics.

- Some forms of commercial accommodation are difficult for census collectors to correctly identify. This is especially true for boarding houses, which can be suburban houses with
no signage. Misclassifying boarding houses as private dwellings would contribute to underestimation of severe housing deprivation. Chamberlain (2012) highlighted this problem in the Australian context. However, in New Zealand (and most parts of Australia) there are no alternative sources of data on boarding house numbers or the characteristics of their residents, so it is not possible to calculate the magnitude of boarding house misclassification, or its effect on severe housing deprivation estimates.

- Low income was used as an indicator of a LAMAH, but is limited in its representation of people’s actual financial position. People who reported higher incomes were excluded from the severely housing deprived population, but may have lacked access to minimally adequate housing for reasons such as high rents in an area, lack of supply of minimally adequate housing (such as following the Canterbury earthquakes), discrimination, or requiring a specific type of dwelling that is difficult to access (suitable for a person with a disability or for a large family, for example).

- Severe household crowding was used as a proxy for LAMAH, which excluded people sharing with friends or family in houses that were not crowded. Severe household crowding is more common among Māori and Pacific people than other ethnic groups (Statistics NZ, 2012a), so this is likely to have produced an ethnic bias in the severe housing deprivation results.

- The results presented in this paper reflect the levels of severe housing deprivation in 2001 and 2006, not the current level. Censuses are key datasets for measuring severe housing deprivation, but their infrequency limits our ability to have an up-to-date picture of the problem. The most recent New Zealand Census of Population and Dwellings was conducted in March 2013.

5.5 Further research needs

- It would be useful to compare the prevalence and profile of severe housing deprivation in New Zealand with overseas. Currently, meaningful comparison is impossible because populations identified as severely housing deprived or homeless are so different between countries. Until an international standard for measuring this population is established, multiple definitions could be applied to national data, and the validity of each discussed. Amore (in preparation) applied the European ETHOS Light operational definition of homelessness to the same data used in this study, with very different results to those presented in this paper. Applying different methods of measuring severe housing deprivation may help guard against reification of statistics in this area.

- The links between severe housing deprivation and health and well-being outcomes should be investigated. Such research could use probabilistic linkage of census to mortality or hospitalisation data. Mortality data for homeless and marginally housed people have been linked to national census records in Canada (Hwang et al, 2009), revealing that these living situations are associated with much higher mortality than expected on the basis of low income alone. The New Zealand Health Survey could be developed to include a severe housing deprivation indicator, and to include people living in non-private dwellings in its sampling frame.

- A longitudinal study would provide important information about the causes and consequences of severe housing deprivation, as well as what helps to resolve it. Such a study is underway in Australia – known as Journeys Home (Melbourne Institute of Applied Economic and Social Research, 2012). This study used data from Centrelink, the
Australian government’s income support agency, which routinely collects data to classify their clients as homeless, at risk of homelessness, or neither homeless nor at risk of homelessness, providing a sampling frame for research and a tool for improving service delivery (Wooden et al, 2012).

- Household surveys (particularly the General Social Survey) could be used to investigate both the number and characteristics of severely housing deprived people sharing with friends or family in permanent private dwellings, and previous experiences of severe housing deprivation. Previous experience of homelessness has been investigated using the Australian General Social Survey (Australian Bureau of Statistics, 2012a) and the Scottish Household Survey (Scottish Government, 2009).

- People living in non-private dwellings should be included in the sampling frame for official large-scale surveys that inform important policies, such as the Household Economic Survey, Household Labour Force Survey, the New Zealand Health Survey, and living standards research. It is very problematic that vulnerable people in the most deprived living situations are systematically excluded from surveys that seek to be representative. We acknowledge that international guidelines tend to recommend limiting the sampling frames of such surveys to permanent private dwellings.

5.6 Recommendations for improving measurement of severe housing deprivation

Conceptual definition and classification

1. The conceptual definition and classification published as the New Zealand Definition of Homelessness (Statistics NZ, 2009a) has some validity problems, and should be modified to reflect the approach presented in this paper.

Data collection

Outreach

2. It is important to acknowledge that census data are never likely to accurately represent the hard-to-reach population living without accommodation, regardless of investment in improving collection processes. This is not to say that such improvement should not be pursued, as everyone has the right to be counted. However, the best method for collecting information from this population is through outreach services that can help, not just count, this vulnerable population. Existing and new outreach services should be required to collect and regularly report basic information about the population they interact with.

Census

3. Statistics NZ should continue to build partnerships with agencies that provide services to severely housing deprived people in order to improve the reach of the census, particularly to those living without accommodation. More effort should be invested in identifying which services will be the most appropriate collection sites, and training staff of these services to educate clients about the census, to encourage them to participate, and to create an environment that makes it easy for them to do so. The likelihood of reaching this population with the census largely depends on the preparation of services
in this sector. Those that are willing to commit to the task should be provided with clear
guidance and support. However, census collectors should be independent from the
services, and it should be very clear to clients that receipt of services does not depend
on their participation in the census.

4. Dwellings that lack basic amenities cannot currently be identified – this should be
remedied. The presence or absence of basic amenities is ostensibly a criterion by which
all New Zealand housing is classified in census data, and is recommended by the United
Nations. Electricity, gas, and water supply information could be utilised, direct questions
asked of residents, or proxies could be developed and tested. All housing that lacks one
or more basic amenities should be identifiable.

5. Census data collection should be developed so that families and groups living as
economic units in non-private dwellings can be identified. This is particularly relevant for
non-private dwellings that provide long-term accommodation, such as boarding houses.
The United Nations recommends “persons living in hotel or boarding houses should be
distinguished as members on one- or multi-person households, on the basis of the
arrangements that they make for providing themselves with the essentials for living”

6. A census question(s) regarding tenure of individuals in rental housing should be
developed. Such information would allow for more accurate identification of temporary
residents, rather than relying on a proxy. It would also be useful for other research.

Other collections

7. Agencies that provide services to severely housing deprived people should be supported
to collect and report information on severe housing deprivation among their clients, in
line with the classification presented in this paper. These agencies include emergency,
social, and community housing providers – including HNZC. Consistent identification of
severely housing deprived people would create many research opportunities, and be
useful for policy and practice.

8. Boarding houses should be registered, both for monitoring purposes and research. Many
boarding house dwellings are of poor physical quality and accommodate very vulnerable
people (Aspinall, 2013). Given the challenges in accurately identifying boarding houses
during census collection, and exclusion of boarding house residents from population
surveys, very little is known about this population. A comprehensive register would
provide a robust sampling frame for research and could be used to improve accurate
identification of boarding houses in the census.

9. Following Australia, Work and Income New Zealand should institute a severe housing
deprivation indicator, which would be useful for service delivery and have important
research potential.

10. Collection of severe housing deprivation data should be explored for Statistics NZ
surveys such as the General Social Survey.

11. Valid and comprehensive measurement of housing quality should be addressed
promptly. This an important Tier 1 statistic, for which New Zealand has not had nationally
representative data since 1935, and was identified as a key issue in the Review of
Housing Statistics (Statistics NZ, 2009). A regular, systematic, national housing survey
should be considered to provide data on the quality of New Zealand housing, covering all tenure types.

Analysis

12. Severe housing deprivation should continue to be measured using the methodology developed in this study, using 2013 data and beyond.
6 References


Appendix 1: Definitions of severe housing deprivation categories, by housing type

Table A1 Definitions of the housing types in each severe housing deprivation category (categories a–e)

<table>
<thead>
<tr>
<th>Housing type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Living rough</td>
<td>i) Living without a dwelling (that is, not in an enclosed structure)</td>
</tr>
</tbody>
</table>
| b. Housing that is enclosed but lacks one or more basic amenities (and in which residents lack minimally adequate security of tenure) | i) Living quarters enclosed but lacking one or more of the following amenities – drinkable water, toilet, bath or shower, cooking facilities, energy source; and  
ii) Managed by the residents (that is, private); and  
iii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing. |
| c. Night shelter                                        | i) Targeted at people who LAMAH; and  
ii) Dwelling not managed by the residents (that is, non-private); and  
iii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
v) Provides services to residents that are over and above accommodation; and  
v) Residents lack 24-hour access to the dwelling. |
| d. Women’s refuge                                       | i) Targeted at people who LAMAH – specifically to people involved with domestic violence, sexual abuse, or both, and;  
ii) Dwelling not managed by the residents (that is, non-private); and  
iii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
v) Provides services to residents that are over and above accommodation; and  
v) Residents have 24-hour access to the dwelling. |
| e. Other accommodation targeted at people who lack access to minimally adequate housing | i) Targeted at people who LAMAH; and  
ii) Dwelling not managed by the residents (that is, non-private); and  
iii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
v) Provides services to residents that are over and above accommodation; and  
v) Residents have 24-hour access to the dwelling; and  
v) Is not a women’s refuge. |
Table A2 Definitions of the housing types in each severe housing deprivation category (categories f–k)

<table>
<thead>
<tr>
<th>Housing type</th>
<th>Definition</th>
</tr>
</thead>
</table>
| f. Institution that is not targeted at people who lack access to minimally adequate housing | i) Not targeted at people who LAMAH; and  
ii) Dwelling not managed by the residents (that is, non-private); and  
iii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
iv) Provides services to residents that are over and above accommodation. |
| g. Camping ground / motor camp                                              | i) Dwelling not managed by the residents (that is, non-private); and  
ii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
iii) Provided on a for-profit basis; and  
iv) Dwelling is located in a camping ground or motor camp. |
| h. Other commercial accommodation                                          | i) Dwelling not managed by the residents (that is, non-private); and  
ii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
iii) Provided on a for-profit basis; and  
iv) Dwelling is not in a camping ground or motor camp. |
| i. Marae                                                                    | i) Dwelling not managed by the residents (that is, non-private – so excludes papakāinga housing); and  
ii) Legal termination of tenancy rights are inferior to the minimum provided to people living in private housing; and  
iii) Dwelling is part of a marae complex. |
| j. Private dwelling that has all basic amenities                            | i) Dwelling has all basic amenities – drinkable water, toilet, bath or shower, cooking facilities, energy source; and  
ii) Is managed by the residents (that is, private). |
| k. Housing that lacks one or more basic amenities (with minimally adequate security of tenure) | i) Dwelling is managed by the residents (that is, private); and  
ii) The dwelling is lacking at one or more of the following amenities – drinkable water, toilet, bath or shower, cooking facilities, energy source; and  
iii) Legal termination of tenancy rights are equal to the minimum provided to people living in private housing. |
Appendix 2: Detailed algorithm for identifying severely housing deprived people in New Zealand census data

Figure A1 Detailed algorithm for identifying severely housing deprived people in New Zealand census data (runs over eight pages)

SECTION 1: Restrict to subject population

Census night population

ALGORITHM STARTS HERE

Absentee?

No

Living in a night shelter?

Living in an institution?

No

Misclassified student accommodation?

No

Subject population GO TO SECTION 2

Yes

Individual_rec_type_code = 1 Absentee

Dwell_type_code = 2111 Residential care for older people OR 2112 Public hospital OR 2113 Private hospital OR 2114 Residential and community care facilities OR 2115 Welfare institution OR 2116 Educational institution OR 2117 Religious institution OR 2118 Prison or penal institution OR 2119 Defence establishment OR 2214 Work, construction or training camp OR 2215 Youth, school, or scoutguide camp OR 2216 Communal staff quarters

Excluded from the subject population (to avoid double counting)

Excluded from the subject population (because administrative data were more accurate)

Excluded from the subject population (because people living in institutions due to a LAMA cannot be identified in census data)

Excluded from the subject population (because student accommodation is a type of institution)
SECTION 3: Criterion 2a (no other place to live)

Living in severely inadequate housing or housing of unknown adequacy

No other address?

No

Usual_resdnt_code = 2 Elsewhere in NZ OR 3 Overseas

Yes

Usual_resdnt_code

= 1 Same as census night OR 4 No fixed abode

Living rough or in an improvised or mobile dwelling?

Living in a non-private dwelling?

Living in a permanent private dwelling?

Living in housing of unknown adequacy?

GO TO SECTION 4

GO TO SECTION 5

GO TO SECTION 6

GO TO SECTION 7
SECTION 8: Criterion 2b (low income) - permanent private dwellings

Living as a temporary resident in a permanent private dwelling with no other address

Is the person accompanied by family?

No

The person does not have a JEAF value

Yes

The person has a JEAF value

Low JEAF income?

No

2006 JEAF $25,001 (Jea_band = 08 to 14)
2001 JEAF $20,001 (Jea_band = 07 to 13)

Not severely housing deprived (K)

Yes

Unknown

2006 Jea_band = 99 Not stated
2001 Jea_band = 99 Not stated

Low JEAF income?

No

Codes as per section 4

Yes

Receiving a means-tested benefit? (family level)

No/Unknown

These cannot be separately identified

Yes

Income srcf7 family code = 07 OR
Income srcf6 family code = 08 OR
Income srcf8 family code = 09 OR
Income srcf8 family code = 10 OR
Income srcf11 family code = 11

Codes as per section 4

High income
GO TO SECTION 7

Low income
GO TO SECTION 7

Income status unknown
GO TO SECTION 8

Low income
GO TO SECTION 7

Income status unknown
GO TO SECTION 8

High income
GO TO SECTION 7

Income status unknown
GO TO SECTION 8
SECTION 7: Criterion 2c (severe crowding) - permanent private dwellings

Living as a temporary resident in a permanent private dwelling with no other address and either low income or income status unknown

Is the dwelling severely crowded?  

No  

CNOS_indicator =  
2 One extra bedroom required - crowded OR 
3 No extra bedrooms required OR 
4 One bedroom spare OR 
5 Two or more bedrooms spare 

Not severely housing deprived (L)

Yes  

CNOS_indicator = 1 Two or more extra bedroom required - severely crowded

Low income?  

No  

Unknown  
CNOS_indicator = 9 Unknown OR missing

Yes  

As per section 6

Severely housing deprived (M)

Housing deprivation status cannot be determined (N)
SECTION 8: Criterion 2b (low income) and pro rata step - housing of unknown adequacy

Living in housing of unknown adequacy with no other address

Low JEAP income?  
- No: Codes as per section 4  
- Yes/unknown: Codes as per section 4

Is the person a child?  
- No: Codes as per section 5  
- Yes: Codes as per section 5

Pro rata allocation of children  
As per section 5

Housing deprivation status cannot be determined (P)

Total severely housing deprived population  
= O + F + I + N

Total not severely housing deprived population  
= A + B + C + H + K + L + O

Total housing deprivation status cannot be determined population  
= E + G + J + N + P
Appendix 3: Supporting information about client data from emergency accommodation providers

Table A3 Sex, median age, ethnicity, and family status among the severely housing deprived population living in emergency accommodation, 2006 and 2009

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>2006</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female (%)</td>
<td>55</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Male (%)</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Age (median)</td>
<td></td>
<td>28 years</td>
<td>27 years</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>European (%)</td>
<td>42</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Māori (%)</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Pacific (%)</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Asian (%)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MELAA (%)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Family status</td>
<td>Sole parent with dependent child/ren (%)</td>
<td>39</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Adult not accompanied by family (%)</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Couple with dependent child/ren (%)</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Couple without children (%)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Sole parent with adult child/ren (no dependants) (%)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Couple with adult child/ren (no dependants) (%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Family with children of unknown dependency status (%)</td>
<td>14</td>
<td>26</td>
</tr>
</tbody>
</table>

Table A4 Non-response rates for emergency accommodation provider data

<table>
<thead>
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<th>Variable</th>
<th>2001</th>
<th>2006</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>12</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Age</td>
<td>35</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>32</td>
<td>20</td>
<td>27</td>
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<tr>
<td>Family status</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In table A4, most missing information was for accompanying children. All surveyed providers reported collecting this information about accompanying children, but some providers only provided the demographic characteristics of the ‘head of household’, and were not pursued.
### Appendix 4: Severe housing deprivation by territorial authority

**Table A5 Count and prevalence of severe housing deprivation, by territorial authority area and living situation (Far North to Ruapehu), 2006**

<table>
<thead>
<tr>
<th>Territorial authority area</th>
<th>Living situation</th>
<th>Total severely housing deprived</th>
<th>Prevalence of severe housing deprivation per 10,000 people</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without accommodation</td>
<td>Non-private accommodation</td>
<td>Temporary resident in a severely crowded permanent private dwelling</td>
</tr>
<tr>
<td>1 Far North district</td>
<td>414</td>
<td>102</td>
<td>432</td>
</tr>
<tr>
<td>2 Whangarei district</td>
<td>210</td>
<td>167</td>
<td>369</td>
</tr>
<tr>
<td>3 Kaipara district</td>
<td>93</td>
<td>18</td>
<td>54</td>
</tr>
<tr>
<td>4 Rodney district</td>
<td>138</td>
<td>88</td>
<td>87</td>
</tr>
<tr>
<td>5 North Shore city</td>
<td>33</td>
<td>77</td>
<td>651</td>
</tr>
<tr>
<td>6 Waitakere city</td>
<td>72</td>
<td>84</td>
<td>1,347</td>
</tr>
<tr>
<td>7 Auckland city</td>
<td>171</td>
<td>1,382</td>
<td>3,669</td>
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<tr>
<td>8 Manukau city</td>
<td>231</td>
<td>263</td>
<td>5,661</td>
</tr>
<tr>
<td>9 Papakura district</td>
<td>87</td>
<td>66</td>
<td>495</td>
</tr>
<tr>
<td>10 Franklin district</td>
<td>78</td>
<td>24</td>
<td>222</td>
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<tr>
<td>11 Thames-Coromandel district</td>
<td>174</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>12 Hauraki district</td>
<td>72</td>
<td>9</td>
<td>51</td>
</tr>
<tr>
<td>13 Waikato district</td>
<td>63</td>
<td>33</td>
<td>267</td>
</tr>
<tr>
<td>15 Matamata-Piako district</td>
<td>36</td>
<td>18</td>
<td>96</td>
</tr>
<tr>
<td>16 Hamilton city</td>
<td>54</td>
<td>232</td>
<td>846</td>
</tr>
<tr>
<td>17 Waipa district</td>
<td>42</td>
<td>45</td>
<td>87</td>
</tr>
<tr>
<td>18 Otorohanga district</td>
<td>15</td>
<td>30</td>
<td>39</td>
</tr>
<tr>
<td>19 South Waikato district</td>
<td>15</td>
<td>24</td>
<td>162</td>
</tr>
<tr>
<td>20 Waitomo district</td>
<td>21</td>
<td>24</td>
<td>78</td>
</tr>
<tr>
<td>21 Taupo district</td>
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<td>145</td>
<td>120</td>
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<tr>
<td>22 Western Bay of Plenty district</td>
<td>294</td>
<td>33</td>
<td>195</td>
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<tr>
<td>23 Tauranga city</td>
<td>171</td>
<td>81</td>
<td>423</td>
</tr>
<tr>
<td>24 Rotorua district</td>
<td>87</td>
<td>84</td>
<td>444</td>
</tr>
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<td>25 Whakatane district</td>
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<td>101</td>
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<td>26 Kawerau district</td>
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<td>3</td>
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<td>12</td>
<td>93</td>
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<td>28 Gisborne district</td>
<td>102</td>
<td>75</td>
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</tr>
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<td>30 Hastings district</td>
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<td>133</td>
<td>543</td>
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<tr>
<td>31 Napier city</td>
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<td>32 Central Hawke's Bay district</td>
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<tr>
<td>33 New Plymouth district</td>
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<td>74</td>
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<td>34 Stratford district</td>
<td>6</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>35 South Taranaki district</td>
<td>21</td>
<td>6</td>
<td>57</td>
</tr>
<tr>
<td>36 Ruapehu district</td>
<td>18</td>
<td>77</td>
<td>48</td>
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</tbody>
</table>
Table A6 Count and prevalence of severe housing deprivation, by territorial authority area and living situation (Wanganui to Invercargill), 2006

<table>
<thead>
<tr>
<th>Territorial authority area</th>
<th>Living situation</th>
<th>Temporary resident in a severely crowded permanent private dwelling</th>
<th>Total severely housing deprived</th>
<th>Prevalence of severe housing deprivation per 10,000 people</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without accommodation</td>
<td>Non-private accommodation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37 Wanganui district</td>
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<td>42</td>
<td>162</td>
<td>234</td>
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<td>38 Rangitikei district</td>
<td>18</td>
<td>36</td>
<td>45</td>
<td>102</td>
</tr>
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<td>87</td>
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<td>21</td>
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<td>81</td>
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<td>42 Horowhenua district</td>
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<td>24</td>
<td>102</td>
<td>162</td>
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<td>21</td>
<td>72</td>
<td>111</td>
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<td>646</td>
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<td>945</td>
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<td>21</td>
<td>6</td>
<td>54</td>
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<td>35</td>
<td>15</td>
<td>98</td>
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<td>56 Grey district</td>
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<td>36</td>
<td>9</td>
<td>96</td>
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<td>6</td>
<td>63</td>
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<td>58 Hurunui district</td>
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<td>18</td>
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<td>36</td>
<td>213</td>
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<td>942</td>
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<td>12</td>
<td>81</td>
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<td>15</td>
<td>24</td>
<td>75</td>
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<td>65 Mackenzie district</td>
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<td>12</td>
<td>0</td>
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<td>66 Waimate district</td>
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<td>15</td>
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</tr>
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<td>67 Chatham Islands territory</td>
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<td>65</td>
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</table>
Appendix 5: Regional severe housing deprivation statistics

Table A7 Severely housing deprived population, by regional council area, sex, age group, and ethnicity, 2006

<table>
<thead>
<tr>
<th>Regional council area</th>
<th>Sex Female</th>
<th>Male</th>
<th>Age group (years)</th>
<th>European/Other</th>
<th>Māori</th>
<th>Pacific</th>
<th>Asian</th>
<th>MELAA (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>15–24</td>
<td>25–44</td>
<td>45–64</td>
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<td>31</td>
<td>17</td>
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<td>22</td>
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<td>52</td>
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<td>29</td>
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<td>24</td>
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<td>Bay of Plenty</td>
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<td>23</td>
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<td>Gisborne</td>
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<td>15</td>
<td>5</td>
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</tr>
<tr>
<td>Hawke's Bay</td>
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<td>50</td>
<td>31</td>
<td>24</td>
<td>25</td>
<td>12</td>
<td>7</td>
<td>44</td>
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<td>47</td>
<td>53</td>
<td>29</td>
<td>26</td>
<td>23</td>
<td>16</td>
<td>6</td>
<td>60</td>
</tr>
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<td>22</td>
<td>31</td>
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<td>17</td>
<td>10</td>
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<td>Wellington</td>
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<td>24</td>
<td>33</td>
<td>24</td>
<td>13</td>
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<tr>
<td>West Coast</td>
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<td>62</td>
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<tr>
<td>Southland</td>
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<td>26</td>
<td>22</td>
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<td>11</td>
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<td>52</td>
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<td>21</td>
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<td>30</td>
<td>6</td>
<td>82</td>
</tr>
<tr>
<td>Marlborough</td>
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<td>57</td>
<td>12</td>
<td>20</td>
<td>28</td>
<td>29</td>
<td>11</td>
<td>74</td>
</tr>
</tbody>
</table>

1. Total response ethnicity data. If a person reported more than one ethnicity, they are included in each ethnic group.
2. Other includes New Zealander.
3. MELAA is Middle Eastern, Latin American, and African.