We all count

Homelessness count rapid literature review and deep dive

29 June 2018

ALLEN+CLARKE

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ALLEN + CLARKE

Allen and Clarke Policy and Regulatory Specialists Limited (*Allen + Clarke*) is a consultancy firm based in Wellington, New Zealand. We specialise in research and evaluation, policy and programme development and implementation, business change, operational management and risk, and secretariat services. A key component of our work is undertaking reviews and developing and implementing policies that improve the outcomes for the public. Founded in 2001, the company is owned and managed by senior staff and has a team of approximately forty-five senior evaluation and policy practitioners, analysts and project support staff. Our company works extensively for a range of government agencies in New Zealand, and international clients and non-government organisations in the Pacific and Asia. More information about our work can be found on our website: www.allenandclarke.co.nz.

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Executive Summary

Context

Taking significant action to end homelessness in New Zealand is a key priority for the Government. Having the right data on homelessness will help build the evidence base and guide the Government's response.

The Minister of Housing and Urban Development has asked the Ministry of Social Development to investigate a number of actions to improve data on homelessness in New Zealand, including investigating approaches to counting the without shelter category of the homeless population. Accordingly, the Ministry of Social Development seeks to better understand the methods that have been used internationally to collect data on homeless populations.

The Ministry of Social Development commissioned Allen + Clarke to carry out a literature review of methods for counting homeless populations used internationally and a deep dive into methods for counting homeless people without shelter to inform recommendations on the suitability of different methods for New Zealand.

Methods for counting homeless populations

The New Zealand definition of homelessness is as follows:

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 New Zealand 2009)

Counting homeless populations is challenging. People that are homeless may live in inaccessible or difficult to observe locations (for example an abandoned house, or a friend's couch or garage) or be unwilling to engage with service providers or researchers.

The literature includes the following methods of counting homeless populations:

Point-in-time count approaches give a "snap shot" count of people that are homeless during a short period of time (for example during a few hours on a single night). Many approaches can be used including street or service-based surveys, street observations and the collection of shelter-held data. Period prevalence counts use similar data collection methods to point-in-time counts but the counts take place over a longer time period (for example 30 days).

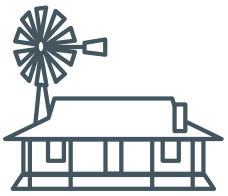
Named-list approaches involve the maintenance of a real-time register of homeless individuals identified by name, typically at a city/area level, which can be used to link homeless people with homes and to monitor the flow of individuals into and out of homelessness. The most prominent example is the By-Name List approach which includes an initial registry week data collection period.

Capture-recapture is a statistical method of estimating the size of a homeless population using multiple samples. Capture-recapture appears in the academic literature but does not appear to have been implemented consistently over time in any jurisdiction.

Registration and administrative data are used in some countries to collate statistics on the number and demographics of homeless people.

Deep Dive Summary

The deep dive section of this review focused on methods for counting without shelter homeless people. The literature reviewed suggests that two methods, point-in-time counts and named-list approaches, are best suited for counting without shelter homeless people in New Zealand. The deep dive looked at the specific issues raised when using these approaches to count rural, Māori, youth without shelter homeless populations and people who do not access government or community assistance. Implementation issues were explored including resources required, ethics and data collected.



Rural

Counting without shelter homeless populations in rural areas is challenging as rough sleeping is often hidden in rural areas, there may not be specific homeless services to aid in data collection, and because of the large geographical area they cover. The literature suggests that point-in-time counts may be unsuitable in rural areas and that collecting data over a longer time period may be more suitable. Named-list approaches may be suitable, but the resources required for these methods to function may not always be available in rural areas.

Māori Populations

The literature suggests that regardless of method, counts should be designed and conducted as a collaboration with Māori. This partnership should include Māori service providers, Māori researchers, volunteers, community leaders, and Māori individuals with experience of being without shelter, and should involve speakers of te reo Māori. Further, the non-Māori workforce should be trained in bi-cultural protocols to ensure that surveys or interviews are conducted in a culturally appropriate manner.

Youth

Homeless youth are difficult to count as they are typically harder to locate and identify. The literature suggests including youth service providers, youth workers and other organisations working with youth, as well as formerly or currently homeless youth in the count planning processes. This will apply to both point-in-time counts and engagement as part of named-list approaches.

Those who don't engage with services

The literature suggests that point-in-time counts may be better suited to count without shelter homeless people who do not engage with services. However, both point-in-time and named-list approaches may be suitable depending on their design and focus. Individuals in this group may be less willing to participate in a survey or be added to a named-list.

Implementation

The literature was reviewed to explore a broad range of questions about implementation including which organisations might best implement counts in the New Zealand context, the resources required, timing of counts or registry weeks, variables to be collected, ethical considerations and what data different methods might produce.

Who implements the counts?

Internationally, point-in-time counts have been implemented at the city/local level by NGOs or local governments. The need for accurate data that can be compared across different cities/areas suggests a strong role for central government in providing guidelines on the design and implementation of counts.

Named-lists are implemented at the city/local level and are typically maintained by a single NGO or local government. Named-lists require participation and ongoing data from multiple organisations to keep lists accurate.

Resources

Planning and implementing point-in-time counts or period prevalence counts is expensive and time-consuming, requiring the involvement of a range of stakeholders including homeless people, homelessness-related NGOs, central and local government, academics, police and other emergency services, and community representatives. Paid staff and volunteers typically conduct the count and must be trained and supported.

The organisation implementing a named-list approach must obtain ongoing funding and other resources to carry out its primary role: to link homeless people with housing. Any data collection carried out by the organisation must be funded and coordinated. Other organisations that maintain the list will also require appropriate resources and training.

Implementation

Data and Ethics

Counting the without shelter homeless population raises ethical issues regarding informed consent, use of incentives, and privacy. Incentives or koha are commonly used to increase participation rates but require consideration of issues around consent. As with all research, informed consent should be obtained from all individuals surveyed during a count.

Data collected using point-in-time surveys typically include information about current homelessness status and demographic data such as age, gender and ethnicity. Data may be collected on a person's health and history of homelessness. Point-in-time counts are useful for producing a local or national picture of homelessness and can inform service planning and identify trends.

Data collected as part of a named-list approach are extensive and typically include screening tools which collect detailed information about a person's situation in order to better help them. Named-lists can also generate detailed prevalence data.

Conclusions

Both point-in-time counts and named-list approaches are suitable for counting New Zealand's without shelter homeless population. The choice of method will reflect the intended outcomes of the count. Point-in-time counts, if carried out well in New Zealand, could be used to assess need for services at an area or national level, identify trends over time, assess the impact of policy changes and characterise without shelter populations demographically. Named-list methods used in key New Zealand cities could move homeless individuals and families into housing and produce rich descriptive data as a secondary outcome.

It is important to note that the two methods can be implemented in a variety of ways. Trade-offs between accuracy and cost will be required by decision makers. A large body of grey literature provides excellent guidance on the specifics of implementation.

1. INTRODUCTION

1.1. Background

Homelessness is an ongoing multi-dimensional challenge for policy makers in both the developing and developed worlds. In order to effectively provide homeless people with services and to reduce rates of homelessness policy-makers need to know the size and characteristics of homeless populations and how these populations are changing over time.

In 2009 New Zealand adopted a definition of homelessness that drew on the European Typology of Homelessness and Housing Exclusion (ETHOS) developed by the European Federation of National Organisations Working with the Homeless (FEANTSA) and the European Observatory on Homelessness (EOH). The New Zealand definition is as follows:

> *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 New Zealand, 2009)

The four living situations are described in more detail in Appendix 2 of *The New Zealand Definition of Homelessness*:

- without shelter includes living on the street or in improvised dwellings such as a garage, tent or car;
- temporary accommodation includes night shelters, refuges, boarding houses, camping grounds and marae;
- sharing accommodation means sharing accommodation with a household; and
- uninhabitable housing means dilapidated or otherwise uninhabitable housing.

  (Statistics New Zealand, 2009)

Taking significant action to end homelessness in New Zealand is a key priority for the Government. Having the right data on homelessness will help build the evidence base and guide the Government's response.

The Minister of Housing and Urban Development has asked the Ministry of Social Development (MSD) to investigate a number of actions to improve data on homelessness in New Zealand, including investigating approaches to counting the without shelter category of the homeless population. Accordingly, MSD seeks to better understand the methods that have been used internationally to collect data on homeless populations. *Allen + Clarke* were commissioned to undertake an international literature review of methods of counting homeless populations.

During the drafting of this report a major point-in-time count of Auckland's without shelter homeless population was being planned, with an implementation date of September 17, 2018. Obtaining detailed information about the count was outside the scope of the review but it is hoped that the results, methods used, and lessons learned are made public and will complement the findings presented here.

1.2. Purpose

The purpose of this report is to present findings from a literature review of methods for counting homeless populations[1] used internationally. The report also presents findings from a deep dive into methods for counting homeless people without shelter to inform recommendations on the suitability of different methods for New Zealand.

1.3. Structure of this report

This report is presented in six sections:

- Section 1 provides the background and purpose of the literature review;
- Section 2 presents an overview of the methodology of the literature review, including the key search terms used to initially identify academic and grey literature and the number of sources identified;
- Section 3 briefly outlines some of the challenges of counting homeless populations, then presents methods used to count homeless populations internationally;
- Sections 4 – 6 present a deep dive into two methods, point-in-time counts and named-list approaches, that were identified as being most suitable for counting New Zealand's without shelter homeless population;
    - Section 4 looks at issues around counting specific without shelter populations.
    - Section 5 explores the implementation of the two methods.
    - Section 6 provides an overview of the strengths and weaknesses of the two methods for counting without shelter homeless people in New Zealand.

[1] Aligned to the New Zealand definition of homelessness.

2. LITERATURE REVIEW METHODOLOGY

The following research questions were used to define the scope of the literature review:

1. What methodologies are presented in the literature to count the full homeless population?[2]
2. What are the strengths and weaknesses of each methodology to count those without shelter in New Zealand?
3. How can each methodology (to count those without shelter) be implemented in the New Zealand context (for example a consideration of cost, privacy/data management, consent and appropriate implementing agencies)?

A deep dive analysis of the suitability of the identified methodologies to count specific without shelter homeless populations identified by MSD was also conducted.

The search parameters, including inclusion and exclusion criteria, are presented in Appendix 3: Literature review inclusion process. Of note, the literature search included terms to differentiate between the total homeless population and those living without shelter. Terms for known methods of counting homelessness including 'Point-in-time', 'By-Name Lists', 'Census', 'Service user' and 'Survey' were included in the search.

The literature search returned 68 peer-reviewed journal articles and 37 pieces of grey literature from across the following countries/jurisdictions: Australia; United Kingdom; Ireland; United States; New York; California; Canada; Finland; Sweden; Norway; Denmark; and the OECD. Each document was reviewed against the inclusion and exclusion criteria and 50 documents were selected for inclusion. Key themes were identified from the literature.

[2] Homelessness is defined as the New Zealand definition of homelessness, which includes populations who are in temporary accommodation, in shared accommodation, in uninhabitable accommodation, or without shelter.

3. METHODS FOR COUNTING HOMELESS POPULATIONS

Counting the homeless population is a challenging process. People that are homeless may live in inaccessible or difficult to observe locations (for example an abandoned house, or a friend's couch or garage) or be unwilling to engage with service providers or researchers. This means that undercounting is a common occurrence that is difficult to quantify (Girard, 2006; Peressini, McDonald, & Hulchanski, 2010). Other difficulties include the transient and fluid nature of the homeless population (Gabbard et al., 2007), which reduces the value of population estimates made at a point in time. In addition, the literature suggests that many counting methods may be more likely to overcount chronically homeless people and to undercount homeless youth and homeless people in rural areas.

In Western countries, historically, homeless populations have typically been counted in indirect ways using administrative data held by service providers or key informant estimates (Berry, 2007). These approaches lack rigour and are unlikely to provide reliable or consistent data. In the past 30 years approaches to counting have become more rigorous and two leading approaches have emerged and been refined: **point-in-time approaches** and **named-list approaches**. Other approaches discussed in the literature include the use of **administrative data**, **capture-recapture** and sampling techniques such as **respondent driven sampling**.

It is important to note that, while this section is an exploration of methods suitable for counting homeless populations under the full New Zealand definition, the majority of the methods identified in the literature are typically used to count a more narrowly defined homeless population such as people without shelter or people living in temporary accommodation.

3.1. Point-in-time count approaches

Point-in-time count approaches provide a snapshot of the extent of homelessness in a community by surveying individuals who are experiencing homelessness during a short period such as 24 hours (Schneider, Brisson, & Burnes, 2016). Point-in-time count approaches can be used to provide local and national estimates of the extent of homelessness and can inform service planning, provision, and funding allocation, as well as local and national policy responses (Donaldson, 2017; Schneider et al., 2016). One of the limitations of point-in-time count approaches is that they are more likely to identify chronically homeless individuals and less likely to identify those who experience brief periods of homelessness (Employment and Social Development Canada, 2018).

3.1.1. Censuses of the general population

Censuses of the general population can provide valuable point-in-time information about homeless populations. For example, Amore et al. (2013) estimate the size of New Zealand's severely housing deprived population[3] using a combination of census and emergency accommodation provider data. Australia also estimates its homeless population from its Census of Population and Housing which takes place every five years (Australian Bureau of Statistics, 2012). Other examples of census-based counts include counts based on population registers in

[3] The authors define the severely housing deprived population as 1. Living in severely inadequate housing (which includes rough sleeping) *and* meeting at least one of the following conditions: 2a. Having no other place to live, 2b. Having a low income or 2c. Living in a severely crowded dwelling (applied only to temporary residents in conventional dwellings).

Scandinavian countries such as Denmark (Edgar, 2009). One advantage of censuses of the general population is that they can effectively include people in shared accommodation who "*do not have the option to acquire safe and secure housing*" (Statistics New Zealand, 2009), who are often referred to in the literature as the "hidden homeless". Identifying whether such people "*do not have the option to acquire safe and secure housing*" requires the collection of additional information. Disadvantages of censuses of the general population include their infrequency and high cost. Some groups may also be undercounted or missed depending on census design.

The work of Amore et al. (2013) makes clear the need for conceptually consistent operationalisable definitions of homelessness. In 2018, for the first time, the census collected housing quality data which can be used to identify people who are living in uninhabitable housing, making it easier to identify this group.

Censuses of the general population are potentially suitable for counting the full homeless population under the current New Zealand definition.

3.1.2. Point-in-time counts

Some jurisdictions carry out point-in-time counts specifically targeted at counting homeless populations. Counts are often conducted by surveying[4] or simply observing[5] homeless individuals within a geographic area over a few hours on a single night or day. Counts may combine data from surveys carried out in night shelters and the streets or may focus only on a particular group such as those without shelter. Some counts also include day street surveys and surveys administered at non-shelter homelessness service providers in order to attempt to include the "hidden homeless" (Eberle, Graham, & Goldberg, 2010). Data from registers held by shelters may provide point-in-time count data.

Surveys typically collect demographic data, information about a person's current housing status and history of homelessness and enough identifying information to avoid double counting (HUD, 2008).

Street counts are typically performed by trained volunteers and service providers but coordinated by local homelessness agencies, service providers, or local or central government (Donaldson, 2017; Schneider et al., 2016). In some cases, complete street counts may be attempted while in others sampling methods are used to extrapolate observations from a sample of areas to estimate the total without shelter homeless population of a city/area (HUD 2008, 2014). Researchers have also used sophisticated statistical methods to extrapolate from samples, for example stochastic gradient boosting. This allows models to penalise overcounting or undercounting depending on the requirements and goals of the count (Kriegler & Berk, 2010). These methods require expert local knowledge to categorise areas based on the likelihood that they will contain without shelter homeless people. This dictates the probability that an area will be surveyed.

Peressini, McDonald, and Hulchanski (2010) emphasise the difficulties of street counts, noting the very mobile nature of this population which makes planning difficult, and the practical issues of counting people who may be hard to see and not wish to be counted.

It is generally accepted that point-in-time counts will overcount chronically homeless people and undercount the temporarily homeless. This relates to each individual's probability of being

[4] Counts may survey all homeless people encountered or a representative sample (HUD, 2014)
[5] Some point-in-time counts rely on observation and judgement only (for example counting all people sleeping on the street or "panhandling" from 12 AM – 3 AM without any interaction) (HUD, 2008)

homeless and thus counted on a given day. This in turn means that demographic data derived from point-in-time counts will be weighted towards the characteristics of the chronically homeless compared to prevalence-based demographic data.

Point-in-time counts are potentially suitable for counting/estimating the size of full homeless populations under the current New Zealand definition but are typically used to count/ estimate the size of populations without shelter or in temporary accommodation and may miss or undercount homeless people in shared accommodation and uninhabitable housing depending on their design.

3.1.3. Period prevalence counts

Period prevalence counts use similar data collection methods to point-in-time counts, but take place over a longer time period (Kauppi, 2017). Point-in-time counts are typically conducted over a 24-hour period while period prevalence counts may be conducted over 7 days or even over 30 days (Kauppi, 2017; Robinson, 2004).

The main advantage of period prevalence counts is that they can be used to produce more comprehensive data on the number of people experiencing homelessness as they provide a longer period in which to identify and survey homeless people. The literature suggests that this may make period prevalence counts more suitable than point-in-time counts for estimating the size of hard to count homeless populations including those in rural areas, homeless youth and indigenous people, women, and those from LGBTIQ+ communities (Kauppi, 2017). However, conducting counts over a longer period increases the chance that some homeless people may be counted more than once. To overcome this, information should be collected at the time of each survey to create a unique identifier. For example, unique identifiers can be created using a combination of a person's initials, date of birth and gender to prevent duplicate information being collected during the counting period (Kauppi, 2017).

Period prevalence counts may also be used for logistical reasons, for example the biennial homeless count carried out in Los Angeles takes place over three days due to the large area covered (Troisi, D'Andrea, Grier, & Williams, 2015). Homelessness service-based period prevalence counts may also be used over longer periods (for example 30 days) in rural areas to address specific issues around the counting of rural homeless populations. This is discussed further in Section 4.1.

3.1.4. Point-in-time count example: United States of America

A well-established example of the point-in-time method is the biennial count of both sheltered and unsheltered homeless people carried out in the United States (HUD, 2014). Over 460 Continuums of Care[6] carry out point-in-time counts over a 24-hour period in late January biennially, often referred to as "S-night." This count is in accordance with the Department of Housing and Urban Development (HUD)'s guidelines as a legislatively mandated condition of funding. Documentation available from HUD provides excellent guidance on carrying out point-in-time surveys as does HUD's website[7] (HUD, 2008, 2012, 2014).

[6] A Continuum of Care is a regional or local planning organisation that coordinates housing and services funding for homeless families and individuals (National Alliance to End Homelessness, 2010).
[7] www.hudexchange.info

The point-in-time count carried out in New York City is often cited as an example of a high-quality count, with a robust approach to stratified sampling. The city is divided into 7,000 areas which are labelled "high-density" or "low-density" based on previous counts, institutional knowledge from organisations that work with homeless people, and expert knowledge. All high-density areas are surveyed by volunteers on S-night between midnight to 4 am. A sample of low-density areas is also surveyed. The homeless population of unsampled low-density areas is estimated based on the rate of homelessness recorded in sampled low-density areas (Schneider, Brisson, and Burnes, 2016).

The New York City point-in-time count has some other noteworthy characteristics:

- decoys are used to ensure the quality of the counts;
- data collected is brief and includes demographic information and where the person currently lives;
- incentives such as gift cards and toiletry packages are used; and
- surveys do not explicitly ask if a person is homeless but do require the administrator of the survey to make this assessment.

(HUD 2008; Schneider, Brisson, and Burnes, 2016)

3.2. Named-list approaches

Named-list methods of counting homeless people are becoming increasingly common according to the grey literature reviewed. These methods involve the maintenance of a real-time register of homeless individuals identified by name, typically at a city/area level, which can be used to monitor the flow of individuals into and out of homelessness. Registers can also be used to produce prevalence estimates, for example the number of individuals who spent at least one night sleeping rough during a year (Greater London Authority, 2017). However, their primary goal is to help homeless individuals and families find housing (20,000 Homes, 2017; Community Solutions, 2017; Mercy Foundation, 2017).

The majority of the grey literature reviewed on named-list methods relates to the By-Name List approach that is becoming increasingly prominent in some American, Canadian and Australian cities. Another example of a named-list approach is the Combined Homelessness and Information Network (CHAIN) database which collects real time data on unsheltered homeless people in the Greater London area.

The By-Name List approach requires an initial registry week that is conducted by volunteers or community workers who survey, and identify by name, every individual and family requiring safe, permanent and sustainable housing (Mercy Foundation, 2017). Volunteers and community workers will canvas a range of locations including street locations, shelters, and non-shelter services. The result is a By-Name List (register) of all individuals within a community that require housing. The survey collects basic demographic information about the individual and their needs, and includes the use of a Common Assessment Tool such as the Vulnerability Index – Service Prioritisation Decision Assistance Tool (VI-SPDAT). These screening tools are used to assess the needs of those experiencing homelessness and to prioritise individuals or families by need for housing and support (Mercy Foundation, 2017). By-Name Lists need to be updateable by participating organisations to ensure that they remain accurate.

Named-list approaches are potentially suitable for counting full homeless populations under the current New Zealand definition but, depending on design, may miss or undercount people who live in shared accommodation or uninhabitable housing or people who do not engage with services.

3.2.1. By-Name List example: Ontario

To date, registry weeks to support the development of By-Name Lists have been conducted in 44 communities across Canada to build a comprehensive picture of the scale of homelessness and to identify and provide shelter for those with the greatest needs. A specific example of this is from August 2016 when the City of Kawartha Lakes and Haliburton County, Ontario held a registry week as part of the 20,000 Homes initiative to identify and survey all homeless individuals in the community (City of Kawartha Lakes and County of Haliburton 20,000 Homes Working Group, n.d.).

In total, 134 homeless individuals were identified, and 110 completed a housing and health survey that was based on the VI-SPDAT (City of Kawartha Lakes and County of Haliburton 20,000 Homes Working Group n.d.). The survey collected information about:

- gender;
- ethnicity;
- refugee status;
- previous military service;
- time spent in Foster Care;
- previous incarceration; and
- brief details of personal history of housing and homelessness.

The VI-SPDAT survey questions also assess the individual's physical and mental health and physical safety risks and collect information about social participation and daily activities.

Following the registry week, the most vulnerable people were identified, and the community set a local target of housing 24 of these people by 1 July 2018. However, it is unclear if this target has been achieved. The county has set up monthly reporting on the number of people who have been housed and continues to follow up on those identified during the 2016 registry week (City of Kawartha Lakes and County of Haliburton 20,000 Homes Working Group n.d.).

3.3. Registration or administrative data

Registration or administrative data records are used in several countries to collate statistics on the number and demographics of homeless people (Edgar, 2009). This data is typically collected from service providers and may take a number of forms. For example, the data may be service delivery statistics from night shelters and hostels or may be client record data on the number of people seeking or living in supported housing, collected from government agencies (Edgar, 2009). Together, this information can be collated at the local or national level to provide an estimate of the number of homeless individuals. For example, in England, Local Authorities are required by law to complete a P1E Homeless Return form every quarter, deliverable to the Ministry of Housing, Communities and Local Government (formerly the Department for Communities and Local Government) (Edgar, 2009).

The Homeless Return provides information on:

- the number of individuals and households who reported they were homeless to their Local Authority;
- the number that applied for and were offered housing assistance; and
- those leaving supported housing during the reporting period.

(Edgar, 2009).

This information is collated from local service providers who may be government agencies, non-government agencies, private providers, or charities. In Denmark, register-based methods have also been used. Under Section 94 of the Law on Social Service, statistics are collected on client enrolments and discharges from homeless hostels. Client information is managed using a central personal register number and is entered into purpose-developed computer software, which is provided to hostels registered with the National Social Appeals Board (Edgar et al., 2007). For a comprehensive discussion of how administrative data and register-based methods have been used to measure homelessness in Europe, see Edgar et al. (2007).

Although using administrative or service user data to estimate the extent of homelessness is inexpensive, this approach has a number of limitations. For example, there is potential for homeless service users to be counted more than once as many homeless people will be engaged with multiple services (Berry, 2007). Service providers may not employ the same definition of homelessness and therefore may misreport or misclassify their clients (Berry, 2007). Where multiple data sources are being combined to produce local or national estimates, the data may have been collected at different times during the year and may be difficult to collate (Berry, 2007). The data collected from service providers will likely underrepresent the size of the homeless population as not all homeless people are service users (Berry, 2007). Further, this method is unlikely to produce an accurate estimation of homeless people living without shelter (Berry, 2007).

Administrative data can potentially be combined to count full homeless populations under the current New Zealand definition but, while this may be cost effective, counts may be of limited quality and will be dependent on what data are available.

3.4. Capture-recapture

Capture-recapture is a method of counting homeless people that appears often in the academic literature but does not seem to have been implemented consistently over time in any jurisdiction. It is described here for reasons of completeness; however, because of the lack of grey literature it is not discussed further in this report.

Capture-recapture is a statistical method which is used to estimate the total size of populations (often animal) by obtaining multiple samples from a population and mathematically accounting for the degree of overlap between samples.[8] Examples used in the homelessness literature include

[8] The technical requirements of the methods are that:

- the defined population should not change between samples (a closed population);
- appearance in a sample does not affect the probability of appearance in another sample;
- individuals can be uniquely identified; and
- individuals have a non-zero chance of being counted.

estimates based on multiple street observation periods (Berry, 2007) and multiple administrative datasets (Coumans, Cruyff, Van der Heijden, Wolf, & Schmeets, 2017).

The benefit of the approach is that, in theory, it is a relatively cost-effective way of estimating the full size of a given homeless population. Disadvantages include the degree of mathematical sophistication required to use the technique, with modelling choices greatly impacting estimates. Busch-Geertsema et al. (2016) also note that confidence intervals can be problematically wide. The assumptions required for capture-recapture to be valid may also be unlikely to hold in many cases.

Capture-recapture methods are primarily used to estimate the size of without shelter homeless populations but may also be used to estimate the size of more broadly defined homeless populations if suitable data are available. Capture-recapture methods appear theoretically rigorous, but in practice may be of limited value due to the wide confidence intervals of the estimates produced, the sensitivity of estimates to modelling assumptions, and questions about the validity of underlying assumptions.

3.4.1. Capture-recapture example: Toronto street count pilot

Berry (2007) piloted a capture-recapture approach to counting without shelter homeless people. Two separate daytime street observation methods were tested on concurrent days in March 2004. The first observation period was carried out from a car, with a single team covering a predetermined route and counting people who met their visual criteria for homelessness including identifying features. Teams counted all people "*with shopping carts, carrying a significant number of bags, bundles, or suitcases*". They also counted people who exhibited the following behaviours: "*sleeping; laying or sitting on the sidewalk, street, plazas, parking lots, or parts of the highway system; panhandling; or rummaging through trash*" (Berry, 2007, p 179). People were uniquely identified based on combinations of physical characteristics. This approach was repeated across three time periods on the same day (9 March 2004). The second observation period used multiple teams of walking street observers who counted homeless people in the same areas as the first observation period using the same visual criteria to identify homeless people: this count was repeated once during the same day (10 March 2004).

The authors estimated the total daytime street population in the areas surveyed using the capture-recapture approach. The simplest model produced a scaled estimate of 1,870 people based on a count of 696 using the multi-team approach and a scaled estimated of 2,584 individuals based on a count of 560 using the single car approach. These estimates were not further triangulated or validated.

3.5. Other methods

A number of other methods for counting homeless populations appear in the literature. These are described briefly here but not explored in the deep dive sections of this report due to either the lack of information about implementation or unsuitability for counting without shelter homeless populations.

3.5.1. Service-based sampling

Service-based sampling involves interviewing a sample of non-shelter (for example a soup kitchen) service users and asking them about where they slept on the previous night or week (Busch-Geertsema et al., 2016). The proportion of without shelter people in the sample is then

multiplied by the total number of meals served (for example) to estimate the total number of without shelter homeless people who used that service. Estimates from multiple comparable services taken at the same time can be combined to provide an estimate of the homeless population of an area. Peressini, McDonald, and Hulchanski (2010) present findings from a 1991 study which used a statistically rigorous version of this method to estimate the prevalence of homelessness in Calgary.

This method could theoretically be used to estimate full homeless populations under the New Zealand definition and appears likely to be relatively cost effective. Limitations include the inability to count homeless people who do not engage with non-shelter homelessness services.

Service-based sampling is potentially suitable for estimating the size of full homeless populations under the current New Zealand definition but has limited value as it will not count people who do not engage with non-shelter homelessness services.

3.5.2. Telephone and household surveys

Telephone or household surveys can be used to interview a nationally representative sample of the population and to collect data both on current housing status and also about any previous episodes of homelessness (Busch-Geertsema et al., 2016). The benefits of such an approach include capturing homeless people in shared accommodation. Limitations include the need for large samples due to the rarity of homelessness and the problem of undercounting people who are currently without shelter, in temporary accommodation, or in uninhabitable housing who are less likely to be surveyed.

Telephone and household surveys are potentially suitable for estimating the size of full homeless populations under the current New Zealand definition but will greatly undercount people who are currently without shelter, in temporary accommodation, or living in uninhabitable housing.

3.5.3. Respondent driven sampling

Respondent driven one-way snowball sampling can be used to count homeless populations by interviewing homeless individuals and identifying other homeless individuals through their social networks who are then also interviewed. This method is known for its value in identifying members of very hard to reach sub-populations (such as drug users or sex workers) but may be less useful as a source of count data due to biases, which mean that people identify others who are similar in age and live in the same area, and potentially miss other groups entirely (Berry, 2007).

Respondent driven sampling is potentially suitable for estimating the size of full homeless populations under the New Zealand definition but biases inherent in the approach limit its value as a source of data.

4. COUNTING WITHOUT SHELTER HOMELESS POPULATIONS IN NEW ZEALAND

Under the New Zealand definition of homelessness, without shelter means a living situation that either provides no shelter (for example living in the street) or is improvised (for example a car, garage[9] or tent) (Statistics New Zealand, 2009). To meet the definition a person must also "*not have options to acquire safe and secure private accommodation*". Counting without shelter populations is vital given the risk that living without shelter poses to the health and wellbeing of homeless individuals.

Sections 4 – 6 present a deep dive into methods for counting without shelter homeless people, structured by topic area and focused on point-in-time counts (including period prevalence counts) and named-list approaches. These approaches were selected because of their prominence in the literature and their suitability for counting without shelter homeless populations. The approaches not discussed here either lacked suitable grey literature (capture-recapture) or were deemed not fit for purpose (administrative data, telephone or household surveys, service-based sampling, and respondent driven sampling). The suitability of censuses of the general population for counting the without shelter homeless has not been explored further.

It is important to note that, while this section is focused on counting without shelter homeless people, many point-in-time counts will combine street counts with shelter data to count a more broadly defined homeless population. Similarly, named-list approaches typically include people who meet a broader definition of homelessness.

This section presents our findings of how to count four without shelter homeless populations: rural, Māori, youth and people who do not access government or community assistance. These populations were identified by MSD as being of particular interest.

4.1. Counting without shelter rural populations

Counting without shelter homeless populations in rural areas is uniquely challenging. The literature suggests that "rough sleeping" is often hidden in rural areas as there may be fewer places for homeless persons to congregate in small towns and a wider variety of places to "bed down" for the night outside of town centres (Robinson, D., 2004). Homeless individuals may also experience greater prejudice and stigma in close-knit rural communities than in urban areas. This may result in homeless people seeking to make themselves invisible to the wider community (Schiff, Schiff, Turner, & Bernard, 2016). Further, in contrast to urban areas where there may be many support services, rural areas may not have specific homeless services, and consequently may not have services that can aid in data collection (Robinson, D., 2004; Schiff et al., 2016). Together, these issues have implications for the choice and application of methods to count homeless people living without shelter in rural areas.

[9] The inclusion of garages in the New Zealand definition of without shelter appears to be an anomaly internationally. Street based point-in-time counts of without shelter homeless people carried out at night are likely to miss people living in garages but may count people living in other improvised structures such as tents or cars. Counts which include surveys of non-shelter homeless services or day street counts may capture some of these individuals but they are still likely to be undercounted.

4.1.1. Point-in-time and period prevalence counts

Point-in-time counts, which typically take place over 24 hours or less, are challenging in rural areas for the reasons noted above and because "street" counts could cover large areas requiring considerable volunteer or staff resources, which are likely to be limited. To address these issues the literature suggests that it may be appropriate to carry out service-based period prevalence counts in rural areas, as discussed in Section 3.1.3. One example of this approach was developed by the Alberta Rural Development Network (Abedin & Bernard, 2017).

This method estimates the number of homeless persons in rural areas by combining survey data from surveys administered by service agencies over a 30-day period. Data is collected from agencies that support or serve homeless people such as soup kitchens, food banks, social service, or welfare agencies. Information may also be collected from the police, faith-based organisations and schools to build a comprehensive picture of homelessness in the area. Data collected includes enough information to generate unique identifiers and to avoid double counting. To ensure consistency, the agencies that participate in the data collection should ideally be the same for subsequent counts (Abedin & Bernard, 2017). The authors suggest that service-based counts could be supplemented with point-in-time counts of locations where homeless people are known to gather to try and include people who do not engage in services.

Data generated from counts of this kind could theoretically be combined with point-in-time data collected from cities to contribute to a national count, although reporting would need to acknowledge differences in data collection periods, the risk of double counting, and reduced accuracy.

4.1.2. Named-list approaches

Limited evidence was found on the use of named-list approaches in rural areas. Common sense suggests that infrastructure requirements would make approaches such as By-Name Lists more difficult to implement and maintain in rural areas.

4.2. Counting without shelter Māori populations

Internationally, homelessness including rough sleeping is disproportionately experienced by indigenous people and those belonging to ethnic minority groups (Anderson & Collins, 2014; Thurston, Oelke, & Turner, 2013). Similarly, in New Zealand, Māori and Pacific people are overrepresented among those who are sleeping rough (Amore et al., 2013; Groot, S. & Mace, J., 2016).

The need to develop culturally appropriate methods of planning, performing and analysing counts of the homeless population, and conducting research with homeless people, have been discussed in the literature from Canada and New Zealand. In their Point-in-Time Toolkit, the Canadian Observatory on Homelessness note that experiences and dimensions of homelessness among indigenous peoples are unique and therefore, ensuring "*respectful and equitable partnership with Indigenous Peoples in all stages of your Point-in-Time Count ([for example], planning, leadership, execution, analysis and dissemination of results) should be a key priority*" (Donaldson, 2017). Further, the Toolkit recommends that the process of conducting the point-in-time count should be a collaboration with local indigenous peoples, including those with experience of sleeping rough, to draw on their leadership, expertise, and insights (Donaldson, 2017).

In New Zealand, researchers have identified the need for culturally appropriate initiatives to address Māori homelessness. Recommendations include the involvement of Māori providers and

service users in the definition, planning, implementation, and evaluation of homelessness research and prevention services to ensure that they are informed by Māori values (Groot & Mace, 2016). Further, non-Māori service providers and government agencies should offer culturally competent services for homeless people (Groot & Mace, 2016).

The New Zealand literature also discusses the issue of differential meanings of the term 'homeless'. For example, Māori living in rural areas on their ancestral land may be homeless according to the Statistics New Zealand definition while experiencing a strong sense of home (Kearns, 2013). Similarly, Māori in urban areas may experience 'spiritual homelessness'. Spiritual homelessness is described as being disconnected from one's country or ancestral homelands (Groot, Nikora, & Rua, 2010). In New Zealand spiritual homelessness is described as a physical and spiritual disconnection from one's tūrangawaewae (a place to stand and be heard) (Groot et al., 2010). One author describes that being "*disconnected from one's tūrangawaewae is to be homeless in one's own land*" (Kake, 2016, p10). The literature suggests that it is possible to experience physical homelessness and a strong sense of home (on ancestral homelands), and conversely to have adequate housing but experience spiritual or cultural homelessness. In some cases, Māori experiencing a lack of housing or shelter may experience both physical and spiritual homelessness (Kake, 2016). The different definitions of homelessness used by different populations suggests that in New Zealand, an agreed definition of homelessness is needed when conducting homelessness research with Māori (Groot & Mace, 2016). Further, this definition requires Māori input and acknowledgement of the cultural and spiritual dimensions of homelessness (Groot & Mace, 2016).

This literature suggests that point-in-time counts and named-list approaches should be designed and conducted as a collaboration. This collaboration should include Māori service providers, Māori researchers, volunteers, community leaders, and Māori individuals with experience of being without shelter, and should involve speakers of te reo Māori. Further, the non-Māori workforce should be trained in bi-cultural protocols to ensure that surveys or interviews are conducted in a culturally appropriate manner (Groot & Mace, 2016).

Point-in-time counts and named-list approaches should be designed and conducted as a collaboration with Māori service-providers, researchers, volunteers and community leaders.

4.3. Counting without shelter youth populations

Homeless youth are more difficult to count than the adult homeless population as they are typically harder to locate and identify (Auerswald, Lin, Petry, & Hyatt, 2013; Narendorf, Santa Maria, D. M., Ha, Y., Cooper, J., & Schieszler, C., 2016). The studies included in this review had varied definitions of youth, but all definitions fit within a range of 12 – 24 years of age (Anthony & Fischer, 2016; Auerswald et al., 2013; Narendorf et al., 2016).

Homeless youth are often difficult to locate and survey as they typically do not access services or spend time in known adult homeless "hot spots" on the streets and are often more transient and mobile during the day (Auerswald et al., 2013; Narendorf et al., 2016). Further, homeless youth often try and blend in with their non-homeless peers and are therefore difficult to identify when conducting street counts (Narendorf et al., 2016). The literature also suggests that the stigma associated with homelessness may result in youth choosing not to identify themselves as homeless. In addition, a greater proportion of youth may be intermittently homeless than the adult homeless population with their housing situation changing daily or weekly. The literature suggests that youth frequently cycle between living with family and friends and living on the

streets or in other transitional or emergency housing (Auerswald et al., 2013). To address these issues, youth-specific approaches to counting homelessness have been developed by adapting methods used to count the adult homeless population.

The California Homeless Youth Project has recommended including youth service providers, other youth workers or organisations working with youth, as well as formerly or currently homeless youth in point-in-time count planning processes. They also encourage the use of a promotional campaign to alert youth to the count. They suggest the inclusion of youth-specific counting routes, survey sites and times when conducting the count. Further, they suggest that there should be flexibility in the counting locations and that these may be informed by information provided by homeless youth on the day of the count. If the count includes a survey component, the survey should be youth focused and recognise issues that are important for this population. The literature suggests including questions on gender identity, sexual orientation, physical and mental wellbeing, foster care history, educational history and aspirations, service use, perceived causes of homelessness, social supports and networks, and unmet needs (Auerswald et al., 2013, p 37). Provision of food and other incentives such as gift cards is also suggested (Auerswald et al. 2013). However, those conducting the count should consult with local youth service providers and youth to determine a relevant and appropriate incentive that should be "*desirable but non-coercive*" (Auerswald et al., 2013, p 37).

4.3.1. Counting without shelter youth example: Texas

To overcome the issues associated with conducting youth counts, a community-academic partnership in Texas used a period prevalence count methodology to produce a count of all sheltered, without shelter, and unstably housed youth aged 13-24 in the city. In this study, without shelter youth were defined as those "living in cars, abandoned buildings, on the street or in a space not designed for human habitation". Various locations were used to survey without shelter youth including events for homeless youth, places where hot meals were provided, drop-in centres, local community events that attract youth (for example a local breakdancing event). Reseachers also hosted events at libraries and other locations in the community. Further, local homeless youth were interviewed and recruited during the planning phase to identify homeless youth "hot spots" for those living on the streets. These areas were then canvased, and all identified youth surveyed.

The risk of duplicate counting was addressed by keeping the data collection team consistent for each geographical area to identify those they had surveyed previously using facial recognition. Youth were also asked if they completed the survey before as a screening question. In this example, youth were offered a $10 gift card as an incentive to participate in the count. This data collection took place over four weeks and produced a more comprehensive picture of youth homelessness than a typical point-in-time count (Narendorf et al., 2016). Similar methods were used in a Cleveland study to successfully survey homeless and unstably housed youth (Anthony & Fischer, 2016).

Youth focused counts of this kind could be used in New Zealand to supplement and inform other counts.

4.4. Counting without shelter populations that do not access government or community assistance

The review of the literature suggests that a point-in-time count may be better suited to count without shelter homeless people who do not access services, but both point-in-time and named-list approaches may be suitable depending on their design and focus.

4.4.1. Point-in-time counts

A point-in-time count will capture people living without shelter who do not access government or community assistance. However, it is reasonable to assume that surveying this group may be relatively challenging as individuals may be less willing to participate in a survey on average. Point-in-time counts based on observation only or which included a protocol for counting those unwilling to be surveyed would not face this limitation.

4.4.2. Named-list approaches

Named-list approaches rely on a combination of an initial registry week and ongoing interaction with services to obtain data about homeless people. For this reason, named-list approaches will struggle to identify and maintain accurate information about people who do not engage with government or community services. By-Name List registry weeks may include protocols for engaging with this group on the streets, but obtaining *ongoing* information is likely to be difficult unless data gathering includes ongoing street engagement. It is understood that such street engagement will be particularly difficult with this group.

One example of a named-list approach which carries out ongoing street engagement is St Mungo's CHAIN, which focuses on without shelter homeless people. A key source of data for CHAIN is interviews carried out by commissioned outreach workers who encounter without shelter homeless people in a variety of street locations such as doorways, parks, and derelict buildings (Greater London Authority, 2017). Other sources of data include rough sleeper assessment and reconnection services, such as No Second Night Out; accommodation projects, including hostels, second-stage accommodation and supported housing projects; and day centres and other specialist services (St Mungo's, 2017).

5. IMPLEMENTATION OF POINT-IN-TIME COUNTS AND NAMED-LIST APPROACHES FOR COUNTING WITHOUT SHELTER HOMELESS POPULATIONS

The literature has been reviewed to explore a broad range of questions about implementation including which organisations might best implement homelessness counts in the New Zealand context, the resources required, timing of counts or registry weeks, ethical issues, variables to be collected, and what data different methods might produce. Detailed information about the costs of different methods has not been provided as this was beyond the scope of the literature reviewed.

5.1. Implementing organisations

The implementation requirements of the two methods are explored separately.

5.1.1. Point-in-time counts

Point-in-time counts of without shelter or more broadly defined homeless populations have typically been organised at the city/area level internationally. The lesson in the New Zealand context is that organisations who have a role in providing services for homeless people at a local level may be best placed to coordinate and carry out counts if appropriately funded.

In the United States, biennial counts are carried out by Continuums of Care as discussed in Section 3.1.2. Finland's annual national survey of homeless people combines count or estimate data collected at the municipal level (Edgar, 2009; Pleace, 2013). Local authorities in England also carry out annual "rough sleeper" counts or estimates which contribute to annual reports produced by the now Ministry of Housing, Communities and Local Government[10] (Department of Communities and Local Government, 2015). The Canadian government's point-in-time guide suggests that counts be organised at the community level by a dedicated committee that brings together key stakeholders (Donaldson, 2017).

While local organisation seems optimal, the need for accurate data that can be compared across different cities/areas suggests a strong role for central government in providing guidelines on the design and implementation of counts. For example, in the United States HUD provides detailed instructions and resources for conducting point-in-time counts. Counts carried out at a local level will benefit from ongoing oversight and review to ensure quality data is produced. For example, local government counts in Finland (Pleace, 2013) and the United Kingdom (Department of Communities and Local Government, 2015) have been criticised for data quality and consistency issues. An organisation that could provide valuable insight in the New Zealand context is Statistics New Zealand, as census implementation includes protocols for including people living without shelter.

5.1.2. Named-list approaches

Databases are typically maintained at a city level by a single NGO or local government organisation, for example St Mungo's, which maintains the CHAIN database that covers the

[10] These counts are legally required and are consistent with the role of local authorities as housing providers.

Greater London area, or All Chicago[11] who maintain a city-wide By-Name List. In Canada By-Name Lists can use a data management system provided by the federal government called the Homeless Individuals and Families Information System (HIFIS). HIFIS also allows the federal government to collect anonymised data contributing to an understanding of the national picture of homelessness (Employment and Social Development Canada, 2017). Although By-Name List databases are maintained by a single organisation, they need to be updated by a range of organisations in order to function correctly, which in turn requires ongoing buy-in and staff training across multiple organisations. In the New Zealand context, social workers, Housing New Zealand employees, local government employees, and workers from homelessness-related NGOs such as night shelters might update a By-Name List database maintained by a single NGO or territorial authority. It is also possible that the central government might provide data infrastructure similar to HIFIS to support named-lists.

5.2. Resources

Discussion of the resources needed to implement point-in-time counts and named-list approaches was relatively general in the literature we reviewed. The resource requirements of the two methods are discussed separately.

5.2.1. Point-in-time counts

Planning and implementing point-in-time counts or period prevalence counts is described in the literature as an expensive and time-consuming process requiring the involvement of a range of stakeholders. These stakeholders may include homeless people, homelessness-related NGOs, central and local government, academics, police and other emergency services, and community representatives. Paid staff are likely to be required to coordinate the count.

The physical process of counting is typically carried out by volunteers who need to be trained and supported. Survey or observation data must then be appropriately entered before results can be reported and interpreted. Costs can vary greatly based on the amount of volunteer time available (HUD, 2008). Costs can be reduced by using stratified sampling. This approach will ideally be based on central government protocols to ensure statistically valid sampling techniques are used.

5.2.2. Named-list approaches

By-Name Lists require similar resources to implement an initial registry week as a point-in-time count, which is one reason why they have been combined in some cities. The organisation implementing a By-Name List must also obtain ongoing funding for premises, employees, and other resources to carry out its primary role: to link homeless people with housing, which also requires a suitable electronic database to be maintained. Any additional data collection carried out by the organisation (for example additional street engagement) must be funded and coordinated (this could involve volunteers). Resources may be required to ensure that the database continues to be updated. For example, this may require ongoing training of workers in partner organisations.

[11] https://allchicago.org/who-we-are

5.3. Season, weather and natural disasters

Planning and implementing a count or registry week requires consideration of timing. The literature suggests that weather will influence the number of without shelter individuals recorded during a point-in-time count or registry week.

5.3.1. Season

The review of the literature suggests that the number and visibility of people sleeping in public places (without shelter) varies according to the season. Numbers reportedly peak during the warmer months and drop off during the winter months. The best time to conduct a count of the without sheltered homeless varies according to the method used and the purpose of conducting the count. For example, HUD requires that all point-in-time counts of the without shelter homeless take place in the last 10 days of January, when the weather is coldest. This is because homeless shelters will likely be at maximum capacity during the coldest times of the year. Therefore, the number of homeless people on the street will provide an accurate estimate of the unmet need for emergency housing and support services (HUD, 2008).

Similarly, in rural areas of Canada and England, point prevalence counts of the without shelter homeless are conducted during October and November. In rural England, this time was selected as it is the time when rough sleeping is at its peak and is therefore most visible and easiest to count (Robinson, D., 2004). In Canada, this time was selected as the best time to conduct an estimation as those sleeping rough begin to access services to find temporary accommodation in preparation for winter (Abedin & Bernard, 2017).

Winter weather, including snow and rain, can lead to an undercount of the number of without shelter homeless people, as people will likely seek refuge in sheltered areas such as abandoned buildings to escape the weather, making them more difficult to count (Auerswald, C. L., Lin, J., Petry, L., & Hyatt, S., 2013). This is less of a concern for registry weeks as data collection takes place over three days, which makes this method less susceptible to the impacts of adverse weather.

Information on the best time of year to conduct registry weeks was difficult to find. During registry weeks, both the sheltered and unsheltered homeless populations are surveyed at the same time to produce a By-Name List of all homeless individuals within the community. The literature suggests that because the goal of a registry week is not simply to produce a count of the number of unsheltered people, the season in which it is conducted is less pertinent than it is for a point-in-time count.

Timing of point-in-time counts should reflect the purpose of the count. Regardless of the season chosen, ongoing point-in-time counts should be completed at the same time of year to account for the effects of season on the visibility of the homeless population.

5.3.2. Natural disasters

The HUD disaster recovery homeless toolkit highlights the importance of data on homeless people, including data collected by Continuums of Care, in planning for disasters (HUD, n.d.). The toolkit states that "*without this knowledge, you risk leaving people out and putting them in danger*". The toolkit notes the value of detailed information such as locations where people may sleep and characteristics of particular homeless populations. Planning a point-in-time count requires consideration of key locations where people may sleep, which could inform disaster planning.

Similarly, the data collected could provide valuable detail on the characteristics of specific homeless populations that could be relevant in the event of a disaster.

The literature did not include information that directly addressed the topic of named-list approaches and natural disasters. It is reasonable to assume that a well maintained By-Name List could also provide valuable data both for planning for a natural disaster and in the wake of a natural disaster.

5.4. Ethics, consent and privacy issues in counting homeless people living without shelter using point-in-time counts and named-list approaches

Research that involves a vulnerable population such as the without shelter homeless raises many issues regarding privacy, consent and ethics. Ethical considerations include respecting the rights, welfare and human dignity of homeless people, informed consent and privacy.

5.4.1. Ethics

Research with homeless people should be conducted with the understanding that homelessness results from a range of interacting personal, social and economic issues, and that many homeless people have experienced difficult lives (Donaldson, 2017; James, 1991; Runnels, Hay, Sevigny, & O'Hara, 2009). Homeless people may experience marginalisation and vulnerability resulting from social exclusion, relationship breakdowns, estrangement from their families, domestic violence, alcohol abuse issues, or substance abuse issues. Further, homeless individuals may be distrustful of government and government agencies and may be alienated from social institutions and seek invisibility and anonymity (James, 1991).

Any method of counting which requires surveying or interviews should train those who administer the survey to identify and manage their personal biases towards homeless people and to engage with them in a positive, respectful way.

5.4.2. Consent

Informed consent involves advising study participants of the potential benefits and risks of being involved in the research, before seeking their consent.

Participants in the surveys or interviews should be informed of the reasons for collecting the information, the type of information that is being collected, how the information will be used, who will have access to information, and who to contact if a participant has questions or wishes to withdraw their consent (Donaldson, 2017).

In the New Zealand context, Information Privacy Principle 3 (*Collection of information from subject*) outlined in Part 2 of the Privacy Act 1993, states that where an agency collects personal information from an individual it must ensure that the individual is adequately informed of:

- the types of information being collected;
- why it is being collected;
- who will have access to it;
- how it will be used;
- where it will be stored; and
- their rights to access and correct the personal information that they have provided.

The literature suggests that this information should be explained verbally to participants to overcome any literacy issues (Runnels et al., 2009). These considerations do not apply to point-in-time counts based on observation only as no personal information is collected.

Complicating consent procedures, mental illness as well as alcohol and substance abuse may make a person incapable of providing informed consent to participate in surveys and interviews (Runnels et al., 2009). There was no detailed guidance on how to assess capability of providing informed consent in the literature reviewed.

Some surveys and interviews may require written consent and others only verbal consent. Point-in-time count surveys are characteristically short and minimally invasive and as such, the international literature suggests that obtaining verbal consent is sufficient (Donaldson, 2017; Eberle et al., 2010).

5.4.3. Informed consent, incentives and honoraria (koha)

A further ethical consideration in obtaining informed consent is the use of incentives or honoraria[12]. Incentives in this context mean a payment of money or an item of value before a survey is carried out, while honoraria or koha acknowledge the time and contribution of participants and are given following participation as a "thank you" rather than an incentive (Donaldson, n.d.).

Incentives are a common method used to increase participation rates (Auerswald et al., 2013; Employment and Social Development Canada, 2018; Narendorf et al., 2016). However, the literature suggests that providing incentives may compromise the informed consent process as the potential participant may feel coerced into taking part (Ensign, 2003). This is a particular issue for vulnerable people such as without shelter homeless populations as they may have little money and few material possessions.

Koha is less likely to compromise the informed consent process because participants may not know about it in advance. The Canadian Observatory on Homelessness released a discussion paper on the use of honoraria in point-in-time counts (Donaldson, n.d.). In their paper, they recommend that the honoraria given should be reflective of the nature of the research and time required to participate. If providing honoraria, this should be given to all participants who have undergone initial screening and have met inclusion criteria, not just those who complete the survey. Koha can take several different forms including money, food, clothing and personal care items like backpacks and blankets. The literature suggests that koha such as bus cards or cell phone top up cards may be more appropriate for homeless youth (Ensign, 2003; Narendorf et al., 2016).

5.4.4. Consent and reporting of homeless youth

There are additional ethical issues in obtaining consent from homeless youth. Typically, parental consent is required for young people under the age of 18 years to participate in research. However, young people sometimes participate in research without consent, instead providing assent[13] (Donaldson 2017). Obtaining parental consent for homeless youth to participate in a count is not always possible or in the best interest of the youth (Donaldson 2017; Ensign 2003). This is because contacting the parent may compromise the safety of the young person and prevent

[12] Honoraria can be understood as koha in the New Zealand context.
[13] Assent is the agreement of youth (under 16 years) who cannot legally provide consent to participate in research.

them from escaping parental violence or abuse (Ensign 2003). In recognition of this, it is possible to apply to the relevant ethics board to request a waiver of written parental consent so that only assent from the young person is needed to participate in the count (Ensign 2003; Anthony and Fischer 2016).

The Canadian Observatory on Homelessness recommends including youth as young as 15 years in point-in-time counts, as excluding people under the age of 18 would result in important information about homelessness in this age group being lost (Donaldson 2017). However, it is recommended that a tally is kept for the number of children under the age of 15 years identified during a count (Donaldson 2017). The consent requirements for surveying homeless youth under the age of 18 in New Zealand would need to be determined before conducting a count of the youth homeless population.

The duty to report homeless youth is a further ethical consideration when conducting a count. The review of the literature did not include New Zealand-specific information about the responsibility of volunteers conducting the count and their team leaders. However, the Canadian Point In Time Toolkit (Donaldson 2017) discusses this issue and recommends that the enumeration management team and committee should develop protocols for volunteers and team leaders to follow if they encounter a young person at risk of harm or in immediate need.

5.4.5. Privacy and data management

When conducting research with homeless people, their right to privacy should be respected (Donaldson, 2017). For this and other reasons, people who collect data about homeless people should sign confidentiality agreements and receive appropriate privacy training in order to protect the privacy of homeless people.

The data generated must also remain private. Different approaches will generate data with varying degrees of anonymity and privacy risk. For example, data collected under point-in-time counts is typically anonymous although participants may be uniquely identified using a combination of initials, age, date of birth, and gender: this improves data quality by reducing the risk of double counting. Some counts may remove identifiers after totals have been compiled to ensure greater privacy.

Data collected under named-list approaches contain both names and much more detailed information about individual circumstances. It is reasonable to expect a greater degree of security for data of this type with strict control over who is authorised to access databases, and secure data storage and protection protocols. In the case of By-Name Lists, the confidentiality and privacy of participants is reportedly protected through the development of secure data handling, management, and storage protocols. These are necessary as the information is likely to be stored on a central database that can be accessed by multiple agencies or organisations (20,000 Homes, 2017). Summary data reported needs to be anonymised to protect privacy (20,000 Homes, 2017).

5.5. Data

As outlined in the Privacy Act 1993, Principle 1 (*Purpose of collection of personal information)*, decisions about data to be collected should be dictated by the intended use of the data. Considerations also include practicalities such as the amount of time a survey takes.

5.5.1. Point-in-time counts

Point-in-time counts based on observation only will produce the sparsest data: area-based counts and possibly some observation-based demographic data of relatively low quality. Point-in-time counts with a survey component may collect:

- demographic data (for example gender, age, ethnicity);
- enough identifying information to create a unique identifier;
- current living situation (for example where do you currently live?);
- reasons why homeless;
- health issues (could include mental health and addiction issues);
- details of previous experiences of homelessness; and
- details of engagement with services.

There are many useful examples of surveys which provide guidance for survey design, for example those presented in the U.S HUD *Guide to Counting Unsheltered Homeless People* (HUD, 2008, pp 103-112).

In the New Zealand context, a survey should include Māori specific demographic questions, and in order to be consistent with the New Zealand definition of homelessness would need to identify whether a person who is living without shelter at the time of a survey has "*no other options to acquire safe and secure housing"* (Statistics New Zealand, 2009). Work by Amore et al. (2013) on operationalising a definition of severe housing deprivation provides excellent guidance on this issue.

5.5.2. Named-list approaches

Data collected in interviews/surveys carried out as part of a named-list approach will ultimately include identifying information, but questions are otherwise similar to those used in point-in-time surveys although typically in more detail. For example, placing a person on a By-Name List database and prioritising them based on need and available resources involves screening using a Common Assessment Tool. One example of such a tool, the VI-SPDAT, involves similar questions to many point-in-time questionaires but in much greater detail, allowing for scores to be assigned across a range of detailed categories such as "*risk of exploitation*" or "*money management*" (Orgcode Consulting Inc., 2016). If a By-Name List or similar named-list approach method was implemented in New Zealand it would be sensible to adapt and adopt these proven tools rather than "reinvent the wheel".

Databases maintained as part of the By-Name Lists approach are likely to include ongoing information relating to the process of finding a person or family a home, but one paper suggested that it is important to "*[s]trive to keep your database nimble, lightweight and efficient: don't let it become weighed down with too many details that delay permanent housing placements*" (Community Solutions, n.d.).

It is interesting to note that in the New Zealand context, data which include first and last names, date of birth, and sex can potentially be linked to other datasets within the Integrated Data Infrastructure (IDI) and anonymised, which may create research opportunities that could benefit homeless people in New Zealand.

5.5.3. Data validation

Data validation in this field is fraught because the true size of homeless populations will never be known with great precision. The literature review did not find significant material relating to the validation of data held as part of named-list approaches, but the literature did contain some useful discussion of data validation for point-in-time counts.

Work has been carried out to assess the quality of street counts in the United States, for example some point-in-time counts have included "decoys", people dressed as homeless people who if approached will identify themselves. Berry (2007) cites a study from 1992 which found that 44% of decoys were missed during an S-night count in New York. Another method of data validation is next day surveys, which involve surveying people during the day after a night count and asking them where they spent the previous night – this may identify locations that were missed by the survey and aid in improving future surveys. It is also suggested that point-in-time count data could be combined with decoy data and next day surveys to provide an estimate of the true homeless population (Hopper et al., 2008; HUD, 2008).

One obvious method of validation is to compare counts generated by different methods at similar points in time. An example is a comparison of Finland's annual municipally-administered count with an estimate generated by Finland's population register (Edgar, 2009). Unfortunately, in this case the two methods produced incompatible results: the population register estimated a figure that was twice that generated by the municipal counts. Interpreting this type of inconsistency is challenging.

5.5.4. Data output

Point-in-time counts can be used to produce a range of data:

- total size of homeless population;
- results by demographic category (for example ethnicity, age, gender etc.); and
- results by other variables e.g. time spent homeless during current period of homelessness, proportion of population experiencing addiction or mental health issues etc.

Count data from multiple cities can be combined (if timing and methods are comparable) to produce national-level estimates. Multiple counts over time allow trends to be ascertained and can potentially provide data to assess the effect of specific interventions. For example, point-in-time data has been used to assess the success of By-Name Lists in some cities.

Named-list approaches can be used to produce detailed prevalence data. CHAIN annual reports include prevalence data on rough sleepers categorised by the regularity with which they are counted and can report flows into and out of homelessness by categorising people as new rough sleepers or returners who have been interviewed in previous years (Greater London Authority, 2017). Unlike in point-in-time counts, individual people are tracked over time which produces a more detailed and reliable summary of without shelter homelessness in the Greater London area.

Data from a named-list database could also theoretically be used to produce a point-in-time estimate of current homeless numbers based on the most recently recorded housing situation of each person currently in the database; however, the data would be less accurate than that generated by a point-in-time count. Such data could be combined with point-in-time data from other areas to produce national point-in-time estimates. Such estimates would be relatively low quality and face a risk of double counting.

6. STRENGTHS AND WEAKNESSES OF POINT-IN-TIME COUNTS AND NAMED-LIST APPROACHES FOR COUNTING WITHOUT SHELTER HOMELESS POPULATIONS IN NEW ZEALAND

This section provides an overview of the strengths and weaknesses of point-in-time and named-list approaches for counting without shelter homeless populations in New Zealand.

The strengths and weaknesses of each method depend in part on the intended use of the data. Point-in-time counts, if carried out well in New Zealand, could be used to assess the need for services at an area or national level, identify trends over time, help to assess the impact of policy changes and characterise without shelter populations demographically. Named-list methods created and maintained in key New Zealand cities could be used by organisations with appropriate resources to help transition homeless individuals and families into housing, for example in partnership with Housing First providers, and also produce rich descriptive data as a secondary outcome.

It is important to note that the two methods can be implemented in a variety of ways. Trade-offs between accuracy and cost/resources will be required by decision makers. This is particularly relevant if resources used to count the without shelter homeless could be otherwise used to help them in more tangible ways.

Key issues identified in the deep dive regarding counting Māori homeless people apply equally to both methods.

The two methods are not mutually exclusive and can in fact complement each other, with point-in-time counts potentially providing validation for the success of a named-list approach in reducing homelessness.

The strengths and weaknesses of the two methods are presented below in Table 1 and Table 2. Where possible we have commented on New Zealand-specific strengths and weaknesses. However, in many cases, comments are more generic, reflecting the literature reviewed.

Table 1. Strengths and weaknesses of counting methods

	Point-in-time counts		Named-list approaches	
	Strengths	**Weaknesses**	**Strengths**	**Weaknesses**
Data quality and usefulness	• Can provide useful data for assessing trends and national picture • Can inform provision of funding or services at the area level	• Does not produce data that can be used to link homeless people with housing or services • Likely to underestimate true size of homeless population and to over-represent those experiencing chronic homelessness • Unlikely to count people living in garages (depending on method)	• Potential to link data to the IDI • Detailed data provides more valuable insight about population • Can inform provision of funding or services at the area level • Named-lists can help link homeless people with homes	• Regular updating requires resources and ongoing buy-in from participating organisations
Rural	• Period prevalence counts may be more suitable	• Can be difficult to carry out in sparse rural areas such as those found in parts of New Zealand • Services may be limited	• The literature reviewed did not directly address this point	• May not be suitable if resources and/ or services are limited
Youth	• Can be effective if conducted as a period prevalence count	• Undercount due to hidden nature of without shelter youth homelessness	• The literature reviewed did not directly address this point	• Youth may not engage with services meaning difficult to include in list and to keep data updated

Table 2: Strengths and weaknesses of counting methods - continued

	Point-in-time counts		Named-list approaches	
	Strengths	**Weaknesses**	**Strengths**	**Weaknesses**
People who do not engage with services	• More likely to capture this group	• May still undercount this group due to lower engagement	• Can include this group if ongoing street engagement occurs	• Difficult to maintain accurate information without ongoing street engagement
Implementation	• Statistics New Zealand have valuable experience from implementing census • Long history of implementation in US provides guidance	• Expensive • Complex to organise	• Compatible with the Housing First approach which is being rolled out in New Zealand • Systems can be set up in cities or areas with the greatest need	• Expensive • Data sharing systems may be costly or complex to implement and maintain across multiple organisations
Ethics, privacy and consent	• Anonymised data is lower privacy risk	• Issues around consent must be carefully managed	• Strong data management infrastructure reduces privacy risks	• Privacy issues around named data • Issues around consent must be carefully managed

**Issues identified in our deep dive regarding counting Māori homeless populations apply equally to both methods. As we did not find specific guidance on the strengths and weaknesses of the two methods for counting this group we have not included this topic in this table.*

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APPENDIX 2: GLOSSARY

Acronym	Full title
AHURI	Australian Housing and Urban Research Unit
CHAIN	Combined Homelessness and Information Network
EOH	European Observatory on Homelessness
ETHOS	European Typology on Homelessness and Housing Exclusion
FEANTSA	European Federation of National Organisations Working with the Homeless
HIFIS	Homeless Individuals and Families Information System
HNZC	Housing New Zealand Corporation
HUD	U.S. Department of Housing and Urban Development
IDI	Integrated Data Infrastructure
MSD	Ministry of Social Development
NGO	Non-governmental organisation
OECD	Organisation for Economic Cooperation and Development
VI-SPDAT	Vulnerability Index - Service Prioritization Decision Assistance Tool

APPENDIX 3: LITERATURE REVIEW INCLUSION PROCESS

Research questions

1. What methodologies are presented in the literature to count the full homeless population?[14]
2. What are the strengths and weaknesses of each methodology to count those without shelter in New Zealand?
3. How can each methodology (to count those without shelter) be implemented in the New Zealand context (e.g. a consideration of cost, privacy/data management, consent and appropriate implementing agencies)?

A 'deep dive' analysis of the identified methodologies was also conducted to consider following:

- a determination of the strengths and limitations of approaches to count those without shelter and assess how these approaches could be practically implemented in a New Zealand setting;
- point-in-time/snapshot counts, surveys, 'by name' lists and any other methods used internationally;
- commentary on the strengths and limitations of the most appropriate methods in the New Zealand context. Consideration will be given to:
  - the national and local government and NGO responsibilities and involvement,
  - ethical implications,
  - cultural suitability,
  - the variability of urban and rural areas,
  - seasonal change, climate and adverse natural events,
  - the ability of the approach to reach people who do not access government or community assistance, and
  - implications relating to consent, privacy, and data management
- approximate comparisons of resources required to implement each method, e.g., people, technology;
- core variables that are recommended;
- what validation of data might be useful;
- information on the costs and benefits of each option; and
- what data was able to be produced, including information on the characteristics of the homeless population, and the duration and drivers of homelessness.

[14] Homelessness is defined as the New Zealand definition of homelessness, which includes populations who are in temporary accommodation, in shared accommodation, in uninhabitable accommodation, or without shelter.

PICO(T/S)

Population	People experiencing homelessness including those living in temporary accommodation, shared accommodation, uninhabitable housing and those living without shelter. The 'deep dive' will focus on those living without shelter.
Intervention	Methodologies for counting homeless populations.
Comparator	Approaches taken across different jurisdictions (Australia, UK, Ireland, US, Canada, Finland; Sweden; Norway; Denmark; OECD).
Outcomes	Effectiveness and practical implications of methods for counting sheltered and unsheltered homeless populations.
Study/time	From 1990 (revised from 2008); all study types and grey literature

Search terms

Where possible (subject to the flexibility of database search functions), the keywords included in the search strategy are outlined below.

- Homeless; homelessness
- Sheltered; unsheltered; without shelter; sleeping rough; precarious housing; temporary housing; uninhabitable housing; long grassers; parkies; transient
- Count(ing); enumerate(ing); measure(ing); quantify(ing); estimate(ing); capture(ing); Audit
- Method; approach
- Point-in-time; By-Name List(s); census; survey; capture; observation; S-night; service-based; service-user
- Māori; Indigenous; Aboriginal; Torres Strait Islander; Koori; First Nations People; Metis; Inuit; Pacific;
- Rural; urban
- Australia; United Kingdom; Ireland; United States; New York; California; Canada; Finland; Sweden; Norway; Denmark; OECD

Databases

The following databases were included in the search:

- Scopus
- EBSCOHost
- PsycINFO
- Ovid MEDLINE(R)
- Academic OneFile

- CINAHL, and
- Google Scholar.

Journal articles and grey literature were also obtained by searching the following sources:

- FEANTSA (European Federation of National Organisations Working with the Homeless)
- Homeless Hub (Canadian homelessness research and information)
- HUD exchange (US resources on counting the homeless population)
- oecd.org (OECD wide)
- AHURI (Australian Housing and Urban Research Institute)
- homeless.org.uk (Homeless link UK), and
- Launch Housing (Australia).

Inclusion criteria

Results of the literature search were reviewed against the following inclusion criteria:

- Currency (published since 2008 (the date range was subsequently increased to those published from 1990 onwards)).
- Relevance to research questions or topics covered in the 'deep dive'.
- Material provides sufficient methodological detail to allow for the analysis of the method or approach used to count homelessness.
- Provides details of homelessness research or counts conducted in Australia, UK, US, Canada, Europe, Scandinavia, or the OECD.
- Published in English.

Exclusion criteria

Articles and reports were reviewed against the following exclusion criteria:

- No relevance to research questions or topics covered in the 'deep dive', or
- Insufficient methodological detail to allow for the analysis of the method or approach used to count homelessness, or
- Only qualitative research methods presented, or
- Provides details of homelessness research or counts conducted outside of Australia, UK, US, Canada, Europe, Scandinavia, or the OECD, or
- Published in a language other than English, or
- Published before 1990.

APPENDIX 4: EXAMPLES OF INTERNATIONAL COUNTS AND NAMED-LISTS

Country	Name or description	Method	Implementation	Who is counted	Additional details	Reference
England	CHAIN	Named-list approach	• St Mungo's (NGO) funded by the Lord Mayor of London (local government)	• Rough sleepers: people who have been seen rough sleeping by outreach workers - often referred to as “verified rough sleepers”. • People who have a “street lifestyle” such as street drinking or begging - often referred to as “wider street population”.	• Data sources include commissioned outreach workers.	(St Mungo’s, 2017)
Canada	National coordinated Point-in-Time Count	Point-in-time count	• Nationally coordinated and funded at the federal level. • Implemented by "designated communities" (local government level)	• Sheltered and without shelter homeless people. • Without shelter homelessness includes people who are sleeping in places unfit for human habitation, including the following locations: - streets, alleys, parks and other public locations, transit stations, abandoned buildings, vehicles, ravines and other outdoor locations. • Sheltered homelessness includes: - emergency shelters, extreme weather shelters, Violence Against Women (VAW) shelters, and transitional shelters. It may include people who receive hotel/ motel vouchers in lieu of shelter beds.	• Annual. • Nationally implemented since 2016. • Counts may include incentives/ honoraria. • Street counts are combined with shelter data from systems such as HIFIS.	(HUD, 2014)
United States	Biennial S-night counts	Point-in-time count	• Carried out by Continuums of Care. • Legislatively mandated	• Mandate is to count sheltered and without shelter homeless people. HUD definition of without shelter: - “An individual or family with a primary night-time residence that is a public or private	• Counts inform future funding.	(Employment and Social Development Canada, 2018)

Country	Name or description	Method	Implementation	Who is counted	Additional details	Reference
			condition of funding. • HUD provides oversight on standards and timing.	place not designed for or ordinarily used as a regular sleeping accommodation for human beings, including a car, park, abandoned building, bus or train station, airport, or camping ground." - "An individual or family living in a supervised publicly or privately-operated shelter designated to provide temporary living arrangement (including congregate shelters, transitional housing, and hotels and motels paid for by charitable organizations or by federal, state, or local government programs for low-income individuals)".		
England	Annual rough sleeper count	Point-in-time count or estimate	• Local government	• Rough Sleepers: are defined as follows for the purposes of rough sleeping counts and estimates: - "People sleeping, about to bed down (sitting on/in or standing next to their bedding) or actually bedded down in the open air (such as on the streets, in tents, doorways, parks, bus shelters or encampments). People in buildings or other places not designed for habitation (such as stairwells, barns, sheds, car parks, cars, derelict boats, stations, or "bashes" which are makeshift shelters, often comprised of cardboard boxes)".	• Mandatory. • Counts date back to 1998. • From 2010 estimates required if counts not carried out.	(Ministry of Housing Communities and Local Government, 2017)
Canada	By-Name List	Named list approach	• Implemented by 44 "designated communities".	• "Every individual and family requiring safe, permanent and sustainable housing." • All people experiencing homelessness.	• Conducted voluntarily as part of the 20,000 Homes Initiative. May receive local	(20,000 Homes, n.d.)

Country	Name or description	Method	Implementation	Who is counted	Additional details	Reference
					government funding or support. • Registry week used to develop an initial By-Name List of all homeless individuals within a geographical area. • May include VI-SPDAT survey tool to prioritise need.	
Australia	Census of Population and Housing	Census of general population	• Australian Bureau of Statistics oversees census. • Implemented at state or territory level.	• Total population. • Question about homelessness not directly asked but status is inferred when: - a person does not have suitable accommodation alternatives and occupies: - a dwelling that is inadequate; - or has no tenure; - or if their initial tenure is short and not extendable; - or does not allow them to have control of, and access to space for social relations.	• Takes place every 5 years. • Census includes street counts. • Identifying locations where without shelter people may live is a highly organised process that can begin up to a year in advance.	(Australian Bureau of Statistics, 2012)