A Global Framework for Understanding and Measuring Homelessness

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About the Institute of Global Homelessness

The Institute of Global Homelessness (IGH) is a partnership between DePaul University in Chicago and Depaul International, an NGO based in London that works with people experiencing homelessness in six countries. IGH serves as a central hub where policymakers and practitioners can find the tools they need to end homelessness around the globe.

Our vision is a world where everyone has a home. Our mission is to support an emerging global movement to end homelessness led from the ground, guided by actionable research and supported by effective policy.

For more information about the Institute, please visit www.ighomelessness.org or contact kjohnson@ighomelessness.org.
UNDERSTANDING AND DEFINING HOMELESSNESS
**Introduction**

Our aim is to develop a definition of homelessness that is meaningful across the globe, with resonance in the Global South as well as the Global North. This definition should provide a common language and reference point to frame exchanges on the topic of homelessness within and across world regions. It should also provide a robust basis for the development of a global estimate of the number of people affected by homelessness, and trends in the scale of this phenomenon.

In developing this definition, we have drawn upon a wide range of sources, including:

- The 'European Typology of Homelessness and Housing Exclusion' (ETHOS) developed by FEANTSA (European Federation of National Organisations Working with the Homeless) and the European Observatory on Homelessness (EOH) (Edgar & Meert, 2006; Edgar et al, 2007; see also Appendix A).
- Critiques and developments of ETHOS, and in particular contributions by Kate Amore and colleagues (Amore et al, 2011; Amore, 2013).
- The sustained programme of work undertaken by Graham Tipple and Suzanne Speak on homelessness in the developing world (e.g. UN Habitat, 2000; Tipple & Speak, 2005, 2006, 2009; Speak, 2013).
- Articles on homelessness definitions in specific developing world contexts, especially those which focus on the interface between street homelessness and the population living in slums/ informal settlements (e.g. Cross et al, 2010; Kok et al, 2010).

**The Conceptual Model**

The core concept lying at the heart of our proposed global definition of homelessness is:

'Lacking access to minimally adequate housing'

More specifically, following the lead of Amore (2013, p.228), we understand homelessness as "living in severely inadequate housing due to a lack of access to minimally adequate housing" [emphasis in original]. This parallels the 'enforced lack' criterion now widely accepted in concepts of poverty and material deprivation (e.g. Lansley & Mack, 2015), and reflects our view that homelessness should be conceived of as 'severe housing deprivation' (see also Springer, 2000). In other words,
homelessness denotes a standard of housing that falls significantly short of the relevant adequacy threshold in one or more domains.

The following three 'domains of home' - a refined version of the ETHOS conceptual domains (Edgar & Meert, 2006) - seem to us the appropriate ones within which to evaluate adequacy (see also UN Habitat, 2009):

- the ‘security domain’
- the ‘physical domain’; and
- the ‘social domain’.

The security domain is a multi-dimensional domain that relates to "the extent to which households can make a home and stay there for reasonable periods if they wish to do so, provided they meet their legal obligations" (e.g. Hulse et al, 2011). This includes both de jure security of tenure (having legal title to occupy) and de facto security of tenure (which relates to the practical likelihood of eviction). As with the ETHOS conceptualisation, exclusive occupation (i.e. the power to exclude others) is also a vital feature of the security domain.

But in addition, we would consider that the affordability of housing is highly relevant to this domain, as inability to meet rental or mortgage costs is a key cause of housing insecurity.

The physical domain pertains to having an adequate dwelling which meets the households' needs in terms of both the quality of the accommodation (durability, protection from the weather, provision of basic amenities, freedom from infestation and pollutants, and safety of one's self and one's possessions from external threats) and quantity of accommodation (not severely overcrowded).

The social domain refers to opportunities to enjoy social relations in the home, as are culturally appropriate in the relevant community, and also the scope afforded for privacy. This domain also pertains to safety from internal threats (i.e. from other occupants) to both the person and their possessions.
The Framework

Proceeding from this conceptual model, we envisage a Framework of Global Homelessness containing three broad categories of people who may be considered homeless. While this proposed Global Framework borrows from ETHOS, it also departs from it in significant ways to take account of developing world contexts, and also recent critiques of ETHOS (particularly Amore, 2013).

1. People without accommodation

This refers to people who are sleeping in places not intended for human habitation, and who are variously referred to as 'roofless', 'living/sleeping rough', 'street homeless', or 'unsheltered' in countries around the globe.

This group is excluded from all three domains of home, having no legal title to occupy any form of physically adequate accommodation, within which they can carry on normal social relations or achieve an acceptable degree of privacy.

This category corresponds to a large extent to ETHOS 1 (see Appendix A), but with adjustments to take account of relevant phenomena in the Global South. The sub-categories are as follows:

- 1(a) People sleeping in the streets or in other open spaces (such as parks, railway embankments, under bridges, on pavements, on river banks, in forests, etc).
- 1(b) People sleeping in public roofed spaces or buildings not intended for human habitation (such as bus and railway stations, taxi ranks, derelict buildings, public buildings, etc.)
- 1 (c) People sleeping in their cars, rickshaws, open fishing boats and other forms of transport
- 1(d) 'Pavement dwellers' - individuals or households who live on the street in a regular spot, usually with some form of makeshift cover. A pavement dweller's 'patch' may only be marked out by a mat or cardboard box, but in many cases tarpaulin sheets or other scavenged materials provide some form of rudimentary shelter. They may form small communities, but these are distinguishable from slum/informal settlements, typically located on the
urban periphery, in being found in scattered sites in the city centre, and offering their occupants little scope to 'consolidate' their dwelling.

With respect to both 1(a) and 1(b) in particular, there is an important sub-division between street homeless adults (most of whom are men), and street children (mostly boys, and smaller in number than homeless adult males, but a group who have garnered a great deal of research and policy attention (UN Habitat, 2000; Kok et al, 2010)). With regard to the latter group, it is children 'of' the street (who sleep in public places) rather than children 'on' the street (who work on the streets but return to a family to sleep) who are most relevant (Jones & Thomas de Benitz, 2012; Lam & Cheng, 2012; van Blerk, 2012). Pavement dwellers, on the other hand, commonly include entire households or families living together on the streets (Tipple & Speak, 2006; 2009).

2. People living in temporary or crisis accommodation

This category pertains to those living in accommodation formally provided by public or charitable bodies to cater for those who are unable to secure a dwelling for themselves. While such accommodation is provided on an emergency or crisis basis, in reality people can live in this ostensibly 'temporary' provision for very extended periods of time.

While the physical conditions in such accommodation may be adequate (though this is far from always being the case), occupants are generally excluded from the security domain (with no de jure or de facto security of tenure) and the social domain (with little privacy, security or safety from fellow occupants, and few opportunities for normal social relations).

The relevant sub-categories include:

- 2(a) People staying in night shelters (where occupants have to renegotiate their accommodation nightly)
- 2(b) People living in homeless hostels and other types of temporary accommodation for homeless people (where occupants have a designated bed or room)
• 2(c) Women and children living in refuges for those fleeing domestic violence
• 2(d) People living in camps provided for ‘internally displaced people’ - i.e. those who have fled their homes as a result of armed conflict, natural or human-made disasters, human rights violations, development projects, etc. but have not crossed international borders (Phuong, 2004)
• 2(e) People living in camps or reception centres/temporary accommodation for asylum seekers, refugees and other immigrants

3. People living in severely inadequate and insecure accommodation

Whether people living in severely substandard or highly insecure accommodation ought to be considered homeless (rather than poorly housed) depends on how deficient their circumstances are with respect to the three domains of home indicated above. Moreover, they would only be considered homeless if they were living in this severely inadequate or insecure housing "due to a lack of access to minimally adequate housing" Amore (2013, p.228).

The potential relevant sub-categories are as follows (broadly speaking, these cover ETHOS 8-13):

• 3(a) People sharing with friends and relatives on a temporary basis
• 3(b) People living under threat of violence
• 3(c) People living in cheap hotels, bed and breakfasts and similar
• 3(d) People squatting in conventional housing
• 3(e) People living in conventional housing that is unfit for human habitation
• 3(f) People living in trailers, caravans and tents
• 3(g) People living in extremely overcrowded conditions
• 3(h) People living in non-conventional buildings and temporary structures, including those living in slums /informal settlements

Summary

We have said above that the distinction between poor or inadequate housing and homelessness rests on the severity of deprivation in the three key domains of home. However, it is also to at least some extent a political decision, embedded in varying
economic, cultural and institutional contexts. We do not think it helpful to attempt to impose a single definition of homelessness, applied uniformly across the globe.

For one thing, in order to be useful, a definition of homelessness must reflect to at least some extent the norms within that society (i.e. it has an inevitable relative dimension based on prevailing housing standards in that context). Amore (2013) argues that the predicted prevalence of a particular form of housing deprivation is irrelevant to considerations of whether, conceptually, it ought to be categorised as a form of homelessness. But we are mindful of Tipple & Speak’s (2006) point that definitions which include “the vast majority of the developing world’s population” (p.57) may “include too many people to be of use in prioritising resources for the most needy” (p.60).

It is, in any case, not necessary that all countries agree on all categories, or accept that all of these groups are part of the homeless population. What is more important - and feasible - is that we develop a Framework that national and local definitions can be set in relation to, so that it can be clarified which of the subgroups are included and which are not. This is a great advantage when comparing absolute numbers and trends across countries, and also for evaluating progress and bringing pressure to bear on policy makers and other key actors. This Framework is therefore best considered an aid to transparency, a useful ‘reference frame’ (Busch-Geertsema, 2010). Such a common conceptual framework, if it were widely recognised and accepted, would allow stakeholders from different national and regional contexts to engage in meaningful dialogue with those from elsewhere - being clear where they are referring to similar and different categories of homelessness - and obviate the danger of talking ‘past’ each other about different phenomena.

However, what we can and must do is come to a clear and consistent definition of homelessness for the purposes of guiding IGH’s work. This definition must have global resonance and be, at least in principle, capable of application in a meaningful way across countries with very different economic, housing and cultural contexts. It is to this more specific definitional task that we know turn our attention.

**The IGH Definition**
We recommend that the work of IGH focus on Category 1 and Category 2 (a-c) in the above framework, i.e. people without any accommodation, and those living in temporary or emergency accommodation specifically provided for homeless people.
# Proposed Framework of Global Homelessness

IGH focus marked in **green**.

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
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<tbody>
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We propose this relatively narrow definition of homelessness for the following (inter-related) reasons.

First these forms of 'literal homelessness', particularly street homelessness and shelters of various kinds, reflect a higher level of commonality across the globe (being present in both the developed and developing worlds) than do some of the other categories, which are more specific to particular world regions (Cross et al, 2010). This commonality also permits us to pursue measures of homelessness which are largely absolute rather than relative in nature (i.e. similar to the $1.25 a day absolute poverty level), which would be more difficult with broader definitions which would inevitably be more culturally defined in nature.

Second, we have grounds for thinking that street homeless people in particular are often neglected in international and local strategies to tackle 'homelessness' in favour of more numerous and better organised groups living in inadequate housing, such as shack or slum dwellers whose circumstances, while often very poor, may constitute a 'staging post' in housing careers towards something more permanent and viable (Cross et al, 2010; Tipple & Speak, 2005; 2009).

Third, many other organisations and networks already exist to focus on slum dwellers, refugees, and internally displaced peoples. It would be neither appropriate nor sensible for IGH to attempt to usurp the work of these well established and expert organisations.

In summary, the gap that IGH seeks to fill is with respect to a population enduring extreme versions of housing deprivation, who are found in most if not all parts of the world, and whose needs tend to be neglected by current networks and international strategies. Our reasoning echoes the sentiments expressed by these South African authors:

"...broad definitions [of homelessness] risk losing the dynamics of actual street homelessness inside large and diffuse social categories: the destitute street homeless are a small and particular group as compared with the much larger, better known and less poor shack population and the many shelter-insecure urban dwellers." (Cross et al, 2010, p.7)
Core Characteristics of the Proposed Approach

A number of judgement calls have been made in developing both this Global Framework and Definition of Homelessness, and the direction we are proposing brings in its wake a number of both strengths and weaknesses.

First, our proposed approach is entirely accommodation-orientated, being concerned with 'severe housing deprivation'. We acknowledge that this excludes the deeper, non-material meanings associated with the concepts of 'home', particularly the connections with family and kinship, and other social ties and relations.

Tipple & Speak (2009) make the point that, while in the West homelessness is often associated with social exclusion, this is not necessarily the case, for example, with pavement-dwelling households. "It is not helpful... to assume that street-homeless people in developing countries are as isolated from mainstream society as many of those in industrialised countries" (p.79). Thus we appreciate that implying the loss of familial roots as well as the loss of shelter is not always appropriate in the developing world, with many people who live on the streets (to be close to their livelihoods) having a 'home' in their family’s place of origin, often in a rural village (see also Wardhaugh, 2012). Nonetheless, we would agree with Tipple & Speak (2005, p.351), that we should not be "quick to abandon the term homeless" in favour of more 'neutral' terms such as 'houseless' or 'shelterless', as homelessness has a resonance for lay people and an implied moral and policy imperative that we would seek to preserve.

Second, our approach is concrete, descriptive, and objective insofar as possible rather than subjective, i.e. focussed on how homeless people would classify their own situation. While of course we would acknowledge the importance of homeless people's lived experiences and perceptions, the main exercise we are engaged in here is to enumerate severe housing deprivation across the world, including comparing different countries and world regions. It is therefore vital that the definition employed is objective, operationalisable and measurable.

Third, our approach focuses entirely on those who are presently homeless, rather than those who are 'at risk' of homelessness, or who are 'formerly homeless'. We agree with Amore et al (2011) that, while these populations are highly relevant to homelessness policies, it is important to distinguish them clearly from the actual homeless population at any given moment.
Fourth, one potential weakness of our proposed definition is that it does not allow us to overcome the 'service statistics paradox' (Tipple & Speak, 2009), given that our inclusion of ETHOS 2(a-c) means that those countries/cities with more homelessness services will tend to report higher numbers of people using these services. That said, one might reasonably expect that levels of street homelessness will be correspondingly lower if these countries are providing viable alternatives to the street.
MEASURING HOMELESSNESS
Introduction

As Tipple & Speak (2009) comment, while attempts at enumeration of homeless people are often controversial, the production of reliable estimates is a critical component in progressive policy development because "...numbers tend to drive investment and can enable lobbyists or officials to direct funding to address the problem" (p.103). Thus a 'global estimate' of the total number of homeless people is an important, possibly essential, tool in garnering support for a worldwide initiative to address the problem.

Just as important, or possibly even more important, is to establish the basis for the periodic collection of homelessness data on a (reasonably) consistent basis in order to generate reliable trend statistics. Such trend data - which highlights negative and positive developments in the 'direction of travel' - is fundamental to evaluating the effectiveness of initiatives to resolve homelessness, enabling pressure to be brought to bear on governments and other stakeholders to 'do better' where necessary.

However, it is the firm conviction of the authors - after an intensive search for existing data on homelessness at the national, regional and local levels in various world regions - that it is not possible at this stage to generate a defensible estimate of the extent of homelessness. This is especially true in the Global South, but also in a number of European countries, for example, data on homelessness is extremely sparse and scattered. The basis for a global estimate is still much too patchy and thin for very large parts of the world. The position with respect to assessing trends on homelessness is somewhat more optimistic, as indicated below.

The next section explains how we have come to this view, based on our review of the currently available statistics, and the section after that suggests a way forward for IGH in building towards a credible global estimate.

The Current Position

Differences in methods and definitions in those territories which have conducted counts of homeless people have had a considerable influence on the large variations in homelessness rates (per head of population) found in the literature, which do not reflect accurately 'real' differences in the extent of the problem. For example, the last homelessness census in Australia (2011) found that 0.49% of the Australian
population were homeless according to the Australian definition on census night (Australian Bureau of Statistics, 2012, p. 5), while the latest national homeless count in Chile, also in 2011, found only 0.07% of the Chilean population being “in the streets” (see Ministerio de Desarrollo Social, 2012, p. 49, own calculations).

To take South America as an example, we can find the national count just mentioned in Chile (the second count of this type in Chile), and one national count in Brazil (conducted in 2007).

In most of the other countries of this world region, numbers are only reported for some cities (e.g. from Bogota and some other Colombian cities) or from the capitals, for example of Argentina (Buenos Aires) and Uruguay (Montevideo), if at all. This is not enough to produce a reliable estimate for South America. In other parts of the Global South the situation is even worse, and counts are either outdated or non-existent.

Attempts in the past to build a global estimate have often combined data which were not comparable at all, because they covered different periods of time (e.g. point in time counts were combined with annual prevalence data), related to different groups of homeless people (data about street homeless people in one region were combined with data on users of homeless services or homeless people sharing with friends and relatives in other regions), or took a local homelessness rate (e.g. in large cities) as representative for the whole country or even for a whole world region (see examples in UN Habitat, 2000 and Tipple & Speak, 2009). Some authors give apparently exact population rates for large world regions without any explanation as to where these estimates are derived from. Often the extremely large ranges given as a consequence of the pronounced variation in population rates (leading sometimes to variations of several hundreds of millions at the global level) are much too wide to be useful.

In 2005 a “Special Rapporteur on adequate housing as component of the right to an adequate standard of living” in his report to the UN Commission on Human Rights announced that the “United Nations estimates indicate that approximately 100 million people worldwide are without a place to live. Over 1 billion people are inadequately housed” (see UN, Commission on Human Rights, 2005, p. 2). In the same report an estimate of 20-40 million homeless people “in urban centres worldwide” is quoted from an earlier publication of the UN (2001), but the empirical basis for both
estimates remains unclear.

Tipple & Speak (2009) in their book on “The Hidden Millions” provide the following worldwide estimates: between 3.8 and 216 million are homeless according to official figures; between 33.6 and 179 million are living on the streets; and between 41.6 and 730 million homeless households are living in inadequate housing. But at the same time they are clear that these ranges are far too wide to be practically useful: “It seems that we should enumerate homeless people but currently we do not have the tools to do so with any accuracy” (p.119)

In 2006 the UN published Recommendations of the Conference of European Statisticians for the 2010/2011 Censuses of Population and Housing (UNECE, 2006) which also included a definition of homelessness for those persons not living in private or institutional households: Two “categories or degrees of homelessness” were proposed (p. 109):

- **Primary homelessness (or rooflessness):** this category includes persons living in the streets without a shelter that would fall within the scope of living quarters.
- **Secondary homelessness:** this category may include persons with no place of usual residence who move frequently between various types of accommodations (including dwellings, shelters, institutions for the homeless or other living quarters). This category includes persons living in private dwellings but reporting “no usual address” on their census form.

The results of the 2011 censuses in different European nations showed that for some countries, especially in Central and Eastern Europe, data on the national extent of homelessness were produced for the first time (see Baptista et al, 2012). But overall the results for Europe were disappointing as the number of countries not reporting any data on homelessness, or reporting data which were unreliable, was rather high, as the following table, published by EUROSTAT, shows. In the 13 cases where a “0” is indicated in the table, it is much safer to assume that no numbers were available rather than conclude that homelessness has been eliminated in the respective countries.
Source: [https://ec.europa.eu/CensusHub2/](https://ec.europa.eu/CensusHub2/) (last retrieved 15 April 2015)

It is important to understand that census authorities are often interested in the scale of homelessness only to a limited extent, and mainly in order to provide a comprehensive number for the national population. They are less interested in providing detailed information on the extent and profile of this particular group. This means that, while in some European countries attempts were made to cover homeless people, their number were then aggregated with other groups who are difficult to count (such as people in institutions, living on boats etc.; for more details see Busch-Geertsema et al., 2014).

However, in other regions of the world, for example in Australia or India, the census authorities have played an important role in providing more reliable estimates on the
scale of homelessness (see Bannerjee, 2002; Australian Statistical Bureau, 2012)

To conclude, we are currently not in a position to extrapolate any reliable global estimate from existing data on homelessness. It is necessary to extend and improve local, regional and national data on homelessness before we can generate a global estimate with the minimum accuracy required. The next section sets out the proposed IGH strategy for facilitating attempts to move towards a more reliable worldwide estimate.

**The IGH Strategy**

Obtaining reliable and valid measures of the extent of homelessness in any location is fraught with complications. Even countries like the United States which have committed significant time and resources to establishing robust counts, confront regular challenges, particularly with regards to the enumeration of 'unsheltered' people (i.e. those sleeping rough or in places not intended for human habitation).

Enumeration is difficult because the persons to be counted typically seek to conceal themselves from the elements and/or authorities, and so are not often visible to enumerators; and the geographic extent within which people may reside is virtually coextensive with the borders of a given jurisdiction, although actual occupied locations are likely much more limited.

Add to this the human resource challenges of mounting comprehensive street counts, including with some regularity and periodicity, and it is clear that obtaining a reliable estimate of unsheltered homelessness in any particular location or country will require a significant commitment of time and people. To guide us in these efforts, we do have exemplary practices from several different countries and cultural contexts and from which we can learn and share. We are also aware of common limitations that will require persistence and creative accommodations to overcome.

We propose that the way forward is as follows:

First, we encourage the IGH and its affiliated members to work with the official census authorities and NGO networks that serve or advocate on behalf of homelessness to promote reliable counts of the narrow definition of homelessness we are suggesting above. Given our experience with official census authorities, we think it is unrealistic
to expect these agencies to undertake regular and periodic counts of unsheltered persons, or people sleeping rough, roofless or in places not meant for habitation.

While these authorities do likely have the capacity to enumerate people in crisis or temporary accommodation, given our collective experience in developed countries, and the already serious challenges to enumeration of people in slums and informal settlements in developing countries, we think it is quite unlikely that these authorities will undertake unsheltered counts on their own. However, we do think that the IGH should encourage NGOs to consult and even collaborate with census officials as NGOs develop plans to undertake enumerations or estimates of unsheltered persons.

These authorities may have tools (i.e. mapping) that can support the enumeration efforts, and they may even be able to offer some level of participation in the planning for a count. (Indeed, in the event that a community or country chooses to estimate the prevalence of homelessness from the retrospective accounts of housed households or persons with telephones, such authorities could well be expected to take a leadership role; this option will be further discussed below.)

Second, based on the experiences of researchers and enumerators in several countries, we can provide guidance on potential methods for estimating the size of the unsheltered population. The United States Department of Housing and Urban Development has issued two documents on recommended methods as it has required biennial counts of unsheltered people as a condition for funding (Burt, 1996; HUD, 2008). The collective experience of various countries to date suggests two primary approaches to counting unsheltered households, including street counts based on stratified geographic sampling, and service-based sampling methods.

Some communities have combined these to improve upon the accuracy of the street counts. Still others have employed a variation on the visible street counts with the use of 'capture/recapture' approaches. Each of these will be described below. Lastly, we will consider the potential utility of household-based surveys for estimating homelessness, although these may be better suited for estimating past rather than current homelessness.

**Stratified Geographic Sampling**
The most common method for estimating unsheltered persons in the US is based on stratified samples of geographic units within a given jurisdiction. Service providers, especially those who do outreach to unsheltered persons, and other professionals with expert local knowledge of the problem, such as police, are convened months in advance of a count to review maps of the jurisdiction and to classify areas as having a high, medium or low probability of having at least 2 or more people sleeping rough.

- Places with a low probability may be removed as potential sampling sites, due to the human resource demands of reaching other sampled areas.
- Areas with a medium probability may be sampled at a 5, 10 or 20 percent rate, depending on the number of enumerators who will be available the day of the count. In general, high probability areas are sampled at 100 percent, but in large areas and with limited enumerators, 20-50% samples may be necessary.
- Areas with 'encampments' or unique places like train stations and airports, where significant numbers of people are expected to be found, are called 'certainty' sites, and are generally enumerated at 100% and 'represent themselves' (i.e., they are not used as a basis for extrapolation to other sites, given their uniqueness).

Enumerators, typically traveling in pairs or groups of three or four, use tally sheets to count people, and may use forms to denote visible demographic characteristics. Some sites may actually survey people, or a sample of people with a formal survey, although enumerators are usually instructed not to disturb sleeping people.

Enlisting volunteers for a count, developing assignment procedures and maps, and providing them with a brief training, will require several months of planning. In the US, these counts are typically done during the coldest month of the year, when people will seek shelter at greater rates, and when it is expected that unsheltered homelessness is most rare. However, this comes with a risk that unsheltered people will also seek informal shelter from the elements and be less visible for enumeration purposes. Some localities may have an additional count in the summer to provide an alternative measure. In New York City, a correction for undercounts includes the deployment of hundreds of “visibly homeless” 'decoys' who report whether or not they are enumerated on the night of the count; counts are adjusted upward for the percentage of decoys who go uncounted.
Certainty Sites Only

A variation on the stratified geographic sample approach may involved a survey of “certainty” sites only. In this approach, where insufficient enumerators and/or resources are available for a stratified approach for the whole jurisdiction, just known sites where encampments are located, or places like plazas, transit stations, dock areas, etc., are identified by the expert planning group, and only those areas are subject to enumeration. While this clearly does not result in a jurisdiction-wide estimate, it does have the advantage of surveying the areas where the largest number of people can be found, including where people can be surveyed regarding their characteristics, and where future and periodic counts can be repeated to gauge changes in the size or composition of the population in these areas.

Service-based Sampling Method

Another method for estimating the size of the unsheltered homeless population includes 'service-based sampling' methods. In this approach, (non-accommodation) service programmes that are known to serve large proportions of the street homeless are identified, such as soup kitchens or “drop-in centers”.

All or a proportion of the sites are surveyed either on one day or, more commonly, over the course of a week. Samples of clients are surveyed (for example, a ten or twenty percent sample), and asked about where they slept either the night before in the case of a one day sample, or over the course of the last week. Also required under this approach is a tally of all the meals served on the day or week of the survey, including at sites not selected for the sample surveys. Based on the proportion of respondents who report sleeping arrangements that could be characterized as “unsheltered” an extrapolation is conducted to estimate the total number of service users who might therefore be unsheltered.

Part of the survey instrument should include a screening question regarding whether or not the respondent has completed the survey previously that day or week, either at the same site or at a different site, and the estimates adjusted for duplication accordingly. This method has been successfully used in some cities in the US and in some European countries like France, which has a national network of public restaurants with subsidized meals, and in Spain (see Yaouancq et al, 2013 and INE, 2012).
Service-based Sampling as a Correction for Uncounted Street Enumerations

An alternative use of the service-based method is as a correction for the street enumerations, such as the stratified geographic approach or the 'certainty' site only approach. In this case, people at service sites are surveyed the day after the one-day counts and asked about where they slept the night of the survey. The goal is to determine the percentage of people who were in unsheltered locations where survey enumerators would not have been able to identify them due to their lack of visibility.

The proportion of unsheltered who would not have been counted is then used as an extrapolation factor for the estimate of the unsheltered who were counted. This is also a way to derive an estimate of the 'hidden homeless' who may be living with others in conventional housing but on an emergency basis (although this may not be an enumeration goal of a more narrow definition of homelessness).

The reliability of the estimate in either case is based on an assumption that the visible and not visible persons exist in proportion to their relative representation among the service users.

Finally, because this method is meant as a corrective to the street enumerations and not as an estimate of unsheltered homelessness among all service users, it is not necessary to get a tally of unduplicated service users across all service sites, as is required when this method is the primary approach to estimating unsheltered persons, and for which the universe of service users is necessary (as a denominator) from which to generate the estimate.

Capture/Recapture Method

A less commonly used, but novel approach to estimating the size of the unsheltered population employs a 'capture and recapture' method. In this case, geographic areas or service sites are pre-identified on the basis of their having a high probability of unsheltered homelessness.
A predetermined sampling approach is planned, and respondents recruited using the specified procedures (first 200 people contacted in an area or at a service provider, for example). People are then screened as to their housing status to determine if they were unsheltered in the previous night, week or month. Some components of a personal identifier are also obtained. This usually includes the initial of the first and last name, and perhaps year or month and year of birth, or it could include last four digits of a national identity number or recent phone number, etc. These identifiers are chosen to reduce concerns by respondents that they will be identifiable by surveyors or officials, but which they can readily recall with reliability. The identifier(s) then serves as the “tag.”

A subsequent survey is then repeated using the exact same sampling procedure and sample size at another point in time (one month or two months later). A formula is then used to derive an estimate of the total population, based on the overlap of the two samples (the tagged people from the first count “recaptured” on the second count).

One challenge with this approach is that it produces estimates with large confidence intervals. However, the confidence interval can be narrowed with repeated resampling, for example, by doing the procedure perhaps monthly over a six month period. This approach was recently used successfully in Chile (Ministerio de Desarrollo Social, 2011; see also Williams, 2010 with examples from the UK).

**Telephone and Household Surveys**

A final method for estimating unsheltered homelessness is also a method than can be used to estimate rates of other forms of homelessness: telephone or other household surveys. In this case, households are sampled, usually based on random digit dialing or through samples of housing unitss, and people are surveyed regarding their homelessness history. Respondents are asked to self-report places they may have stayed over varying time periods, or over their lifetime, and the list of options includes a range of homeless situations.
Positive indicators of homelessness are then used to derive a rate, which can then be extrapolated to the population from which the sample is obtained. An advantage of this approach is that researchers can 'piggy back' on existing household surveys by adding these questions, and take advantage of large-scale, robust national surveys already conducted by official bodies.

A potential disadvantage of this approach is that given that homelessness is likely a relatively 'rare event' epidemiologically speaking, reliable results will require very large samples, such as are likely to be obtained from national surveys by official census authorities. Small samples (n=500 or even 5000) can lead to very large confidence intervals, with extrapolations to whole nations based only a handful of respondents reporting a positive homelessness history.

A further disadvantage specifically with respect to the estimation of unsheltered homelessness is that unsheltered persons are less likely to have phones, or to have recently been part of a household, and so this method may be expected to significantly underestimate unsheltered homelessness, and certainly will underestimate current, very recent or long-term homelessness as people sleeping rough or in temporary or crisis accommodation will not be captured by most household surveys.

**Summary**

A variety of methods are available for estimating the number of person who are homeless in a given jurisdiction. In this section, an emphasis was given to methods for estimating unsheltered homelessness, that is, persons who are roofless or otherwise living in places not meant for human habitation. The assumption here was that people in emergency accommodations or shelters are able to be enumerated in a more straightforward manner due to their residence in a night-time facility, where they can be readily tallied or surveyed on a given night. In contrast, given the geographically dispersed and broad extent in which persons can be unsheltered, other methods are necessary to estimate the population size.

The methods above provide some systematic approach to conducting such estimates, although each has its shortcomings, and may be best used in combination, so as to correct or triangulate the various estimates. Certainly, more research is
needed to understand how these methods compare and as to their applicability in a wide variety of settings around the world.

It is worth emphasising that we will be in a position to comment on trends at a much earlier stage than having a defensible global count. For large parts of the Global North such trend analysis is already possible (see Busch-Geertsema et al, 2014, for a number of European countries), and it might also be possible for some countries and cities in the Global South as well. For example, the Brasilian city of Sao Paolo has had more than six bi-annual homelessness counts to date (the most recent one in 2015); the national count in Chile is the second one; trend data have been reported for India, and at the local level for a number of cities in the Global South.

As to the feasibility of a global estimate, it is likely that this will take some time as cities and countries develop their estimates, and certainly overgeneralization of some local or national estimates should be cautioned against. For example, creating regional estimates for a continent based on only a handful of local or national counts is not recommended, as both rates for given countries and for areas in a given country can be quite variable, based on current international experience. At best, an estimate for a given country can be attempted based on a rate or averaged rates for cities and extrapolated to urban areas, combined with a separate rate derived and extrapolated for rural areas. Such national estimates can be additive in a region or continent. Generalizing these rates to other nations in a region is risky in any case, due to expected international variations in rates, but it will likely not prevent some from trying to offer such estimates.

To get to a Global Estimate, we propose that the IGH work to promote national estimates based on the definitions and enumeration methods above. In time, these can be added to form reasonable estimates in various regions around the world, recognizing that this is a long-term task, and will take many years to accomplish on a global scale.
CONCLUSION
We have proposed in this paper a Global Framework of Homelessness focused upon "living in severely inadequate housing due to a lack of access to minimally adequate housing", with adequacy evaluated in respect of the 'security', 'physical' and 'social' domains of home. While this Framework encompasses a wide range of circumstances that may potentially be described as homelessness, as a means of providing a ‘frame of reference’ for cross-national discussions and comparisons, we propose that the work of IGH focuses more narrowly on people without any form of accommodation (the 'shelterless' group who are sleeping rough or in places not intended for human habitation) and those living in temporary or crisis accommodation specifically provided for homeless people. This is a population who are found in most if not all parts of the world, and whose needs tend to be neglected by current networks and international strategies.

We have concluded that we are not in a position to extrapolate any reliable global estimate for these groups of homeless people from the data which currently exists. It is necessary to extend and improve local, regional and national data on homelessness before we can generate a global estimate with the minimum accuracy required. We have therefore set out some proposals for facilitating attempts to move towards a more reliable worldwide estimate, and we see IGH as playing a crucial role in encouraging the development of the more reliable local statistics required to build towards this goal.

We further recommend that IGH should consider producing an annual report/monitor of homelessness counts and trend data available in particular countries, cities and other locations, and areas of the world for which we can make credible estimates, tracking how this develops over time. A network of coordinators in different world regions would make this feasible, by supplying local intelligence, contacts and data. We would envisage an annually updated 'monitoring table', which tracks progress in terms of the homelessness data available, alongside the methods deployed to generate this data. Such a regular 'report card' should help to generate momentum for positive action in those parts of the world where greater progress is needed in enumerating and, more importantly, tackling homelessness.
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Suzanne Fitzpatrick completed her PhD on youth homelessness at the University of Glasgow in 1998. She subsequently held a number of posts in the Department of Urban Studies at the University of Glasgow, including ESRC Research Fellow in Housing and Social Exclusion and, latterly, Lecturer in Housing and Social Policy.

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His homelessness work has positioned him as an early innovator in the use of administrative data for research and policy analysis, particularly for populations and program impacts which are difficult to assess and track. Culhane’s work has resulted in federal legislation requiring all cities and states to develop administrative data systems for tracking homeless services in order to receive HUD funding. His work has also been instrumental in a national shift in how cities address chronic homelessness and family homelessness. Culhane’s recent research includes studies of the ageing homeless population and vulnerable youth and young adults, including those transitioning from foster care, juvenile justice, and residential treatment services.
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Between 2011 and 2013 he has coordinated the “Housing First Europe” project funded by the European Commission. In 2014 he published together with colleagues the results of a large research project on prevention of homelessness in Germany’s most populated regional state North Rhine-Westphalia and a statistical update of the extent and profile of homelessness in European member states.

He has been involved in a number of evaluations of re-housing projects for homeless people and provides advice and support for a regional governmental action program to prevent and reduce homelessness. He is also member of the core research team of a project funded by the European Commission until December 2015 about homelessness prevention in the context of evictions in all 28 EU member states.