

## Counting Homeless Persons with Surveys of Users of Services for the Homeless

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### *Abstract*

Because of their comparative economy, the most commonly used methods for counting the homeless focus on users of shelters, food lines, health clinics for the homeless, and other services for the homeless. This paper argues that surveys restricted to shelter users are of limited usefulness, but that joint surveys of food-line, shelter, and clinic users include very substantial proportions of the homeless in many communities. Such comprehensive surveys can provide an accurate basis for research on the homeless in communities with reasonably capacious service systems. The reliability of such surveys has grown as service systems for the homeless have improved. Groups of the homeless that tend to be missed in service user surveys include homeless youths on their own as well as substantial portions of the rural homeless population and of the doubled-up or institutionalized homeless populations. Surveys of homeless persons sleeping in known places “on the streets” can be used to supplement surveys of service users. Research in Colorado suggests that such supplemental surveys of the street population provide a practical basis for comprehensive estimates of the homeless street population.

### **Introduction**

Research methods for determining numbers and characteristics of the homeless remain in a developmental, exploratory stage. Definitions of the homeless continue to differ among studies. Methods for sampling and surveying the homeless vary a great deal in cost and approach. Not much is known about the effectiveness of the methods in accomplishing various research objectives.<sup>1</sup>

Especially at the state and local levels, resources spent for research on the homeless often mean fewer resources for services for the homeless. Such a tradeoff makes sense only if improvements in planning and service delivery made possible by the research at least equal research costs. This tradeoff frequently results in methodological shortcuts that threaten the validity of the research. For instance, the single most common approach to research on the homeless is to focus on persons in shelters. This approach is too flawed to generate reliable information on the overall homeless population.

The standard approach to high-quality research on the homeless is to develop probability samples of homeless persons at their sleeping places, in shelters, on the streets, in flophouses or cheap hotels, or other places. This approach has proven highly effective.<sup>2</sup> When applied with competence and care, it has also proven highly expensive and difficult to justify when tradeoffs are required between research and service. It also generally misses important segments of the homeless.

More recently, research has aimed to sample the homeless at service locations where they congregate during the day, such as food lines and day shelters, as well as where they sleep at night. This paper shows that this service-oriented approach to research on the homeless can be highly cost-effective. In some communities, a substantial proportion of the homeless—including homeless street persons—are service users. Users of daytime services include groups of the homeless not generally included in research limited to sleeping places. In many communities, this can be the preferable approach to research on the homeless.

### **Information needs for homeless policy analysis**

Policy analysts have identified three types of interventions addressing the homeless problem. The first and most familiar is emergency interventions providing shelter, food, health care, and other immediately pressing services needed to preserve the health and lives of actually homeless persons. The second is transitional services designed to help homeless persons exit from homelessness. Such transitional services include longer term housing, supportive social services, and employment and training assistance, as well as income supports for the dependent. The third major policy is preventive services to keep persons from becoming homeless in the first place.<sup>3</sup>

Preventive policies cover much the same range of interventions as those included among transitional programs; to achieve their purposes, they are delivered to persons who are at risk but not actually homeless. Preventive policies may also be designed to shape the social environment producing homelessness, by making social welfare programs more generous or accessible, by boosting the availability of subsidized or moderate-cost housing, or by trying to stimulate the availability of jobs for the indigent and homeless.

This simple policy typology offers clues about the information needs for policy making. Simple counts—point prevalence—of the

homeless are useful for understanding the needs for emergency services. Simple demographic information is also useful, because the emergency needs of families, youths, and single adults differ.

More complex information is needed for responsive transitional policies. Estimates of annual prevalence—the number of unduplicated cases of homelessness in a year—can help determine the numbers of individuals and families requiring transitional services in a typical budget period. Moreover, good typologies describing the characteristics and service needs of the homeless can help identify the kinds of transitional services the homeless need.

The information requirements for effective preventive services are more complex still. This is especially true for preventive strategies focused on identifying and helping persons at risk, rather than preventive policies altering the general social environment. The population of persons at risk of homelessness is far larger than the number of persons who are actually homeless at any time. Evidence from Colorado suggests that the population in the state at high risk of homelessness (more than a 10 percent chance of becoming homeless in a given year) is roughly eight times as large as the number of persons homeless at any given time (point prevalence).<sup>4</sup>

An effective preventive policy requires knowledge of the characteristics and needs of the at-risk population, an understanding of the factors placing the persons at risk, and the identification of programs that could alleviate risk. Unfortunately, very little is known about these issues. Statistical sampling and analysis of the characteristics of the at-risk group is extremely difficult. Most are housed or institutionalized at any given time and are not part of the homeless population.

It is thus apparent that policy makers need information that is far more discriminating and complex than simple counts of the homeless at a point in time. In particular, they need accurate information on the characteristics and needs of the homeless. The development of relevant and empirically applicable typologies of the homeless would be especially useful.<sup>5</sup> Better understanding of the dynamics of homelessness is also needed to improve insight into the factors shaping the lengths of spells of homelessness and the relationships between point prevalence and annual prevalence. Documenting the housed and institutionalized populations' risk of homelessness would also be useful.

## **Problems with sampling homeless persons at their sleeping places**

Research on the homeless has been impeded by the great difficulty of obtaining representative samples of the homeless. The standard approach has been to sample homeless persons at their sleeping places. Using such research of course makes it reasonably straightforward to develop statistically reliable samples of homeless persons in emergency shelters. It is also relatively straightforward to develop samples of the homeless sleeping in single-room occupancy (SRO) or other hotels. The difficulty is in developing reliable samples of homeless persons who sleep in other places. Such persons are often sleeping on the streets, or temporarily with friends and family.

### *Problems with sampling street populations*

Rossi developed the method of taking probability samples of locations such as census blocks and methodically sweeping, or searching, them at night using teams of interviewers.<sup>6</sup> Such sweeps are extremely expensive, precluding their widespread use. Moreover, they are difficult to do efficiently, because it has proven hard to find reliable information on where the homeless are likely to be found. This situation has made it impossible to allocate resources for sweeps in a manner calculated to maximize their effectiveness.

Rossi, for example, used information from the Chicago police to divide Chicago blocks into three categories: those with a high probability of containing homeless persons, those with a medium probability, and those with a low probability. He found that the police information, though helpful, bore very little relationship to the actual distribution of the homeless, especially in the relatively warm fall months.<sup>7</sup>

Preliminary evidence from the 1990 census suggests that the U.S. Census Bureau also has had considerable difficulty in anticipating places on the streets where homeless persons could be found. An evaluation of Census S-Night in Chicago for the Census Bureau stationed observers at a number of sites selected by the bureau and monitored homeless persons and census enumerators.<sup>8</sup> The report concluded that the observers ended up in three types of areas: “(a.) those with homeless people but no enumerators, (b.) those with enumerators but no homeless, (c.) those with neither homeless or enumerator.”

The research also reports, “Some observers wondered about the rationale for their site placement. Those observers had been assigned to areas that had no visible signs of homelessness (e.g., no abandoned or dilapidated buildings, no SROs, no low income areas).”

A similar evaluation of S-Night in New Orleans found the census choice of sites much more apt, but too limited in extent:

Sites offered a reasonably thorough coverage of the presumed high-density, homeless-frequented, downtown and near-downtown areas of the city. Of course, the homeless do frequent other areas of the city, albeit with lesser concentration. . . . Nonetheless, these latter-type locations were altogether ignored.

To the extent that resources were scarce, the limited site plan may have been the most efficient high-yield strategy. At the same time, it must be realized that such an enumeration as this can only provide an extremely limited count of the homeless.<sup>9</sup>

To simplify sampling problems, recent research studies have chosen to limit street interviews to known sleeping places of the homeless.<sup>10</sup> Such places may include abandoned buildings, places under bridges, parks, bus stations, and the like, used by significant numbers of the homeless. Such simplified sampling plans save money and effort, but at the cost of missing an unknown number of homeless persons. Given the substantial ignorance of where homeless street persons are to be found, this approach seems highly questionable as a basis for counting street persons. Homeless persons missed in such surveys may include those deliberately concealing themselves and others sleeping in cars or other unusual places. Persons who have recently become homeless often use such places.

### *Problems with sampling the doubled-up homeless population*

Not all researchers or policy makers define persons who are doubled up on a temporary or emergency basis with friends or family as homeless. Such persons are excluded from Rossi’s concept of the literally homeless. Rossi counts as homeless only persons in emergency shelters for the homeless, or persons sleeping on the streets: that is, in parks, vacant buildings, cars, or in public places not meant for sleeping, such as movie theaters, bars, or all-night restaurants, etc. His definition also excludes persons living in SROs or hotels.<sup>11</sup>

However, most other definitions include as homeless some persons who are not literally without shelter. The McKinney Act (P.L. 100-77, July 22, 1987) defines as homeless “an individual who lacks a fixed, regular, and adequate nighttime residence.” This official definition includes persons in hotels and other apparently temporary housing arrangements such as jails and hospitals, because they are not fixed and regular and may not be adequate. The definition could also include large numbers of persons living temporarily with friends and family because of a lack of another place to live. Such doubled-up persons could be deemed to lack a fixed and regular place to live.<sup>12</sup> They could well outnumber the literally homeless by a considerable margin.<sup>13</sup>

The broader McKinney Act definition could thus entail sampling residents of hotels, jails, hospitals, and even in households. Few effective strategies for sampling these various populations have been developed.

To get more insight into the numbers and characteristics of the population of persons doubled up with friends and family on an emergency basis, the U.S. Department of Housing and Urban Development (HUD) is exploring the use of the American Housing Survey (AHS) to identify such persons in households.<sup>14</sup> HUD has proposed that questions on homelessness be added to the national Survey of Income and Program Participation.

Such research is feasible at the national level because questions on homelessness can be piggybacked onto existing large-scale surveys at low costs. Such a survey approach is generally infeasible for state and local studies, because of the substantial sample sizes required.<sup>15</sup>

The 1990 census also developed fairly comprehensive lists of hotels and flophouses costing \$12 or less per night. Such places were counted among emergency shelters for the homeless. No information has yet been published on the numbers of persons counted in such places, however.<sup>16</sup>

### **Service use by the homeless**

Expensive street sweeps or surveys of the housed population can be avoided or limited by focusing samples of the homeless on users of services. This approach involves sampling the homeless at daytime gathering places—service agencies—as well as at sleeping places. In research in Colorado, these groups of the homeless have been

sampled at daytime services used by the homeless and at emergency shelters for the homeless. In the author's research, he included as homeless persons who use emergency shelters, food lines, day shelters, and health clinics for the homeless and who report that they lack a permanent place to live.<sup>17</sup> The extent to which doubled-up persons, residents of hotels and flophouses, or persons getting out of jails, hospitals, and other institutions use services for the homeless is unknown, however. As a result, it is impossible to determine the completeness or representativeness of the sample. The evidence on patterns of service use by the homeless has major gaps, but it is increasingly clear. While use of general social services such as welfare or food stamps is low among the homeless, substantial proportions of the homeless make use of services for the homeless such as food lines, health clinics for the homeless, and shelters.

Not surprisingly, large numbers of homeless persons are disaffected from social institutions and mistrustful of government and its agencies. Moreover, homelessness is a stigma and a regular source of humiliation for the homeless, and it makes them vulnerable to discrimination and mistreatment by others. For these reasons, many homeless persons seek invisibility and anonymity. When homeless persons look for help, they tend to seek it predominantly from persons and agencies specializing in helping the homeless.

Research in Denver has documented the high disaffection and mistrust with which the homeless view government. In the Denver metropolitan area, only 44 percent of adult homeless persons believe that government is trying to help the homeless. Only 35 percent believe that government workers treat the homeless with respect. Almost half (45 percent) of homeless persons believe that they are more likely to be hurt than helped if they apply for welfare or general assistance, although 35 percent believe they are more likely to be helped.<sup>18</sup>

Bureaucratic red tape, slow application processes, and too little outreach to the homeless by service agencies also reduce homeless people's use of general social services. Research in three California counties has shown that agencies help very few homeless persons in that state to apply for needed mental or physical health care, or for welfare, food stamps, or other aid programs. Only 2 to 4 percent of the homeless in the three counties reported such outreach. When it was offered, however, few homeless persons refused it. By contrast, about one-third of the homeless reported outreach from shelters or other services for the homeless.<sup>19</sup>

These realities are reflected in low rates of participation in general social programs. For example, of homeless persons in the Denver metropolitan area who appear to be eligible, only 35 percent receive food stamps. Of veterans with honorable discharges, only 16 percent report receiving veterans' benefits. Of persons with a work disability, only 8 percent receive Supplemental Security Income, Aid for the Needy and Disabled (a Colorado program), or other help for the disabled.<sup>20</sup>

In the Colorado research, families stand out as a group that makes the most use of general social programs. At the time of the Colorado research (spring 1990), the state did not have a welfare program for two-parent families. Nevertheless, 23 percent of homeless families were receiving welfare. About 40 percent of homeless families not receiving welfare had applied for it.<sup>21</sup> Public schools are also widely used by the children of homeless families. In the Denver metropolitan area, parents of homeless children reported that 62 percent of the children were enrolled in school.<sup>22</sup>

In contrast to the generally low use of general social programs for the needy, rates of use of services for the homeless are generally quite high. Again using Denver as an example, in spring 1990, James and Duchon found that fully three-fourths of the homeless had slept in a shelter for the homeless during the previous night, and within the past 24 hours 69 percent had used food lines that were not part of shelters for the homeless.

Information from Ohio also reports relatively high rates of use of services for the homeless.<sup>23</sup> Homeless persons in that state were asked to identify services they had used within the past month. The most frequently used social services were food lines and shelters for the homeless (61 percent and 56 percent, respectively). Welfare or relief offices and hospital emergency rooms were next (44 percent and 25 percent, respectively). Twelve percent each had used battered women's shelters and community mental health centers.

### **Numbers of non-service-using homeless persons**

The high rates of use of homeless services show that surveys at service sites would reach a large number of the homeless. Unfortunately, relatively few studies provide a comprehensive sample of the homeless needed to compare service users with nonusers, or to determine how many of the homeless could be reached through surveys of users.



Attempts by Burt and Cohen to provide overall estimates of the national homeless population illustrate the pervasive lack of information. Burt and Cohen used national probability samples of users of emergency shelters and food lines to estimate numbers of homeless service users in the nation. Unfortunately, crude assumptions were all that were possible to estimate the number of nonusers. To provide a range of estimates, they assumed that the ratio of nonusers of services to users was between 20:100 and 50:100.<sup>24</sup>

Rossi's Chicago research does not provide reliable clues concerning service use, because he did not ask specifically about the use of food lines. In his winter (Phase II) survey, he asked respondents how many had received "free meals" in the past 30 days; 72 percent of Chicago's homeless reported that they had.<sup>25</sup> He also reports that 82 percent of Chicago's homeless had stayed in shelters during the past seven days. Unfortunately, he does not provide estimates of the number of street persons who had received free meals.<sup>26</sup> Evidence from the Denver metropolitan areas suggests that the ratio of nonusers to users of homeless services is very low in that community. My research in Denver was based on interviews with persons in shelters, at food lines, and in sleeping places on the streets that were known to search and rescue personnel of the Salvation Army and other groups working with the homeless. The same methods have been applied in April 1988 and in April 1990.<sup>27</sup>

The Denver research estimated an adult homeless population in the metropolitan area of 1,815 on an average night in April 1988. Of these, 1,225 were residents of emergency shelters for the homeless, 410 were on the streets, and 180 were in other living arrangements. As has been discussed, other living arrangements included jails, hospitals, hotels, and the homes of friends and family. This "other" group is based on surveys at food lines, and thus includes only service-using portions of this population.<sup>28</sup>

Note that homeless persons doubled up with friends and family who were not using food lines were not counted in Denver. Service use among doubled-up families might be expected to be low. The resources of the household will often obviate the need for outside help for the homeless person during the doubled-up period.

In the Denver research, estimates of the homeless population not using services thus include only street persons not using food lines on an average day. In 1988, street surveys established that 64 percent of Denver's street population had used food lines within the past 24 hours. Given the size of the street population, this figure implies a non-service-using street population of only about 150

persons. Put another way, the ratio in Denver of non-service-using homeless to those using services was only 8 percent, far less than the 20 percent lower boundary used by Burt and Cohen. The 150 nonusers of homeless services amounted to only 9 percent of the literally homeless shelter and street population in the metropolitan area.

The ratio found in 1990 Denver research was even lower, suggesting a greater availability and acceptance of services by the homeless. In 1990 street interviews, 83 percent of street persons reported having used food lines within the past 24 hours. Moreover, the street population was found to have declined markedly between 1988 and 1990, from 410 to 280 persons. As a result of increasing use of food lines and diminished size of the street population, the number of street persons not using services for the homeless plummeted to about 50 persons. This figure implies a ratio of non-service-using to service-using homeless population of 2:100 in 1990.

In Denver, clearly, surveys of service users are likely to provide reliable insight into both numbers and characteristics of the region's homeless. However, it should be emphasized that interviews with street persons were done only at known sleeping places of the homeless. Service use by street persons in known sleeping places may be higher than service use by other street persons, especially those who deliberately avoid the known sleeping places or newly homeless persons who do not yet know the ropes.<sup>29</sup>

Evidence from Nashville also suggests that the use of shelter services has grown there in recent years. Nashville is the only community in the nation that has regularly attempted to count the homeless over a long period of time. The Nashville research is based on observer counts rather than interviews with the homeless, and it does not provide direct insight into the use of food lines or other nonshelter services. However, the research has compiled indoor/street ratios of homeless persons since 1983. These ratios express the relative sizes of the homeless population in shelters, SROs, etc., and the population of the streets.

These indoor/street ratios appear to have risen in that city both in summer (June) and in winter (December). In 1986 and 1987, for example, the summer indoor/street ratios for the total homeless population (core area and fringe) averaged 3.3. In 1989 and 1990, the summer ratios averaged 6.1. Similarly, the winter ratios averaged 7.4 in 1986 and 1987, and 10.3 in 1988 and 1989.<sup>30</sup>

Unpublished research by Audrey Burnam estimates patterns of service use by homeless persons in the Los Angeles area that imply far lower rates of use than have been found in Denver. Los Angeles is generally acknowledged to have a considerable shortage of shelter space. Occupancy rates in Los Angeles shelters are high compared with those in other large cities. During the first six months of 1987, for example, a telephone referral service funded by the city and county turned away more than over 4,000 calls for shelter because space was unavailable.<sup>31</sup> Feeding services for the homeless are reasonably plentiful, however.<sup>32</sup>

Burnam reports that surveys of homeless persons in shelters and on the streets close to Los Angeles's downtown (where shelters are most available) suggest that 15 percent of the homeless in the area had not used either shelters or food lines within the past month. A similar survey of homeless persons in a more affluent west-side community close to the ocean found that 28 percent had not used either service in the past month.<sup>33</sup>

Clearly, rates of service utilization vary markedly among communities. The factors producing such differences are poorly understood. Caution must be exercised in using characteristics of service users to infer the characteristics and needs of the homeless population in general.

Two specific, important groups of the homeless are widely believed to use services infrequently, if at all. These are youths on their own and homeless persons in rural areas where services are commonly unavailable or spotty. Youths on their own frequently avoid homeless services such as shelters and food lines because of fears of trouble or of abuse by adult homeless persons. In addition, shelters are frequently required by law to turn youths in to the police or social-services departments. In many rural communities, services for the homeless are limited to travelers' aid to help them get to larger cities where services are available. In Ohio, it is reported that the homeless in rural areas often double up with friends and family and do not rely on public services.<sup>34</sup>

These patterns of service use by youths and rural homeless persons imply that special sampling strategies are required to reach them and that no sample of service users may adequately represent them.<sup>35</sup>

## Surveys of shelter residents

The most common survey approach to the homeless focuses on samples of residents of shelters for the homeless. Such research is conceptually straightforward in most cases and can be useful. Understanding how the shelter system is used can help in developing clues to the size and nature of the homeless population. There is considerable unused capacity in the national system of shelters for the homeless. On an average night in 1988, for example, only 66 percent of the overall national capacity of shelters was occupied.<sup>36</sup> Occupancy was 74 percent in shelters serving predominantly single men, 69 percent in shelters serving mostly families with children, and 59 percent in other shelters. Only about one-quarter of the shelters in the country report being full all year round.

Such vacancy levels suggest that variation in the use of the shelter system can signal changes in the size and needs of the homeless population, as well as changes in the capacity of the shelter system. Indeed, crude statistical evidence suggests high correlations between the capacity of the shelter system and overall numbers of homeless in a community. Burt has used numbers of shelter beds in a community as a proxy indicator of the scale of homelessness in the community in analyzing the determinants of the scale of growth of homelessness.<sup>37</sup> She reports simple correlation coefficients between numbers of shelter beds and estimates of overall numbers of homeless persons of between 0.8 and 0.9.<sup>38</sup>

Unfortunately, such correlations provide little confidence that numbers of shelter beds provide a genuinely useful indicator of the scale of homelessness. There are no really reliable estimates of homelessness for a cross section of communities. Moreover, one would expect high correlations between numbers of homeless persons in shelters (and thus numbers of shelter beds) and estimates of overall numbers of homeless persons, even if there were no significant correlation between numbers of sheltered and nonsheltered homeless persons. This is true simply because the number of sheltered persons is a major component of the overall homeless population.<sup>39</sup>

The use of numbers of shelter beds as a proxy for numbers of homeless persons is particularly questionable because there are considerable ambiguities in counting shelter beds. While a "shelter bed" in many shelters is literally a bed, in many others it is a cot, sleeping pad, chair, or other sleeping arrangement. Overflow space is an important component of shelter capacity in many communities.

By themselves, shelter surveys thus do not provide a reliable basis upon which to estimate the prevalence of homelessness. Neither do they provide accurate or unbiased insight into the characteristics and needs of the homeless. The characteristics of shelter users are sometimes quite different from those of the overall homeless population.

Excess capacity in the shelter system is concentrated in the least attractive portion of the system, and shelters differ in their ability and willingness to service various elements of the homeless population. As a result, shelter utilization may be shaped by the characteristics of shelter inventory, even when considerable vacancy exists.

The U.S. Department of Housing and Urban Development reports:

Mismatches sometimes occur between type of shelter space available and the type of client needing shelter (e.g., unaccompanied men or women, or families with children). Spaces in a jurisdiction's larger homeless shelters that offer only short-term, emergency assistance (e.g., a warm place to rest and a meal) may be available virtually all the time, especially in winter when the number of shelter beds tends to expand in anticipation of need. At the same time, spaces in smaller, highly specialized facilities that offer medical treatment and/or extensive "transitional" services may always be at a premium.<sup>40</sup>

The use of shelter surveys to describe or study the homeless population requires the employment of stratified sampling methods designed to correct for biases in the characteristics of sheltered persons. Such stratified samples are difficult to design, however. There are apparently systematic differences in the characteristics of shelter users and other homeless persons. National surveys of shelter and food line users by Burt and Cohen have shown that families and children are overrepresented among shelter residents compared with homeless users of food lines.<sup>41</sup> However, other research has shown that patterns of shelter use differ among communities, and probably vary over time as well. With respect to mental health, for example, research in Chicago has shown that street people tend to be more unkempt, more incoherent and confused, and more depressed than are shelter users.<sup>42</sup> By contrast, research in California has shown that severely mentally ill homeless persons in that state are more likely to be in shelters than are other groups of the homeless.<sup>43</sup> If patterns of shelter use differ widely or change markedly, then appropriate stratified sampling techniques are extremely difficult to design.

The one important advantage of shelter surveys is that, unlike food lines and most places “on the streets,” shelters can provide safe and private space and conditions that are conducive to longer interviews. Street locations frequently offer too little safety or privacy for in-depth interviews. Food line users are often too concerned with maintaining their position in line to permit in-depth questioning. Such in-depth interviews are needed to investigate the characteristics and service needs of the homeless. As has been discussed, this is the type of information required to fashion effective preventive and transitional programs.

Signaling the advantages of shelter interviews, many of the best early studies of the mental and physical health and health-care needs of the homeless have been conducted in emergency shelters.<sup>44</sup> However, more recent studies of mental health problems of the homeless have used broader sampling frames than emergency shelters.<sup>45</sup> In-depth interviews can also be done at day shelters or clinics for the homeless. Some researchers have also induced homeless persons to come to offices or other locations selected for research purposes.<sup>46</sup> This approach has the obvious drawback that only a portion of the people sought for interviews will actually appear.

Well-known statistical methods have been developed by Freeman and Hall and by Cowan, Breakey, and Fischer, to calculate estimates of the overall population of homeless persons based on patterns of shelter use.<sup>47</sup> These methods involve highly restrictive assumptions, however, and their results are therefore of highly questionable usefulness.

The capture-recapture methods pioneered by Cowan and colleagues for analysis of homelessness require two or more samplings of the homeless population. They are thus relatively expensive. The analysis of the results entails three restrictive assumptions:

1. All members of the populations have an equal chance of being observed in each of the samplings.
2. Observing an individual at one time has no effect on the probability of observing the individual at subsequent times.
3. The population being studied does not change in composition or size during the elapsed time between observations.<sup>48</sup>

Assumption 1 is generally violated in research on the homeless because nonusers of services and the doubled-up homeless are generally less likely to be observed than others. While this problem might be solved through stratification methods, assumption 3 is always violated. Piliavin has documented rapid turnover of individuals within the homeless population.<sup>49</sup> In addition, it is widely believed that the homeless population is growing in most communities.<sup>50</sup>

Turnover and growth in the homeless population invalidate the use of capture-recapture methods. These methods have little promise for providing quality estimates of the homeless population.

The method developed by Freeman and Hall is much more promising. However, as applied by Freeman and Hall, the method requires accurate reporting by the homeless of past patterns of use of shelters. The method also involves the assumption of stability over time in the probability that various groups of the homeless use shelters; thus, this method is also questionable.<sup>51</sup>

### **Analysis of shelter and food-line users**

In principle, surveys of food-line users could be used by themselves as a basis for research on the homeless. In practice, this does not make sense. Like shelters, food lines do not serve a representative cross-section of the homeless. Burt and Cohen have shown that homeless persons using food lines and not shelters tend to be predominantly male (93 percent) and more frequently of middle age (31 to 50 years old) than shelter users.<sup>52</sup> Moreover, food-line users are less likely to be families than are shelter users, as has been discussed, and are more likely to have low levels of education.

At base, food-line users share more of the profile of traditional residents of skid row than do shelter users.<sup>53</sup> Groups of the homeless that are underrepresented include the “new homeless” or the “economically homeless,” who are of great current interest, and persons whose homelessness may be attributable to the deinstitutionalization of the mentally ill and the failures of the community mental health care system.

However, several studies have shown that joint samples of shelter and food-line users may provide a useful insight into numbers and characteristics of the homeless in the nation<sup>54</sup> or in a state or community.<sup>55</sup> Joint samples of food-line and shelter users provide very substantial coverage of the overall homeless population, as has been

seen. Biases in the characteristics of shelter and food-line users appear to be countervailing, at least to some degree.

The principal difficulties of joint surveys of shelter and food-line users are:

1. To avoid duplication of interviews with persons using both services. This can be done by asking respondents whether they had responded to the survey earlier, or by collecting respondents' names, or in other ways.
2. To use screening questions that clearly identify the homeless. A large proportion of food-line users are not homeless. Indeed, in Denver, approximately 10 percent of shelter residents report having a permanent place to live, and thus have not been counted as homeless in research in that community.
3. To be aware of monthly patterns of food-line use. In Denver in 1988, food-line users were sampled early and late in April. It was found that more families use food lines late in the month, and that long-term and repeat homelessness was less common among users late in the month than early in it.<sup>56</sup> This is not surprising, because more people use food lines late in the month as welfare and other checks run out.

The difficulties of interviewing persons at food lines also warrant repeating. It is more difficult to do in-depth interviews at food lines than at shelters. It can thus make sense to use a simpler questionnaire at food lines than at shelters. It may also be possible to attempt food-line interviews after meals, when persons are less pressed for time. Typically, persons do not linger long after meals, however, so a relatively large survey staff is required to get large numbers of interviews.

The author has developed methods for making comprehensive estimates of the homeless street population from surveys of shelter and food-line users. He supplemented samples of service users with a sample of homeless persons collected at known sleeping places of the homeless on the streets. These street interviews ascertain, among other things, the frequency of food-line use by the street persons. The inverse of the proportion of street persons using food lines provides a multiplier with which to extrapolate numbers of street persons using food lines into an estimate of the overall street population.<sup>57</sup> This multiplier technique increases the expected standard errors of estimates of the homeless population, however, and requires the assumption that patterns of service use are the same



for street persons at known sleeping places and elsewhere. This assumption may not be accurate. As has been discussed, service use by the covert homeless and the recently homeless may be especially low.

## Conclusion

Surveys of the users of shelter and food-line services for homeless and the indigent do not provide comprehensive counts or unbiased characteristics of the homeless. A number of groups may be under-represented among users, including youths, the rural homeless, deliberately covert street persons, recently homeless persons, and persons who are doubled-up with friends and family. No existing method provides an altogether satisfactory basis for inferring the overall numbers or characteristics of homeless persons from samples of service users. However, surveys of service users are highly useful. As the availability of emergency services for the homeless increases, the frequency of the use of such services can also be expected to rise. Indeed, this appears to be happening in Denver and Nashville. Increasing use spells increasing usefulness for surveys of service users.

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## Endnotes

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4. Franklin J. James, "New Methods for Measuring Homelessness and the Population at Risk: Exploratory Research in Colorado," *Social Work Research and Abstracts*, forthcoming; *Report of the Governor's Task Force on the Homeless* (Denver: Task Force on the Homeless, 1988).
5. Keyes, *Housing and the Homeless*.

6. Rossi et al., *The Condition of the Homeless in Chicago*; Peter Rossi et al., "The Urban Homeless: Estimating Composition and Size," *Science* 235: (1987) 1336-41.
7. Peter H. Rossi, *Down and Out in America* (Chicago: University of Chicago Press, 1989), Appendix B, as extracted for the Conference on Enumerating Homeless Persons, Washington, November 1990.
8. Kathryn Edin, *Assessment of S-Night 1990 in Chicago, IL* (Chicago: North Park College, 1990).
9. James D. Wright and Joel A. Devine, *Toward Census 2000: Assessment of S-Night 1990 in New Orleans, Louisiana*, (New Orleans: Tulane University, 1990), 17.
10. George Vernez et al., *Review of California's Program for the Homeless Mentally Disabled* (Santa Monica: The RAND Corporation, 1988); Audrey M. Burnam and Paul Koegel, *Methodology for Obtaining a Representative Sample of Homeless Persons: The Los Angeles Skid Row Study* (Santa Monica: The RAND Corporation, 1988).
11. Rossi, *Down and Out in America*.
12. U.S. General Accounting Office (GAO), *Children and Youths: About 68,000 Homeless and 186,000 in Shared Housing at any Given Time*, Report GAO/PEMD-89-14 (Washington, DC: 1989), 9.
13. For example, GAO has estimated that the point prevalence of literal homelessness among children and youth is between 41,000 and 107,000 in the nation. It has also estimated a point prevalence of doubled-up children and youth of between 39,000 and 296,000 (pp. 22-23).
14. Specifically, HUD is considering using the AHS to identify and describe the characteristics and living arrangements of persons who have moved into households within the past 12 months who, before moving in, stayed in shelters, SROs or hotels, on the streets, or in public places because they had nowhere else to stay (correspondence with Duane McGough, Office of Policy Development and Research, February 5, 1991).
15. According to GAO, the *Los Angeles Times* did a survey of 500 residences and estimated that in 1987 there were 42,000 families in the county living in garages. Such surveys are rare. The confidence interval around this estimate is surely very large (GAO, *Children and Youths*, p. 16). Research in Colorado has suggested that only about 0.6 percent of the state population is at high risk of homelessness, and that only 0.2 percent of the state's population is homeless at any time during a year (James, "New Methods"). These data imply that very large samples of the housed population would be needed to ensure adequate sample sizes of the doubled-up homeless population.
16. Cynthia M. Taeuber and Paul M. Siegel, "Counting the Nation's Homeless Population in the 1990 Census" (Paper presented at the Conference on Enumerating Homeless Persons, Washington, DC, November 1990); U.S. Bureau of the Census, *Census Bureau Releases 1990 Decennial Counts for Persons Enumerated in Emergency Shelters and Observed on Streets* (Washington, DC: U.S. Department of Commerce, 1991).

17. James, "New Methods"; Idem, *Changing Patterns of Homelessness in Colorado: 1988 to 1990* (Denver: Graduate School of Public Affairs, University of Colorado, 1991); *Report of Governor's Task Force on the Homeless*.
18. Franklin J. James and Lisa Duchon, *Patterns of Social Service Use among Colorado's Homeless* (Denver: Graduate School of Public Affairs, University of Colorado, 1991).
19. Vernez et al., *Review of California's Program*, table 3.10.
20. James and Duchon, *Patterns of Social Service Use*.
21. Ibid.
22. Ibid.
23. Dee Roth et al., *Homelessness in Ohio: A Study of People in Need: Statewide Report* (Columbus: Ohio Department of Mental Health, 1985).
24. Martha R. Burt and Barbara E. Cohen, *America's Homeless: Numbers, Characteristics, and Programs That Serve Them* (Washington, DC: The Urban Institute, 1989), 30.
25. Rossi et al., *The Condition of the Homeless in Chicago*, 32.
26. There must have been some confusion among respondents as to what the interviewers meant by "free food"; virtually all shelters provide a meal as well as a place to sleep. Taken at their face value, Rossi's results imply that few street people in the winter survey were using food lines. On the implausible assumption that no street people used food lines, the ratio of nonusers to users of services in Chicago's 1986 winter was about 40:100, or around the high end of the interval specified by Burt and Cohen. The ratio 40:100 is the percentage of homeless who did not use shelters during the past seven days (29 percent) to the percentage who did (71 percent).
27. In the Denver research, persons were counted as homeless if they reported that they lacked a permanent residence. The overall homeless population on the streets was estimated on the basis of patterns of service use. Probability samples of food-line users provided a count of numbers of homeless street persons using food lines. Surveys of persons at sleeping places on the streets provided estimates of the proportion of street persons using food lines. The overall street population was estimated by multiplying the numbers of street persons using food lines by the inverse of the proportion of street persons using food lines (James, "New Methods"); see also *Report on Governor's Task Force on the Homeless*.
28. James, "New Methods."
29. Sample sizes of non-service-using street persons at known sleeping places in Denver are too small for reliable statistical analysis. However, a comparison of the characteristics of these individuals with service-using street persons suggests that the two groups are basically similar. This implies that surveys of service-using street persons may provide useful indicators of the characteristics of other street persons.

30. Barrett Lee, data prepared for the Conference on Enumerating Homeless Persons (Washington, DC, November 1990). Later conversation with Barrett Lee (March 29, 1991) revealed that the winter ratios for recent years were raised by especially cold weather at the times of the surveys; thus, winter ratios may not have risen as much as summer ratios.
31. U.S. Department of Housing and Urban Development (HUD), *A Report on Homeless Assistance Policy and Practice in the Nation's Five Largest Cities* (Washington, DC: Office of Policy Development and Research, August 1989), 43.
32. Conversation with Audrey Burnam, March 28, 1991.
33. Ibid.
34. Richard J. First et al., *Preliminary Findings on Rural Homelessness in Ohio* (Columbus: College of Social Work, Ohio State University, 1990).
35. In part to explore such issues, a statewide survey of youths on their own was taken in Colorado during April 1991. Results are expected by fall 1991. In efforts to count Colorado's rural homeless, surveys have been made in rural counties with social-services departments, sheriff's offices, and ministerial alliances. These rural surveys have proved useful in counting the rural homeless (James, *Changing Patterns*).
36. U.S. Department of Housing and Urban Development, *A Report on the 1988 National Survey of Shelters for the Homeless* (Washington, DC: Office of Policy Development and Research, March 1989), 6.
37. This work by Burt is in progress.
38. Also from Burt's work in progress; estimates of numbers of homeless persons were drawn from a study of homeless service users in 20 major cities (Burt and Cohen, *America's Homeless*); estimates were also drawn from U.S. Department of Housing and Urban Development, *A Report to the Secretary on the Homeless and Emergency Shelters* (Washington, DC: Office of Policy Development and Research, 1984).
39. Heuristically, Burt has measured the correlation between X and (X + Y), where X is a relatively large number. Such a correlation would be significant, even if the correlation between X and Y were zero. In Burt and Cohen's analysis of homelessness in 20 cities (*America's Homeless*), for example, 75 percent of the homeless service-using population used shelters in a 24-hour period (p. 37).
40. HUD, *A Report on the 1989 National Survey*, 8.
41. Burt and Cohen, *America's Homeless*. Researchers can take advantage of the strong seasonal patterns of shelter use. Specifically, use of shelters is far higher in winter than in summer (Rossi et al., *The Condition of the Homeless in Chicago*; Lee, data assembled for the Conference on Enumerating Homeless Persons, Washington, DC, November 1990). This means that the numbers and characteristics of shelter occupants will more accurately reflect the overall homeless population in winter than in summer.
42. Rossi et al., *The Condition of the Homeless in Chicago*, 138.

43. Vernez et al., *Review of California's Program*.
44. A.A. Arce et al., "A Psychiatric Profile of Street People Admitted to an Emergency Shelter," *Hospital and Community Psychiatry* 34, 9:812-17; William R. Breakey in Deborah L. Dennis, ed., *Research Methodologies Concerning Homeless Persons with Serious Mental Illness and/or Substance Abuse Disorders* (Washington, DC: Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse and Mental Health Administration, 1987).
45. Breakey, in *Research Methodologies*.
46. Irving Piliavin et al., *Conditions Contributing to Long Term Homelessness: An Exploratory Study* (Madison: Institute for Research on Poverty, University of Wisconsin, 1988).
47. Richard B. Freeman and Brian Hall, "Permanent Homelessness in America?" *Population Research and Policy Review* 6 (1987): 3-27; Charles D. Cowan, William R. Breakey, and Pamela J. Fischer, "The Methodology of Counting the Homeless" (mimeographed, no date).
48. Seymour Sudman, Monroe G. Sirken, and Charles D. Cowan, "Sampling Rare and Elusive Populations," *Science* 240 (1988): 991-96.
49. Piliavin et al., *Conditions Contributing to Long Term Homelessness*.
50. Burt and Cohen, *America's Homeless*.
51. Freeman and Hall, "Permanent Homelessness in America?"
52. Burt and Cohen, *America's Homeless*, 38.
53. Bogue, Donald, in Jon Erickson and Charles Wilhelm, *Housing the Homeless* (New Brunswick, NJ: Rutgers University Center for Urban Policy Research, 1986).
54. Burt and Cohen, *America's Homeless*.
55. *Report of Governor's Task Force on Housing; James, Changing Patterns; James "New Methods."*
56. Franklin J. James, *Numbers and Characteristics of the Homeless: A Preliminary Application in Colorado of a New Methodology* (Denver: Graduate School of Public Affairs, University of Colorado, 1988).
57. James, "New Methods."

