Who Counts?

ASSESSING ACCURACY OF THE HOMELESS COUNT

November 2017

ECONOMIC ROUNDTABLE

Knowledge for the Greater Good

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Assessing Accuracy of the Homeless Count

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Economic Roundtable

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Underwritten by the Economic Roundtable

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Executive Summary

Overview

Within the past year, Los Angeles County and City voters approved $4.75 billion for services and housing to combat homelessness.[1] The Greater Los Angeles Homeless Count is crucial for identifying how this money should be used to help people escape homelessness.

The Count is an increasingly comprehensive effort to count and describe Los Angeles' homeless residents, but it is not yet sufficiently accurate to identify year-to-year changes in homelessness. Methodology that seemed reasonable when introduced in 2009 can now be seen to produce inconsistent estimates of the number of homeless residents and their attributes.

It is important to obtain more accurate and reliable information from the massive effort invested in the Count by volunteers, the Los Angeles Homeless Services Authority (LAHSA) and research collaborators. To be uncounted is to be unseen – to be left out of funding, planning and implementing programs to combat homelessness. To be helped, people experiencing homelessness must be seen and understood.

Objective

This report views Greater Los Angeles Homeless Counts from 2007 through 2017 as a body of work rather than discrete annual snapshots and assesses the extent to which the Counts present a consistent body of evidence and the extent to which there are inconsistencies among Counts, or with other data, indicating a need to strengthen the Count methodology. The objective is to strengthen the reliability of the Count as a tool for understanding and combating homelessness.

Review

Los Angeles Homeless Services Authority staff and the University of Southern California research team that is supporting the Homeless Count met with the Economic Roundtable to discuss this report and also provided written comments. All of the points raised have been addressed in this final version of the report.

Assessment

The top level finding from this assessment is that the Homeless Count is valuable for providing a fresh picture of homelessness, but the Count data is not reliable enough to be used for comparing the number or population composition of homeless residents from different Counts. In addition, there are indications that the Homeless Counts have underestimated the number of people who are homeless.

Year-to-Year Comparability of Homeless Count Data

1. There does not appear to be reliable, year-to-year comparability in data produced through the Homeless Count. One source of this problem appears to be the demographic survey of unsheltered residents. A second source of discontinuity appears to be inconsistency in how the street count is carried out. The third source of discontinuity is lack of statistical tools for identifying and correcting *measurement error:* the difference between the Count and the actual number of homeless residents.
2. The demographic survey has been carried out through quasi-random selection of unsheltered homeless residents for interviews, and so has not provided a statistically reliable description of the homeless population. Nevertheless, it has been the only source of information for estimating the attributes and annual size of the unsheltered homeless population.
3. Since 2013, there has been a contradiction in Homeless Count reports between an increasing number of point-in-time homeless and a decreasing number of people homeless over the course of the year. This casts doubt on both the demographic survey and the formula for projecting annual homelessness. Aside from the accuracy of the demographic survey data, the formula used to project the annual homeless population has a shortcoming in that it does not account for people who exit homelessness after being homeless for more than one week but less than one year, and then are replaced by new entrants.
4. When information about the gender, ethnicity and age of the unsheltered homeless population from demographic surveys in different Homeless Counts is compared, there are large increases and decreases in the reported characteristics of the population that do not appear plausible. These shifts are even less plausible when compared to data for sheltered residents, which show very little year-to-year change in demographic characteristics.
5. From 2013 to 2016, vehicles steadily accounted for 30 percent of homeless sightings, then in 2017, the share increased to 36 percent – growing by a fifth from one year to the next. This followed special targeting of vehicles in 2017 as well as growth in the number of Homeless Count volunteers. This type of change in counting activity creates data discontinuities that are not corrected in year-to-year comparisons.
6. There are year-to-year discontinuities in the share of the unsheltered homeless population that is reported to be chronically homeless as well as the share that is reported to be homeless for the first time. These do not appear to correlate with any trends in the underlying causes of homelessness such as unemployment or poverty.

Comparability of Homeless Count with the General Relief Caseload and School Records of Homeless Students

1. The General Relief caseload includes only part of the homeless population, which suggests that this caseload is smaller than the actual point-in-time homeless population. However, over the five Homeless Counts from 2009 through 2016, the homeless segment of the General

Relief caseload plus homeless family members in other programs estimated to fit HUD's definition of homelessness have been an average of 82 percent larger than the population estimate from the Homeless Count. In addition, the two populations have had opposite trends of growth and decline. This raises uncertainty about the comparability of one Homeless Count to the next and their reliability as an indicator of whether the homeless population has grown or declined.

2. School data from 2016 shows large concentrations of homeless students in the San Gabriel Valley, Southeast/Gateway Cities, and Long Beach. This geographic distribution is significantly different from the distribution of homeless children reported in the 2016 Count, which was based on demographic survey data for only 103 children. There is a strong possibility that the Homeless Count identifies geographic concentrations of homeless children inaccurately.

Recommendations

The core methodology for carrying out the Count has been unchanged since 2009. Progressively more effort and money has been invested in implementing the methodology, but the results still are not sufficiently accurate. These recommendations outline steps that should significantly improve the Count's accuracy by reducing *measurement error* through more careful and consistent procedures, and by obtaining additional types of information for calibrating and correcting *measurement error*.

New procedures for conducting the street count and demographic survey, volunteer training, and statistical methodology are needed to build on the accuracy already achieved in carrying out the Count and to strengthen the reliability and year-to-year consistency of the Counts.

The research burden for improving the accuracy and consistency of the Homeless Count should be shared by researchers in the region and local governmental agencies that serve homeless residents, rather than falling solely on LAHSA, whose primary task is grant and contract management.

Street Count Improvements

1. Require Count volunteers to participate in more consistent, substantive training that includes standardized procedures for canvassing census tracts, assessing risks and making decisions about which areas to investigate.
2. Provide a suggested route on the maps that are given to both street count volunteers and teams that conduct the demographic survey, as is done in New York City, to ensure that the entirety of their area is covered once and only once.
3. Develop reliable, standardized procedures for determining whether vehicles are occupied by homeless individuals.
4. Maximize the number of enumeration teams in urbanized areas that walk rather than drive their routes.

5. Use mobile apps on cell phones in the street count and the demographic survey to document the GPS coordinates of each homeless contact.

6. Where possible, integrate the demographic survey as a uniformly random component of the street count. This includes the youth survey, an improved version of the family survey, the follow-on surveys recommended later, and possibly some components of the street count. New York City achieves this integration by combining the street count and demographic survey and carrying out both during the day.

Demographic Survey Improvements

7. Increase the number of families with children that are reached by the demographic survey or make greater use of HMIS data about children in order to provide more reliable information about homeless children.

8. Carry out the demographic survey in a random sample of locations rather than in locations influenced by opportunity or convenience.

9. Support detailed analysis and widespread dissemination of information from the demographic survey that is operationally important for combating homelessness, for example, barriers to employment, health conditions, justice system involvement, and needed services, and maintain year-to-year consistency in questions asked.

10. Assess whether Homeless Management Information System (HMIS) data, which represents shelter residents, is more reliable than the demographic survey and if it should have a larger role in describing the total homeless population.

Statistics and Data Analysis Improvements

11. Give the research organization working with the Count a fully independent and objective role in ensuring the data integrity of the Count rather than a secondary, supportive role.

12. Strengthen the integrity of the Count by identifying, quantifying and correcting *measurement error*. The *statistical* challenge is to describe the total homeless population based on a count that identifies only part of the population. To achieve greater accuracy, the research team guiding and analyzing the Count should include a knowledgeable statistician with expertise in enumerating hidden populations and sampling methodology.

13. Make it a primary goal of the Count to calibrate year-to-year comparability in population estimates and to identify likely causes for major shifts in the number or composition of the homeless population.

14. Develop a more complete sampling frame for the demographic survey that includes benchmarks for social attributes. A more comprehensive sampling frame for homeless residents will make it possible to target survey efforts to correspond with population characteristics as well as to assign more accurate weights to survey responses. The current sampling frame is based solely on two geographic categories: hotspot census tracts and all other census tracts. This is questionable because homelessness causes placelessness. Homeless individuals are less defined by geography than any other member of society. *Local researchers and government agencies that serve homeless residents should work with LAHSA to develop a complete and*

accurate geographic and demographic profile of homeless residents, including household type, homeless history and type of dwelling.

15. Use a "decoy" quality assurance mechanism in which researchers deploy adults throughout each area of the county, posing as homeless individuals during the street count, to check whether they are found and counted as visible homeless persons in order to produce an estimate of the proportion uncounted among homeless people on the streets. This could be implemented by having an outside research organization field several hundred decoy teams and determining whether they were counted by using GPS data sent by the volunteer enumeration teams or by equipping volunteers with devices that send a Bluetooth beacon that the decoys could detect. This method is used successfully in New York City and Toronto.
16. As an additional tool for quantifying the share of homeless persons who are not found by enumerators, conduct surveys at homeless provider locations in the days following the Count to determine whether individuals were counted. This method is used successfully in New York City and Philadelphia.
17. Survey a stratified sample of vehicles that may have homeless occupants to determine the proportion of different types of vehicles that serve as homeless dwellings.
18. Develop a more accurate statistical model for estimating the annual homeless population using a more detailed and complete breakout of population turnover among individuals who experience homelessness. This model should include descriptions of the attributes of individuals experiencing different durations of homelessness.
19. Use other data sources to assess the accuracy and completeness of the Homeless Count. This includes the number, location and attributes of persons receiving public assistance from the county who are identified as homeless, health care provider reports of services to homeless individuals, and school data about homeless students.

Approach

Accuracy

Homeless individuals are invisible in most public data. Lacking housing, they are off the residence-based data grid used, for example, by the Census Bureau. People experiencing homelessness must be seen to be helped. The Homeless Count is the primary effort to see and understand homelessness in Los Angeles. To be uncounted is to be unseen – to not count in funding, planning and implementing programs to combat homelessness.

The *accuracy* and *consistency* of the Count are important because the annual Count of homeless residents is widely publicized and viewed as a measure of success, or lack thereof, in the region's efforts to combat homelessness. In addition, the Homeless Count is important for showing the scale of homelessness and for revealing the demographic composition of the region's homeless population.

The key requirement for *accuracy* is producing Count data that closely matches the actual reality on the street. The key requirement for *consistency* is implementing the Count in a manner that will produce comparable results each year it is carried out.

Benchmarks

The most readily available test of the accuracy of the Count is through comparing data from Counts conducted in different years and assessing whether changes from one Count to the next are plausible. Data from the demographic surveys lends itself best to cross-year comparisons, using information about demographic and homeless history characteristics. Cross-year comparisons in the types of homeless sightings in the street counts help assess reliability of numerical counts. Finally, measures of homelessness provided by other sources of data support reliability cross-checks of numbers, geographical locations and demographics.

Homelessness is likely to fluctuate in tandem with lack of jobs, poverty, lack of affordable housing, and child neglect.

Assumption

Unless there are major shifts in economic or social conditions, it is realistic to assume that there is year-to-year continuity in the character, scale and location of Los Angeles' homeless population, with incremental rather than abrupt change. Homelessness is the most extreme manifestation of poverty and is in large part an outcome of insufficient jobs, high housing costs, and failures to provide adequate care and opportunities for children and youth. It is reasonable to assume that homelessness is likely to fluctuate in tandem with incremental changes in these underlying causes.

Possibilities of large, abrupt shifts in the scope or character of homelessness should be corroborated by other sources of evidence before being accepted as real.

Objective

Homeless Counts are the most widely used and comprehensive sources of information about people experiencing homelessness. This report looks at Homeless Counts as a body of work rather than discrete annual snapshots of homelessness and it assesses the extent to which the Counts present a consistent body of evidence and the extent to which there are inconsistencies among Counts that indicate a need to strengthen the Count methodology. An enormous amount of effort is invested in the Count by volunteers, the Los Angeles Homeless Services Authority (LAHSA) and research collaborators, and the results are important to policy makers and the public. The objective of this report is to contribute to the effectiveness of the Count as a reliable tool for understanding and combating homelessness.

Year-to-Year Continuity

Steps in Producing the Homeless Count

Achieving an accurate Homeless Count is a very difficult task. There are risks of introducing errors at each step. The following is a broad brush description of steps in producing the Homeless Count:

1. Volunteer teams go out at night in an assigned geographic area and *count*, but do not approach, unsheltered homeless individuals, families and dwellings that are not suitable for human habitation but appear to be occupied. Dwellings include tents, make-shift shelters and vehicles in which the occupants often are not visible. These numbers are augmented through Counts by special teams in potentially dangerous or inhospitable locations such as under bridges and in river beds.

   Census tracts are broken out into two categories – *hotspots* and *non-hotspots*. Hotspot census tracts are ones where there is more homelessness activity and thus a larger number of homeless persons.

2. If the street count does not cover every census tract (as was the case until 2016), the number of people counted in each tract is weighted to make up for uncounted tracts. Results from hotspot and non-hotspot tracts are *weighted* separately, with results projected proportionately onto uncounted tracts in each of the two categories within each service planning area (SPA). For example if half of the non-hotspot tracts in a SPA were counted, the results from each counted tract would be doubled to account for the uncounted tracts.

3. A census of nearly all homeless individuals in temporary *shelters* is obtained. Since 2013, this information has been obtained from the Homeless Management Information System (HMIS) for the month of January. HMIS records provide information about both the number and demographic attributes of residents in publicly-funded shelters.

   HMIS records have provided information about 11,000 to 14,000 shelter residents in each of the three most recent Counts – a large body of data.

4. A *demographic survey* is conducted in a sample of census tracts to obtain information about the *attributes* of homeless individuals and families, including the number of occupants in different types of dwellings. This information is projected onto the street count estimate to describe the attributes of the unsheltered population.

   Information from the demographic survey about how long respondents have been homeless is used to estimate the size of the *annual* homeless population.

   In 2017, a separate *youth demographic survey* was carried out of unsheltered youth 18 to 24 years of age.

The demographic survey has been a quasi-random opportunity survey, and so has not been reliably representative of the homeless population.

In each Count, the demographic survey has been a quasi-random opportunity survey, making it statistically unreliable for describing the larger homeless population. For it to be reliable it would have to mirror the characteristics of the total population.

Just as a cook can tell how a large pot of soup will taste by trying only a spoonful, it is possible to learn about a very large group of people by talking to a small number of them. This is achieved through a truly random sample because randomness is the key to mirroring the total population.

Despite its limitations, the demographic survey has been the only source of information for estimating the attributes of unsheltered homeless residents and annual size of the total population. As a consequence, there has been year-to-year unevenness in the population estimates from the Count.[2]

Year-to-Year Continuity in the Annual Homeless Estimate

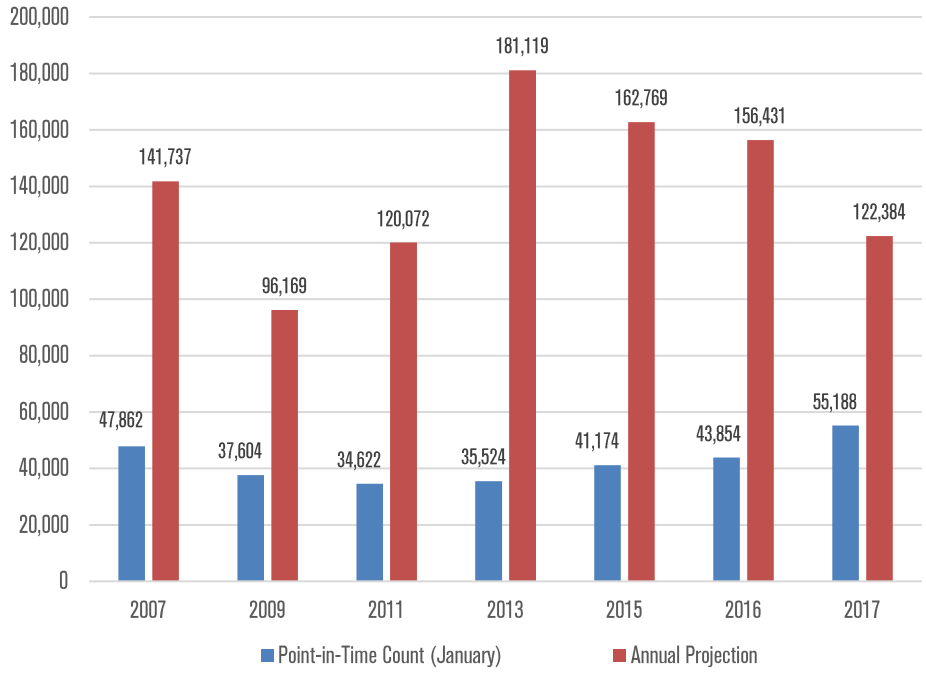
A population that experiences homelessness over an extended period of time is at risk of damaging emotional, medical, legal, financial, and social impacts. Understanding the composition of the homeless population and the likelihood that different subpopulations will either quickly escape homelessness or have extended experiences of homelessness is arguably more important than understanding the size of the point-in-time population.

The point-in-time homeless estimates increased from 2013 to 2017, but the projected annual homeless population decreased.

Information from the demographic survey about how long people have been homeless and whether they are new arrivals in Los Angeles County is used to estimate the number of people who experienced homelessness over the year preceding the Homeless Count. The size of both the point-in-time and annual populations from 2007 through 2017 is shown in *Figure 1*.

The number of people projected to have been homeless over the past year as a ratio to each person in the in the point-in-time number from the Homeless Count is shown in *Figure 2*. This ratio ranges from a high of 5.1 people homeless

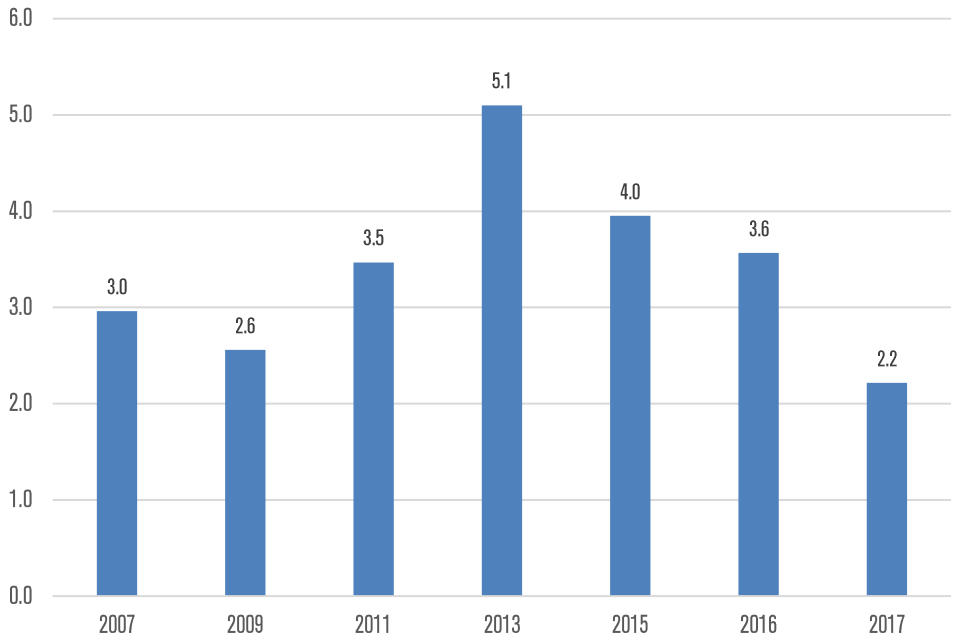
Figure 1: Point-in-Time Homeless Counts and Annual Projections



Sources: LAHSA homeless count methodology papers and homeless count reports 2007-2017. Weighted data shown.

The contradiction of increasing point-in-time homeless and decreasing annual homeless casts doubt on the formula for projecting annual homelessness.

Figure 2: Number of People in the Annual Projection for Every Person in the Point-in-Time Count



Sources: LAHSA homeless count methodology papers and homeless count reports 2007-2017. Weighted data shown.

annually for every point-in time person in 2013 to a low of 2.2 annual homeless in the recent 2017 Count.

Intuitively one would expect to see the annual population increase when the point-in-time population increases. This is because a larger point-in-time estimate is likely to mean that more people have been made homeless. Based on the formula used to project the number of people who are homeless annually, more short-term homeless means more turnover (i.e. more people entering and exiting annual homelessness) and a larger annual population.[3]

Figures 1 and *2* show that the point-in-time homeless estimates increased from 2013 to 2017, but the projected annual homeless population decreased over these four years. This raises a strong possibility that the demographic survey data used to make the annual projection was inconsistent from one year to the next and did not accurately describe the homeless population.

If the point-in-time has grown and annual homeless population has shrunk, as shown in *Figure 1,* the only explanation would be that the point-in-time population has grown because a much larger share of the population is chronically homeless. This kind of change in the homeless population mix with fewer people exiting homelessness, fewer new entrants and less short-term turnover would explain a shrinking annual population. However, this possibility seems unlikely and should be verified by other data sources before being accepted as a plausible explanation.

The contradiction of increasing point-in-time homelessness and decreasing annual homelessness casts doubt on both the demographic survey and the formula for projecting annual homelessness. Aside from the accuracy of the demographic survey data, the formula used to project the annual homeless population has a

shortcoming in that it does not account for people who exit homelessness after being homeless more than one week but less than one year, and then are replaced by new entrants.

Information from the demographic survey is also used to estimate the make-up of the point-in-time homeless population. This includes the number of veterans, children, chronically homeless individuals, and individuals with different types of trauma and disability. The inconsistency from one year to the next in information about the duration of homelessness indicates that other information from the demographic survey may also be inconsistent. The reported estimates of year-to-year change in the numbers of homeless veterans, children, youth, and chronically homeless persons could be unreliable.

Year-to-Year Continuity in the Street Count

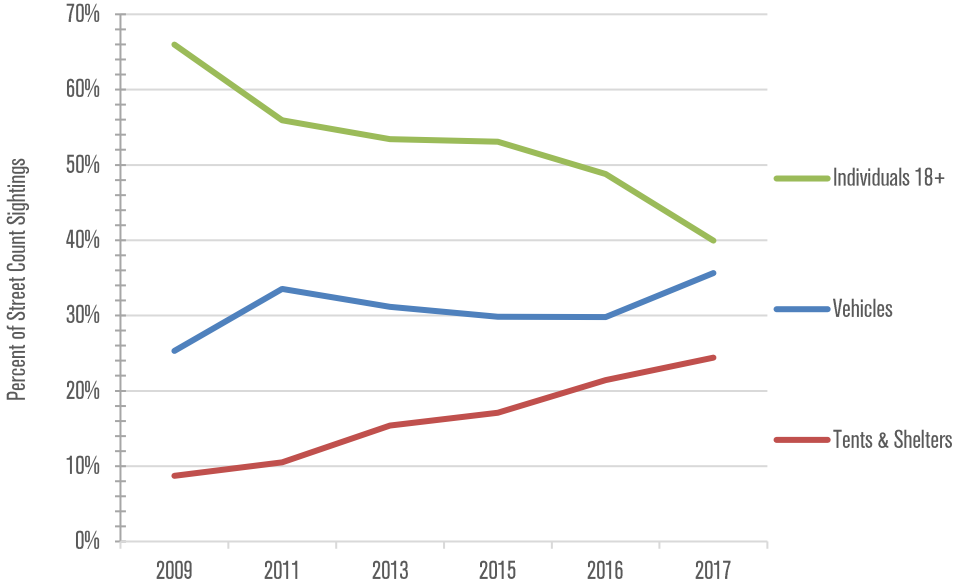
The homeless street count identifies individuals and families experiencing homelessness, as well as homeless dwellings in the form of tents, make-shift shelters, cars, vans, and campers or recreational vehicles. Trends from 2009 through 2017 in sighting these forms of homelessness are shown in *Figure 3*, with tents and shelters combined into one category and vehicles into another category.[4] Only 0.2 percent of street sightings are of homeless families, which are not shown.

The overall trend is that unsheltered individuals outdoors (e.g., on a bus bench) make up a decreasing share of homeless sightings; however, tents and make-shift shelters make up an increasing share.

Vehicle hotspots were targeted as a priority for the Homeless Count for the first time in 2017. This increased effort may well explain the increased vehicle count.[5]

Older parked vehicles without visible occupants are open to interpretation as to whether they are shelter for homeless persons or the property of a neighborhood resident.

Figure 3: Breakout of Homeless Sightings in Street Count



Sources: LAHSA street counts 2009 to 2017. Data includes single individuals 18 years of age or older but does not include the 0.02 percent of sightings that are of homeless families. Unweighted street count data.

Vehicles accounted for a steady 30 percent of homeless sightings from 2013 to 2016, then in 2017, the share of sightings that were vehicles increased to 36 percent – growing by a fifth from one year to the next.

Vehicle sightings have a significant impact on the Count. In 2017, each vehicle was counted as having an average of 1.8 inhabitants.[6] The increase in vehicles from 2016 to 2017 accounted for an increase of 3,360 people in the point-in-time Homeless Count.

There is very little training and no formal protocol for how volunteers carry out the street count. One of the authors participated in a volunteer group whose motto was, "when in doubt, count." This group reported a large number of vehicles as homeless dwellings even though no occupants were seen in any of the vehicles. In contrast, a volunteer in another part of Los Angeles reported seeing a large number of vehicles that were occupied. It is unclear to what extent there are similar patterns of vehicle occupancy across Los Angeles, to what extent enumerators have consistent count methodologies, and to what extent these practices are consistent from one year to the next.

It is possible that there was such a large single-year shift in the form of shelter occupied by homeless individuals, but this would be an abrupt departure in the trend from 2011–2016. However, this type of abrupt deviation from a multi-year trend may well be the result the new effort to target vehicles. It is open to interpretation whether older parked vehicles without visible occupants are shelter for homeless persons or the property of a neighborhood resident. In 2017, these judgment calls were applied to a larger share of homeless sightings because more effort was devoted to counting vehicles that appeared to be homeless dwellings.

There is more data describing the sheltered population than the street population, and it is more reliable because it is drawn from everyone rather than a quasi-random sample.

Year-to-Year Demographic Continuity

Comparisons of data from counts show the extent to which there is year-to-year continuity in the counts. Three types of data about the attributes of homeless residents are used for these comparisons: *1)* Unweighted information from the sample of respondents to the *demographic survey* of unsheltered people. Data from the demographic survey is presented in unweighted form because the survey is designed to be representative of the entire continuum of care. *2)* Complete information for the entire population of *shelter residents* from HMIS. *3)* Final weighted results from the *Homeless Count*. This information broken out by age, ethnicity and gender is shown in *Figures 4* to *12*.[7]

In the four most recent Homeless Counts, 2013 through 2017, the demographic profile of homeless residents has been produced by combining demographic information from HMIS records for *shelter residents* in the month of January with results from the demographic survey of the *unsheltered population*.

The 11,000 to 14,000 HMIS records for the sheltered population provided by HMIS has been estimated to represent only about a quarter of the total point-in-time homeless population.[8] During the same years, the demographic survey obtained responses from 3,200 to 5,800 unsheltered individuals in each Count year, who represented the unsheltered street count population, which has been

estimated to represent about three-quarters of the point-in-time homeless population.

There is more data describing the sheltered population than the street population, and it is more reliable because it is drawn from the entire population rather than a quasi-random sample.

Gender Continuity

Based on the demographic survey, the share of women in the unsheltered homeless population, shown in *Figure 4*, seesawed from one count to the next. It dropped from 31 percent in 2011 to 25 percent in 2013, then increased to 30 percent in 2015, then dropped to 25 percent in 2016, and then increased to 28 percent in 2017. These shifts represent thousands of women being included in or excluded from the population recognized as experiencing homelessness.[9]

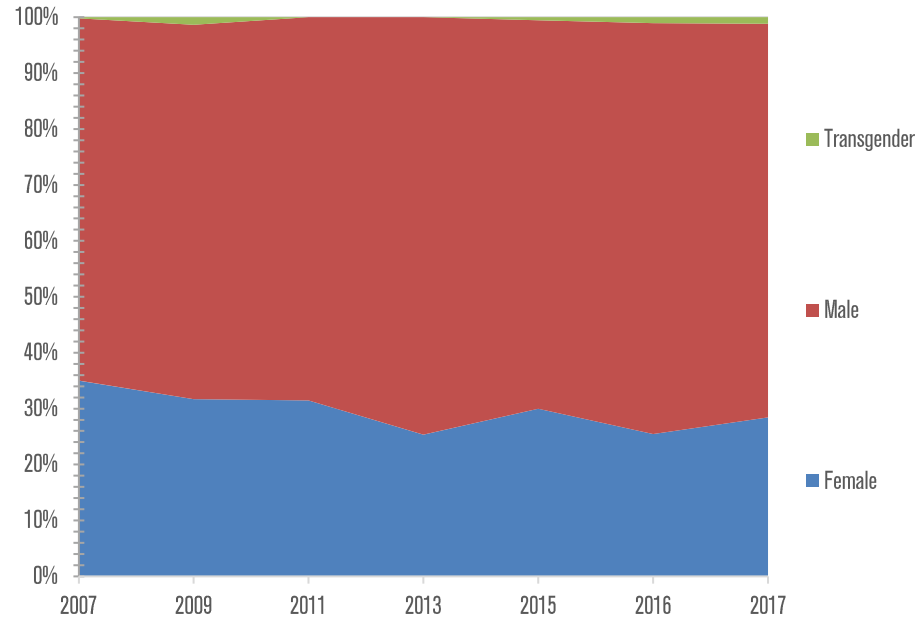
In contrast, the share of females in the sheltered population varied by only 3 percentage points from 2013 to 2017, making up a third of shelter residents, as shown in *Figure 5*.

The gender composition for the total homeless population, both sheltered and unsheltered, shown in *Figure 6*, was produced by combining HMIS data for sheltered individuals with demographic survey data for the street population. Because the street population is estimated to account for about three-quarters of homeless persons, the demographic survey was the dominant influence in estimating the share of females in the overall homeless population.

The most noticeable influence of the demographic survey is the drop in the share of females in the total population from 34 percent in 2011 to 27 percent in 2013, and then the rebound to 33 percent in 2015. It seems unlikely that the share of women in the homeless population would drop by a fifth from one count to the next, and then rebound in the following count. This may show a break in the year-to-year continuity and comparability of data from the demographic survey.

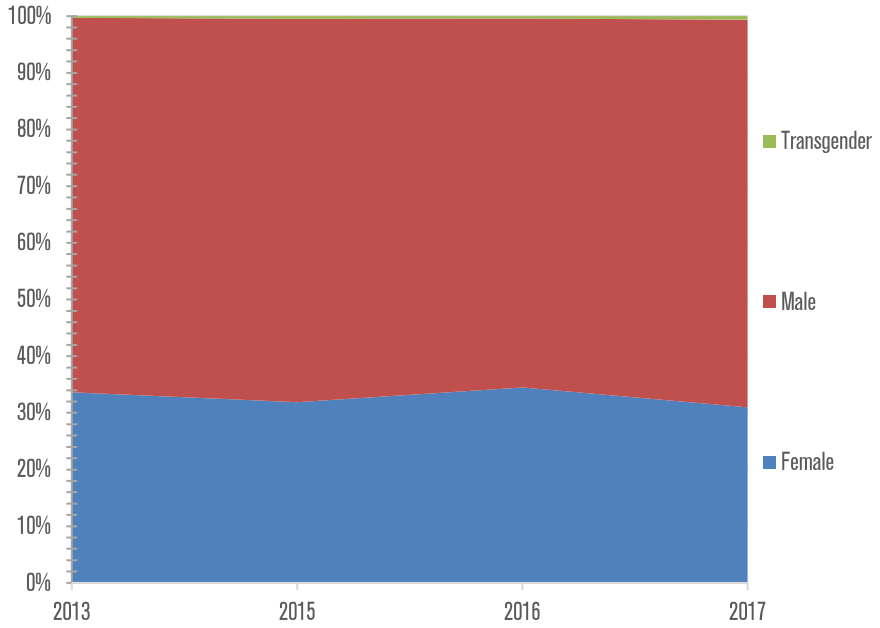
It seems unlikely that the share of women in the homeless population would drop by a fifth from one count to the next, and then rebound in the following count.

Figure 4: Gender in Demographic Survey of Unsheltered Population – *Unweighted*



Sources: LAHSA demographic surveys 2007 to 2017. Unsheltered street population. Unweighted.

Figure 5: Gender in HMIS – Total Shelter Population



Source: LAHSA HMIS for January of 2013 to 2017. Complete shelter population.

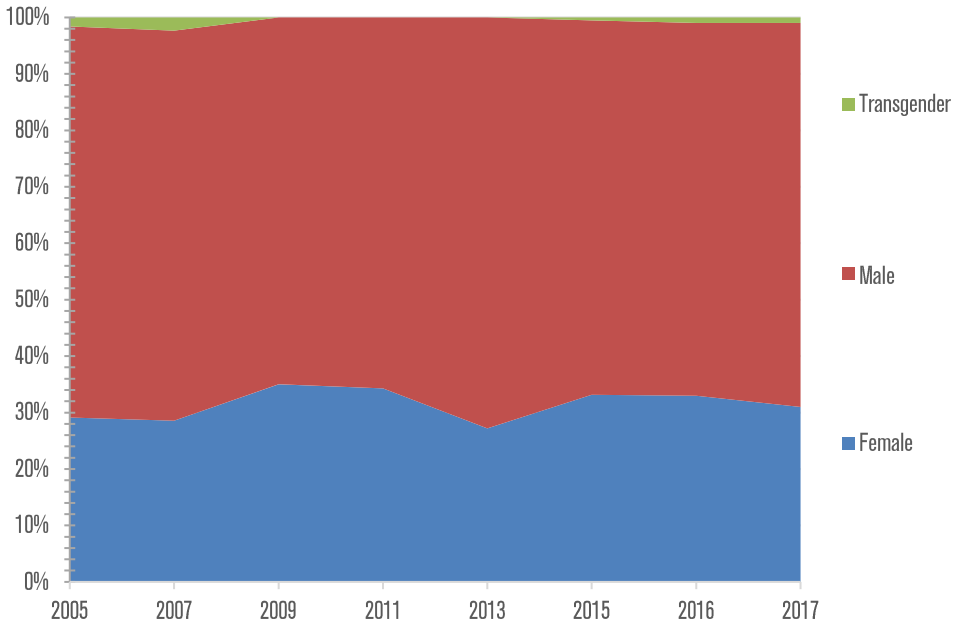
The ethnic makeup of the unsheltered street population has had abrupt changes from one year to the next in the demographic survey.

Ethnic Continuity

The ethnic makeup of the unsheltered street population, as captured by the demographic survey, has had abrupt changes from one year to the next, as shown in *Figure* 7.[10]

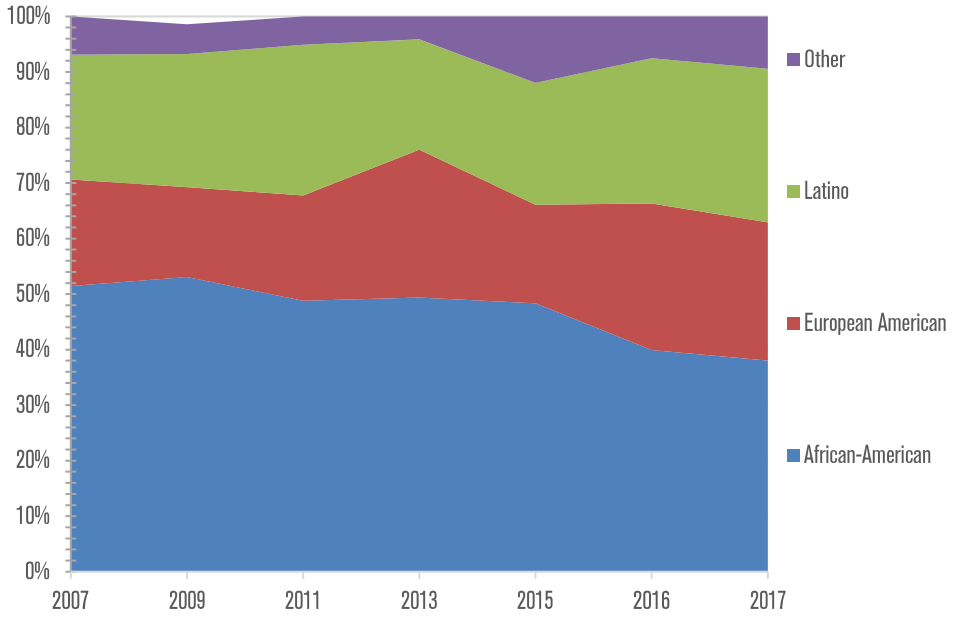
Based on the demographic survey, in 2013, the share of *European Americans* shot up and *Latinos* plummeted. In 2015, *European Americans* dropped back down and

Figure 6: Gender in Final Homeless Count Reports - *Weighted*



Sources: LAHSA homeless count reports 2005 to 2017. Total homeless population. Weighted data.

Figure 7: Ethnicity in Demographic Survey of Unsheltered Population - *Unweighted*



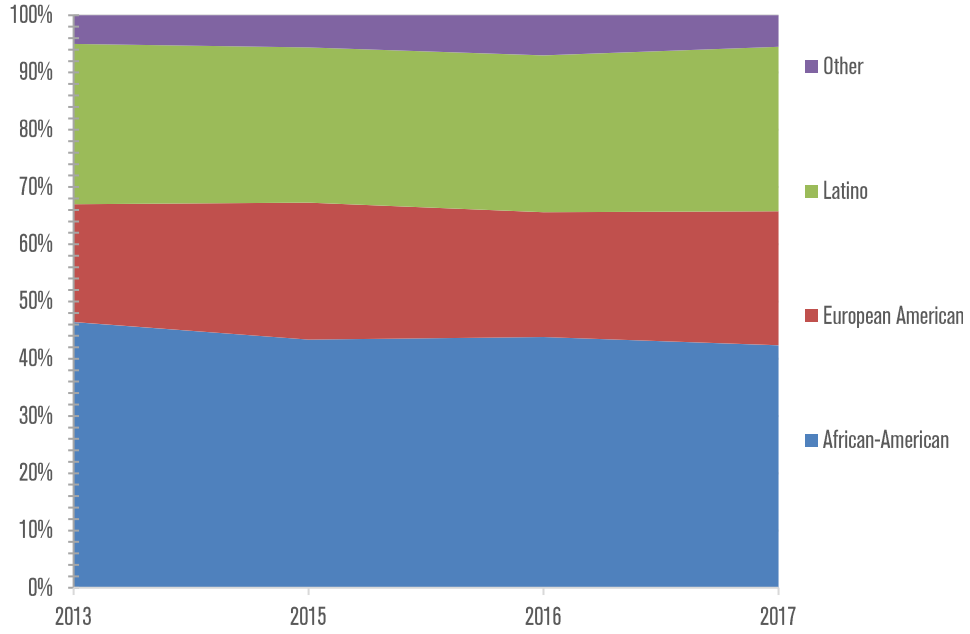
Sources: LAHSA demographic surveys 2007 to 2017. Unsheltered street population. Unweighted.

Other Ethnicities shot up. In 2016, *European Americans* shot back up, *Latinos* increased and *African Americans* plummeted.

In contrast, the ethnicity of the sheltered population shown in HMIS data has remained largely unchanged, as shown in *Figure 8*. From 2013 to 2017, the ethnic makeup of shelter residents did not vary by more than 2 percentage points for any group. This casts further doubt on the year-to-year ethnic changes shown by the demographic survey (*Figure 7*).

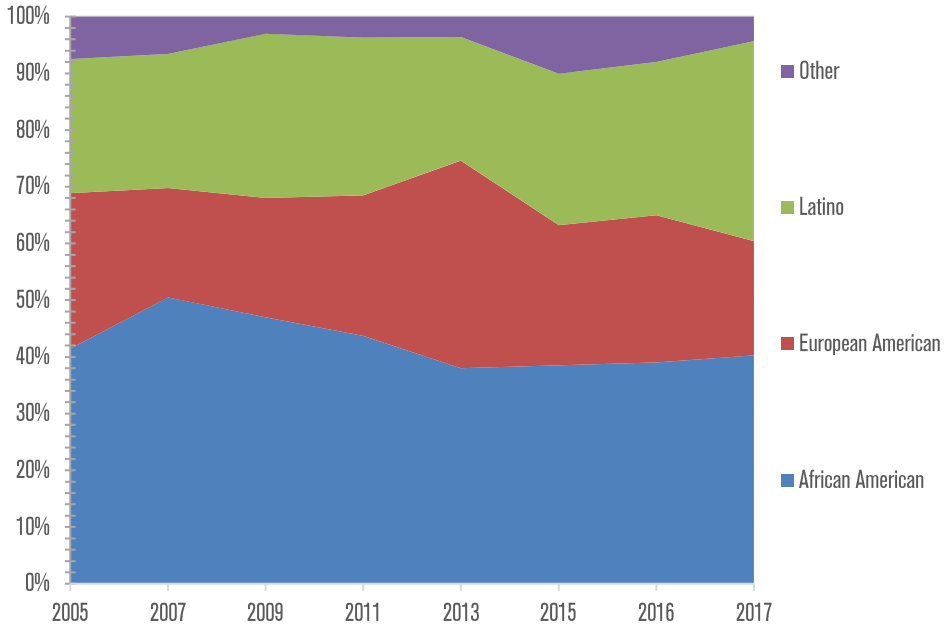
The ethnicity of the sheltered population shown in HMIS data has remained largely unchanged.

Figure 8: Ethnicity in HMIS – Total Shelter Population



Source: LAHSA HMIS for January of 2013 to 2017. Complete shelter population.

Figure 9: Ethnicity in Final Homeless Count Reports - *Weighted*



Sources: LAHSA homeless count reports 2005 to 2017. Weighted data.

It seems unlikely that the presence of European Americans and Latinos swelled and then dropped dramatically from one count to the next.

The demographic surveys had the greatest influence on determining the ethnic composition of the total homeless population in the Homeless Count reports, as shown in *Figure 9*. Ethnic shifts reported for the overall population are a slightly muted version of the shifts reported by the demographic survey. This reflects the fact that the unsheltered population is estimated to make up about three-quarters of the total homeless population.

It seems unlikely that the presence of European Americans and Latinos swelled and then dropped dramatically from one count to the next, particularly when there were not corresponding changes among shelter residents or the general population. This may well show a break in the year-to-year continuity and comparability of data from the demographic survey.

Age Continuity

One of the striking findings reported in the 2017 Homeless Count was that the number of homeless transition-age youth (18 to 24 years of age) had increased by 64 percent, from 3,447 youth in 2016 to 5,645 in 2017.[11]

Most of the reported growth was among unsheltered youth, who reportedly increased 73 percent, from 2,388 in 2016 to 4,122 in 2017.

Results from the demographic survey of unsheltered youth were treated as a random sample and projected onto unsurveyed census tracts. However, 98 percent of the surveys were collected in targeted hotspots where youth were expected to be found and thus were not random. The sampling results for the youth survey are shown in *Table 1* and discussed in more detail below.

Table 1: Hotspots vs. Non-Hotspots in the 2017 Youth Demographic Survey

Stratum Categories for Census Tract	Number of Census Tracts	Number of Tracts Surveyed	% of Tracts In Stratum Surveyed	% of All Tracts Surveyed	Number of Completed Surveys	% of All Completed Surveys	Weighted Value of Surveys
Drop-In Center	20	17	85%	4%	102	13%	107
Focus group hotspot	208	208	100%	50%	370	47%	435
2016 street count hotspot	164	126	77%	30%	128	16%	1,612
Skid Row	4	4	100%	1%	8	1%	25
Venice	11	11	100%	3%	109	14%	119
2016 youth count hotspot	58	41	71%	10%	56	7%	1,470
Non-hotspot	1,695	8	0.5%	2%	14	2%	489
GRAND TOTAL	2,160	415	19%	100%	787	100%	4,257

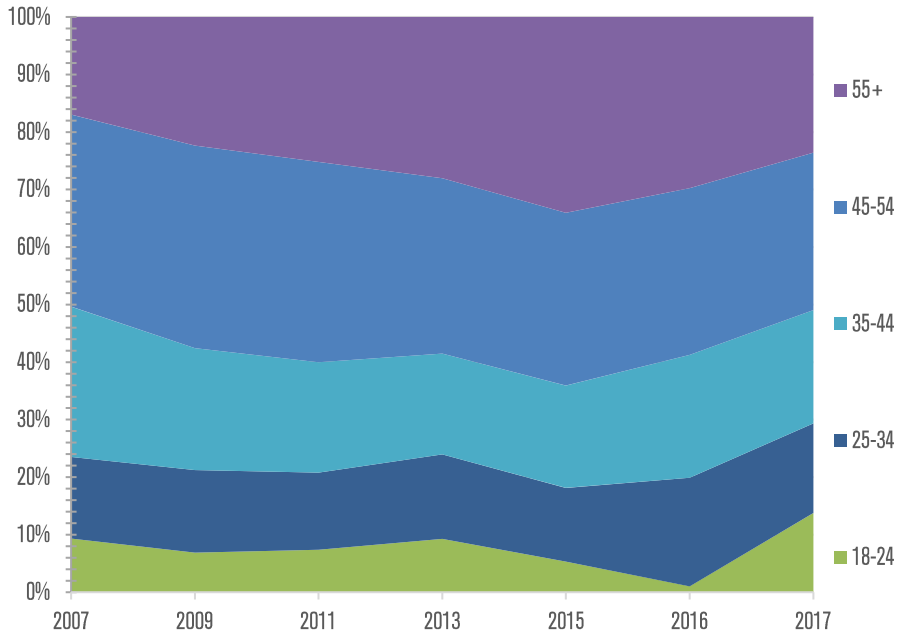
Source: LAHSA (August 8, 2017). Unsheltered Youth Count Final Sample Weights and Survey Count by Service Planning Area, 2017 Greater Los Angeles Homeless Count

Every census tract was assigned to a survey category based on the type of evidence indicating that youth were likely to be found and 415 tracts were surveyed compared to only 292 tracts in 2016.[12] However 407 of the tracts surveyed were hotspots. Only 8 of the 1,695 non-hotspot tracts were surveyed. Only 2 percent of surveys came from youth in non-hotspot tracts, which cover over four-fifths of the continuum of care.[13]

With only 14 completed surveys, the data for estimating the number of youth in non-hotspot tracts was very scant.[14] However, the youth survey was used as a random sample survey with results that could be applied to the entire continuum of care, even though 98 percent of the tracts surveyed were targeted rather than randomly chosen.

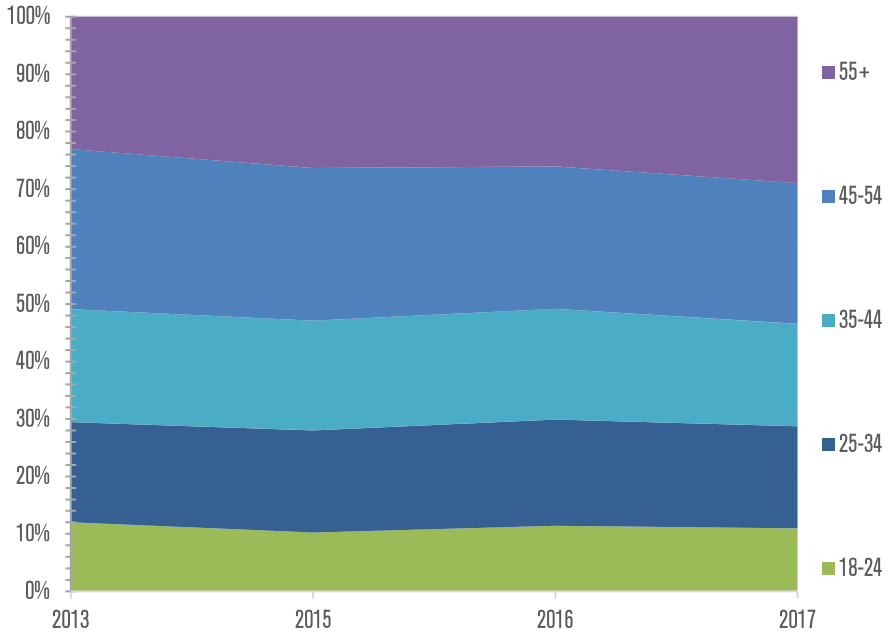
Only 8 of the 1,695 non-hotspot census tracts were surveyed. Only 2% of surveys came from youth in tracts covering over 4/5 of the county.

Figure 10: Age in Demographic Survey of Unsheltered Population - *Unweighted*



Sources: LAHSA demographic surveys 2007 to 2017. Unsheltered street population 18+ years of age. Unweighted data.

Figure 11: Age in HMIS – Total Shelter Population



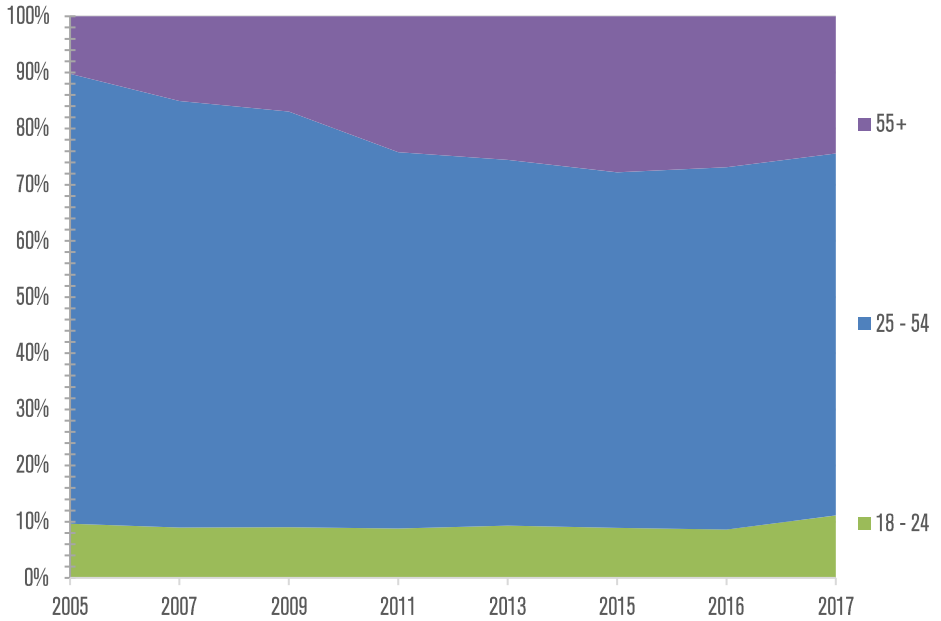
Source: LAHSA HMIS for January 2013-2017. Complete shelter population 18+ years of age.

The abrupt increase in youth homelessness in the demographic survey is inconsistent with data for people in emergency shelters.

Youth 18 to 24 years of age are shown in unweighted demographic survey data in *Figure 10* to account for 9 percent of those surveyed in 2013, 5 percent in 2015, 1 percent in 2016, and 14 percent in 2017.[15]

In contrast, HMIS data for almost the entire shelter population at the time of each Homeless Count shows that youth made up a steady 10 percent of shelter residents from 2015 through 2017. This can be seen in *Figure 11.* The abrupt increase in youth homelessness in the demographic survey is inconsistent with data for people in emergency shelters.

Figure 12: Age in Final Homeless Count Reports - *Weighted*



Sources: LAHSA homeless count reports 2005 to 2017. Weighted data.

Youth were reported to account for 8 percent of the total homeless population in every Count from 2005 through 2016, and then in 2017, their share increased to 10 percent. The total homeless population shown in *Figure 12* includes both unsheltered people on the streets and people in shelters. The three age groups shown in the Homeless Count report were all reported to have grown from 2016 to 2017, so even though a large increase in the number of homeless youth was reported, this did not result in a large increase in their share of the homeless population.

The additional effort invested in identifying and canvassing hotspot tracts appears to have been a change in procedure that resulted identifying more homeless youth. It is clear that the 2017 youth count succeeded in identifying and interviewing more youth than in previous years. However, it may not have produced a reliable sample that could be used to project the presence of homeless youth throughout the continuum of care. Given the changes in how the survey was carried out it clearly did not produce results that could accurately be compared with the youth count from previous years.

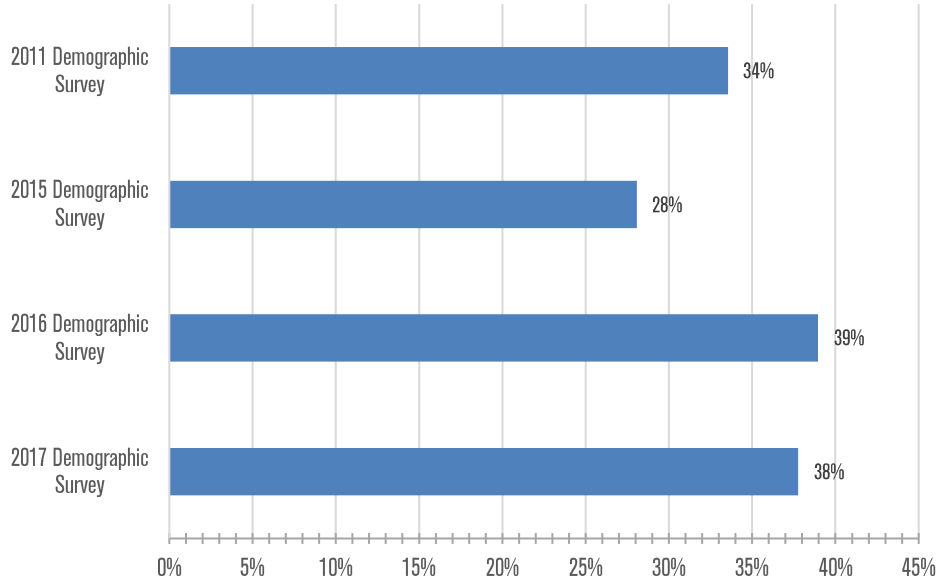
HUD required a separate youth count in 2017. This stimulated increased effort to find, count and survey youth. The positive result was a more complete youth count. The apparent negative result was a break in continuity with previous youth count data. Because the framework for identifying statistical error in the count is based solely on the number of census tracts enumerated, the increased count produced by this increased effort was not flagged as a break in data continuity and a 64 percent increase in the number of homeless youth was reported.

Sampling distortions are the most plausible explanation for the reported 64% increase in the number of homeless youth.

Year-to-Year Continuity in Homeless History

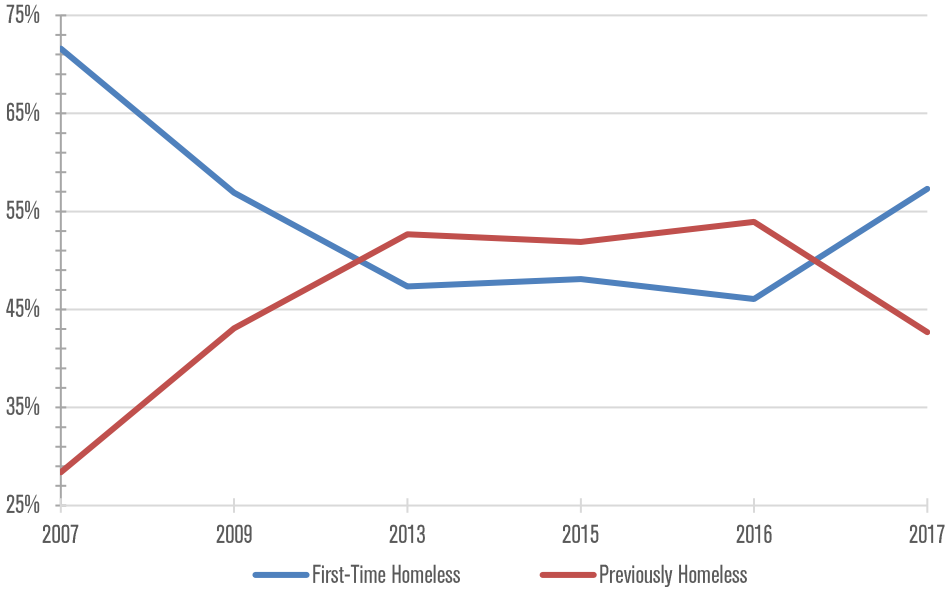
The share of the homeless population reported to be chronically homeless has varied from year to year in Homeless Count reports, as shown in *Figure 13*.[16] The

Figure 13: Chronically Homeless as Percent of Unsheltered Homeless Population



Sources: LAHSA demographic surveys 2011 to 2017. Unsheltered street population 18+ years of age. Unweighted data.

Figure 14: First-Time Homeless vs. Previously Homeless



Sources: LAHSA demographic surveys 2007, 2009, 2013, 2015, 2016 and 2017. Data shows adults 18+ years of age and unweighted.

It would be surprising if the proportion of first-time homeless increased 24% from one year to the next.

rate shown in demographic surveys that provide this information has ranged from 28 to 39 percent.[17] This variation does not correspond with regional economic trends and is most likely the result of sampling inconsistencies in the populations surveyed in different years.

Six demographic surveys have collected information about whether respondents were homeless for the first time or whether they had experienced previous episodes of homelessness, as shown in *Figure 14*. The share reporting to be first-time homeless declined steadily from 72 percent in 2007 to 47 percent in 2013, held steady and dropped slightly to 46 percent in 2016, and then bounced back up to 57 percent in 2017. This is a 24 percent increase in the proportion of first-time homeless from 2016 to 2017.

Assuming that there has been an increase in homelessness since 2016, it would stand to reason that there would also be an increase in first-time homelessness. But it would be surprising if the proportion of first-time homeless increased 24 percent from one year to the next.

Summary

Six key findings about the year-to-year comparability of data from the Homeless Count are:

1. The demographic survey has been a quasi-random opportunity survey, and so has not been a statistically reliable representative of the homeless population. Nevertheless, it has been the only source of information for estimating the attributes of the unsheltered homeless population and the size of the annual homeless population.

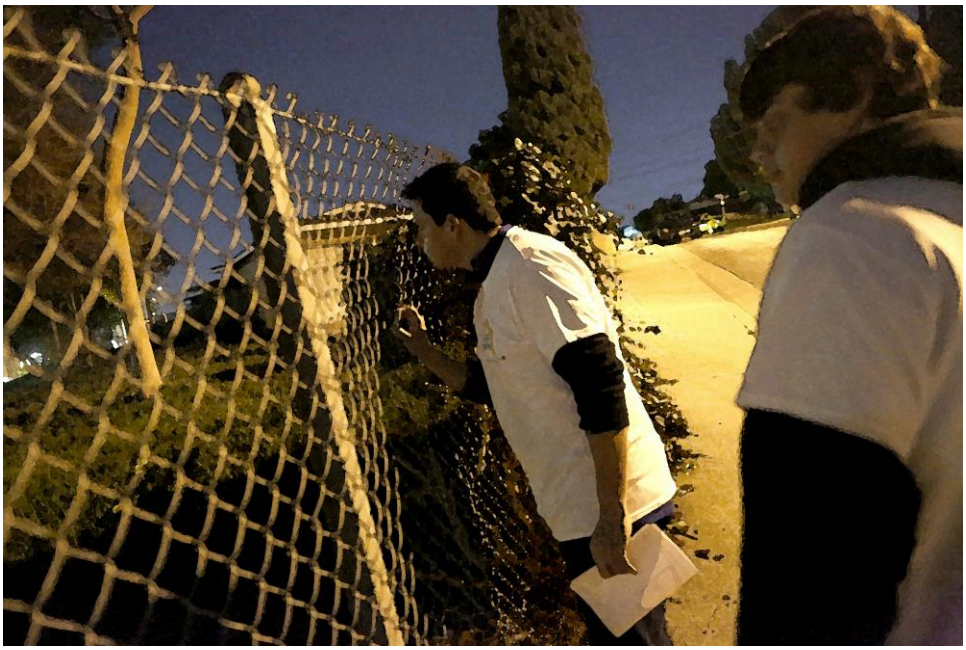
2. Since 2013, the Homeless Count reports show a contradiction between an increasing number of point-in-time homeless and a decreasing number of people homeless over the course of the year. This casts doubt on both the demographic survey and the formula for projecting annual homelessness. Aside from questions about the representativeness of the demographic survey data, the formula used to project the annual homeless population has a shortcoming in that it does not account for people who exit homelessness after being homeless for more than one week but less than one year, and then are replaced by new entrants.

3. When information in the demographic survey about the gender, ethnicity and age of unsheltered homeless population is compared from one year to the next, there are large up and down shifts in the reported makeup of the population that do not appear plausible. These shifts are even less plausible when compared to data for sheltered residents, which shows very little year-to-year change in the demographic characteristics of homeless residents.

4. There are year-to-year discontinuities in the share of the unsheltered homeless population reported to be chronically homeless as well as the share that is reported to be homeless for the first time.

5. From 2013 to 2016, vehicles steadily accounted for 30 percent of homeless sightings, then in 2017, the share increased to 36 percent – growing by a fifth from one year to the next. This abrupt deviation from a multi-year trend may well be the result of a change in Count methodology. There is very little training and no formal protocol for how volunteers carry out the street count.

6. There does not appear to be reliable year-to-year comparability in data produced through the Homeless Count. One source of this problem appears to be the demographic survey of unsheltered residents. A second source of discontinuity is likely to be inconsistency in how the street count is carried out in different census tracts during each Count. A third source of discontinuity could be changes over time in how the Count is implemented.



Comparability of the Homeless Count with Other Data

Comparability of the Homeless Count with the Cash Aid Caseload of Destitute and Homeless Adults

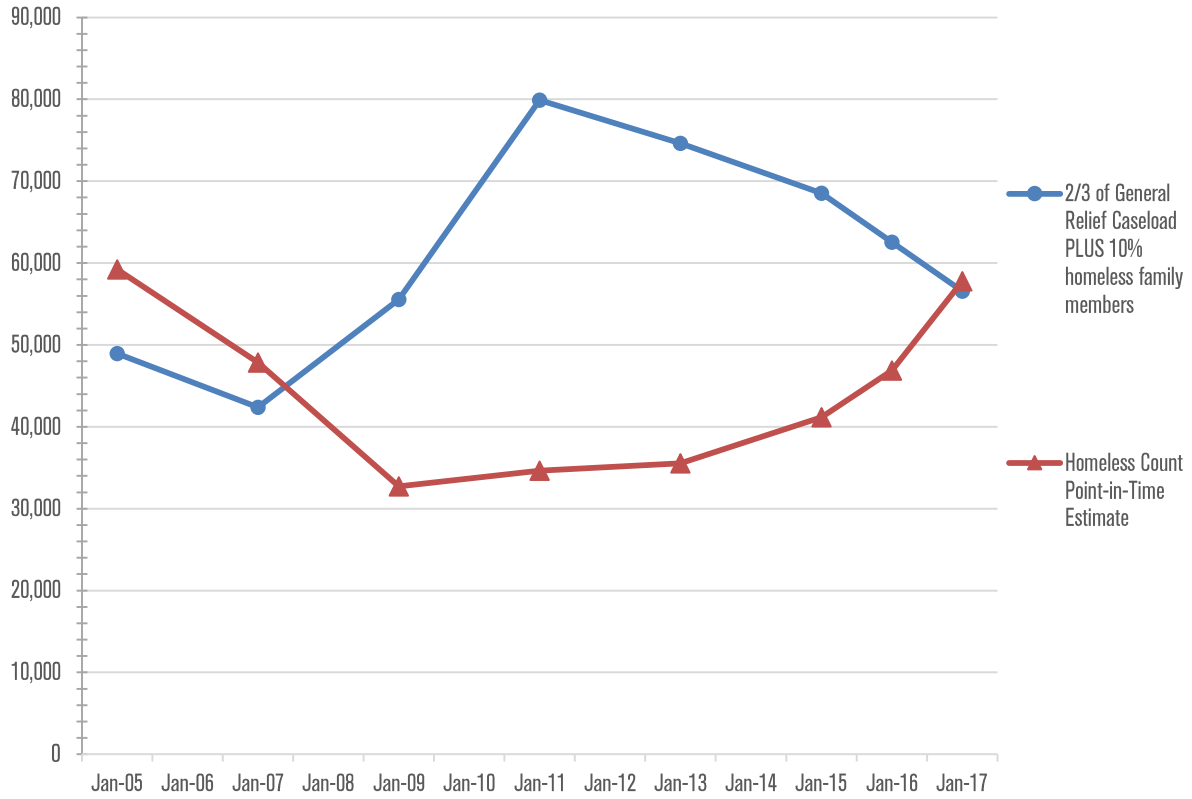
There are risks of both under-counting and over-counting in estimating the size of the homeless population.

There are risks of both under-counting and over-counting when estimating the size of the homeless population. Counts of visibly homeless individuals may miss unsheltered people who remain out of sight during the Counts. Homeless persons may not be visible because they are in places that are missed or that volunteer teams are unable to find. Moreover, the observations or interviews of enumerators may lead to measurement errors due to inaccuracies in information provided by respondents.

Roughly two-thirds of Los Angeles County's General Relief caseload is estimated to be homeless on a given day, nearly half have been continuously homeless for 12 months or more, and approximately 80 percent have had two or more episodes of homelessness.[18] This represents a population that substantially overlaps with the population enumerated in the Homeless Count. Recipients are mostly single adults 18 years of age and older who must be destitute (no more than $50 total in cash or bank account) to qualify for this aid and receive up to $221 a month is cash assistance along with food stamps.

The number of people homeless in each Count from 2005 through 2017 along with of the number of people in the General Relief caseload in January of each count year who are conservatively estimated to be homeless based on the size of the General Relief caseload is shown in *Figure 15*.[19]

Figure 15: Homeless Count and General Relief Caseload



Sources: LAHSA homeless count population estimates 2005 to 2017 and Los Angeles County General Relief caseload, Department of Public Social Services, in January of each count year.

The General Relief does not include at least *five* categories of homeless individuals. *1)* If individuals are assessed as being employable, the duration of their cash aid is limited to nine months in a 12-month period. After that they must wait three months to be eligible to re-enroll. *2)* Individuals who have been convicted of a drug felony in the past 20 years, are in violation of probation or parole are ineligible.[20] *3)* Undocumented immigrants are not eligible for benefits. *4)* Families with children are eligible for larger amounts of cash aid through the CalWORKs program, so they are not part of the General Relief caseload. *5)* Individuals who have short episodes of both acute poverty and homelessness are unlikely to be in the General Relief caseload because of the application processing time usually required before receiving benefits.

There is a strong possibility that the homeless counts have under-estimated the size of the homeless population.

Figure 15 shows the estimated number of homeless General Relief recipients (two-thirds of the caseload) plus homeless family members outside of the General Relief program – conservatively estimated as one homeless family member for every 10 homeless General Relief recipients.[21] No attempt is made to estimate the number of people in the other four categories outside of the General Relief program.

This is a crude but conservative approximation of the point-in-time homeless population. It is more useful for indicating the trend of growth or decline in the homeless population than it is as an accurate estimate of the total homeless population. Nevertheless, this caseload data is useful as a reference point in a confused landscape.

Over the five Homeless Counts from 2009 through 2016, the number of people estimated to be homeless based on two-thirds of the General Relief caseload plus another 10 percent in families has been an average of 82 percent larger than the population estimate from the Homeless Count. There is a strong possibility that these Homeless Counts under-estimated the size of the homeless population.

The number of volunteers and staff who carry out the count, and the number of census tracts that were enumerated has increased with each count. This increased resource capacity has led to more complete counts and may have contributed to the large increase in the estimated size of the homeless population in 2017. The 2017 Homeless Count was very close to the crude estimate based on the General Relief caseload: 57,794 vs. 56,583. It is not clear, however, that the increased size of the population estimate was accompanied by increased accuracy in information describing attributes of people experiencing homelessness.

The extensive overlap in the populations of the Homeless Count and the General Relief caseload suggests that the sizes of these two populations should rise and fall together. However, from 2007 through 2017, these two populations have changed in opposite directions. The General Relief caseload grew from 2007 to 2011, and has declined since then. By contrast, the homeless population estimates declined from 2007 to 2009, bottomed out through 2013, and have grown since then.

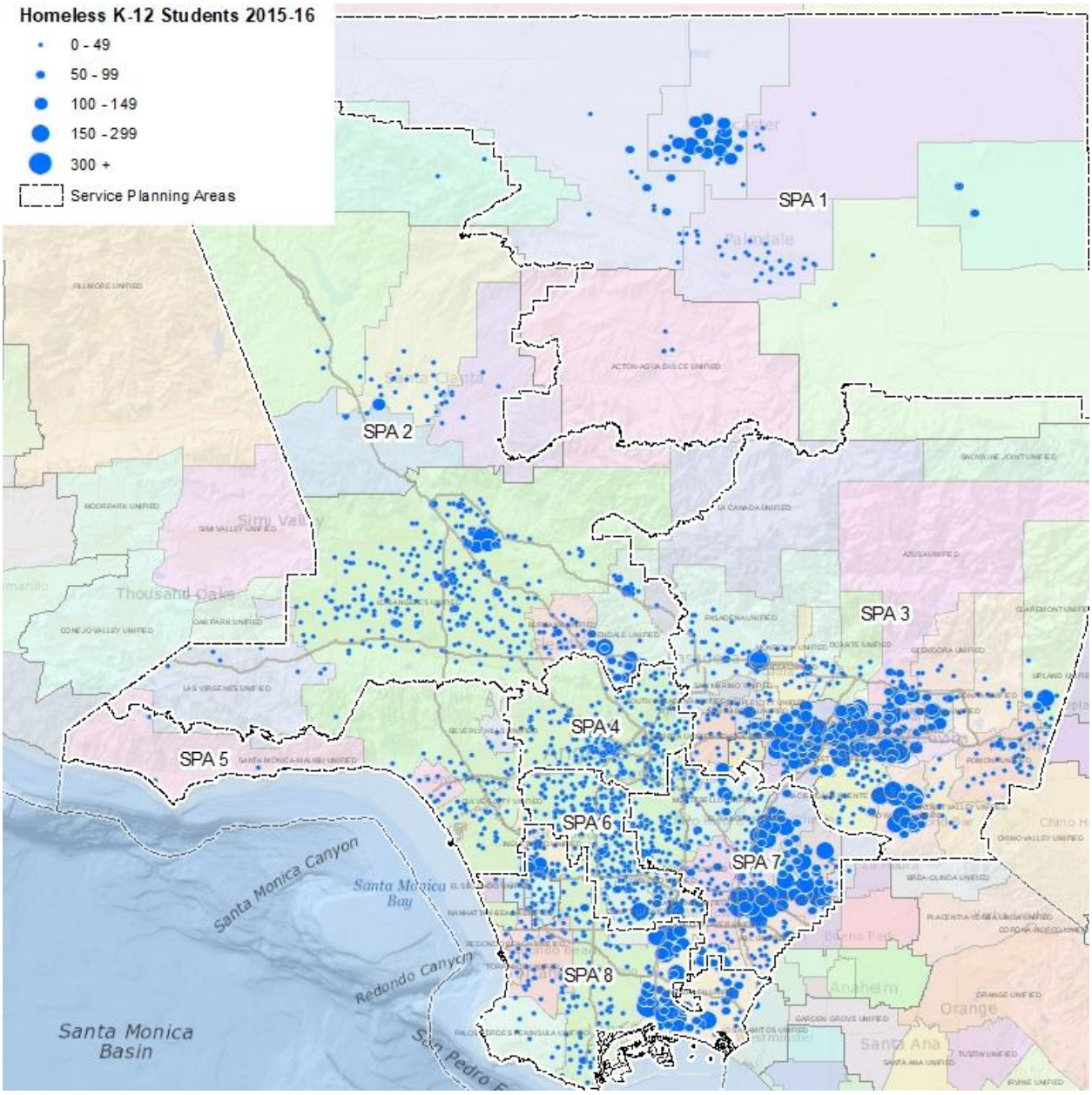
The fact that the direction of change in the Homeless Count differs widely from the direction of change in the means-tested General Relief program for impoverished and homeless unaccompanied adults raises additional uncertainties

about the comparability of one Homeless Count to the next and their reliability as an indicator of whether the homeless population has grown or declined.

Comparability of the Homeless Count of Children with School Counts of Homeless Students

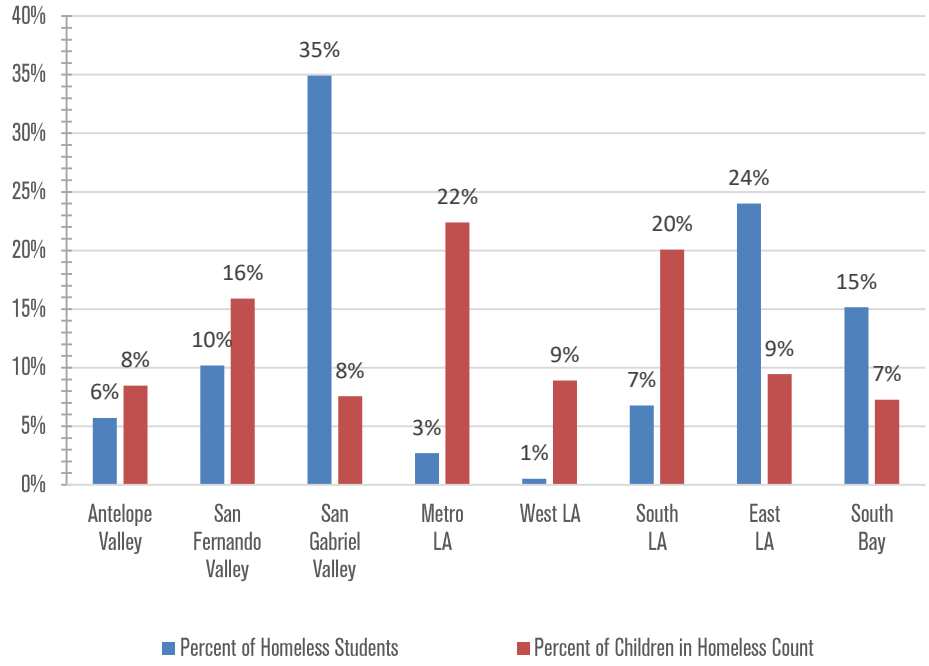
The California Department of Education collects data from each school about students in kindergarten through twelfth grade who are identified as homeless. A map displaying the number of homeless students at each Los Angeles County school is shown in *Figure 16.*[22]

Figure 16: Number of Homeless K-12 Students by School 2015-2016



Source: California Department of Education.

Figure 17: Distribution of Homeless Children in LAHSA Estimates and School District Data 2015-2016



Sources: California Department of Education and LAHSA. Data shows children 0-17 years old in the homeless count and students in kindergarten through twelfth grade in school homeless data.

The definition of homelessness used by schools is broader than the HUD definition used in Homeless Counts because it includes individuals who are couch surfing as well as individuals sleeping in places not meant for human habitation, whereas the HUD definition includes only the latter group. The Los Angeles County Office of Education estimates that 82 percent of students identified by schools as homeless are temporarily doubled up in housing that is not their own, such as houses of classmates and friends. Another 8 percent are temporarily unsheltered, while 5 percent are in shelters and the remaining 5 percent are in hotels or motels (presumably with homeless vouchers).[23]

This means that 18 percent of the 57,453 homeless students identified by Los Angeles County schools in the 2015-2016 school year are estimated to meet HUD's definition of homelessness. Despite the broader definition of homelessness used by schools, it is reasonable to expect the distribution of homeless children identified by schools to be similar to the distribution of children in the Homeless Count. And given that student data is a very large sample collected over the course of the year by schools across the county, whereas the Count data comes from a small demographic survey sample projected onto the street count plus shelter data, the school data is likely to be more reliable.

An average of only 46 children are represented in responses to each of the past seven demographic surveys. In 2017 the number of children increased to 149. It is important to continue this trend of increasing the amount of information about homeless children.

There are remarkably large differences between where homeless students are reported and where homeless children are identified in the homeless count.

The map of primary and secondary students identified as homeless in the 2015-2016 school year shows large concentrations of homeless children in the San Gabriel Valley, Southeast/Gateway Cities, and Long Beach. These are service planning areas (SPAs) 3, 7 and 8. There are also noticeable concentrations of homeless students in Inglewood, San Fernando and the high desert.

The share of homeless students identified in the 2015-2016 school year who are in each service planning area, along with the share of homeless children identified in the 2016 Homeless Count who are in each area is shown in *Figure 17*.

There are remarkably large differences between where homeless students are reported and where homeless children are identified in the Homeless Count. Based on school reports the Homeless Count identifies a *disproportionately small* number of homeless children in three SPAs.

1. The largest difference is in the San Gabriel Valley SPA, which is home to 35 percent of all homeless students identified by schools but only 8 percent of children enumerated in the Homeless Count.
2. Second is the East Los Angeles SPA, which accounts for 24 percent of homeless students but only 9 percent of homeless children in the Count.
3. Third is the South Bay SPA, which accounts for 15 percent of reported homeless students but only 7 percent of children in the Count. The fact that the City of Long Beach is not part of LAHSA, and therefore not part of LAHSA's Count, may account for some or all of the South Bay gap.

There is a strong possibility that the homeless count identifies the location of homeless children inaccurately.

The Homeless Count identifies a *disproportionately large* share of homeless children in three SPAs compared to school reports.

1. The largest possible over-count is in the Metro Los Angeles SPA, which accounts for 22 percent of children in the count but only 3 percent of homeless students reported by schools.
2. Second is the South Los Angeles SPA, which accounted for 20 percent of children in LAHSA's Count but only 7 percent of homeless students reported by schools.
3. Third is the West Los Angeles SPA, which accounts for 9 percent of children in the Count but only 1 percent of homeless students reported by schools.

Children made up only about a tenth of the homeless population in LAHSA's 2016 Homeless Count, which used demographic survey data for a total of only 103 children in its projection that 3,490 children were homeless during the week of the Count compared to an estimated 10,321 homeless students identified by schools over the course of the school year that met HUD's definition of homelessness (18 percent of 57,337 total homeless students). Given that the school tally is an annual number and the Homeless Count is a point-in-time number, the absolute number of children projected from the Count may be reasonably accurate. The larger issue is that there is a strong possibility that the Homeless Count identifies the location of homeless children inaccurately.

Children are the most vulnerable members of the homeless population, so a complete, accurate count of this age group, including where they are located, is important for prioritizing and targeting resources to combat homelessness.

Summary

Five key findings about the comparability of data from the Homeless Count with the General Relief caseload and school records of homeless students are as follows:

1. The General Relief includes only part of the homeless population in its caseload. A conservative estimate of the number of homeless General Relief recipients plus homeless family members outside of the program was an average of 82 percent larger than the Homeless Counts from 2009 through 2016.

2. The 2017 Homeless Count was very close to the number of homeless based on the estimated number of homeless General Relief recipients plus family members outside of the program.

3. There is a strong possibility that the Homeless Counts from 2009 through 2016 underestimated the size of the homeless population.

4. The direction of growth and decline in the Homeless Count has been the opposite of the direction of change in the General Relief caseload from 2009 through 2017. This raises additional uncertainties about the comparability of one Homeless Count to the next and their reliability as an indicator of whether the homeless population has grown or declined.

5. There are large concentrations of homeless students in the San Gabriel Valley, Southeast Los Angeles, Gateway Cities, and Long Beach.

6. In 2016, the Homeless Count used demographic survey data for only 103 children to estimate the attributes and location of the unsheltered population of homeless children.

7. There is a strong possibility that the Homeless Count identifies the location of homeless children inaccurately.

Measurement Error

Errors Reported in the Count

From 2009 through 2017, the only possible errors identified in the Homeless Count have been the "*standard error*" and the "*confidence interval.*"

Standard error is a statistical measure of the accuracy with which a sample represents a population. The extent to which an average value in the Homeless Count, for example, the percent of people estimated to be adults, deviates from the actual percent of the population that is adults, is the *standard error.*

The *confidence interval* describes the amount of uncertainty associated with the size of the Homeless Count. The *95% confidence interval* reported for the Count means that if the Homeless Count were repeated, 95 times out of 100 the Count would fall within the upper and lower bounds of the confidence interval. Another term for the *confidence interval* is *margin of error.*

Standard Error and Confidence Interval in the 2017 Homeless Count

The 2017 Homeless Count reported a standard error of 0 for the 35,555 unsheltered adult individuals who were reported to be homeless. Similarly, the confidence interval was the exact amount of the Count – the upper and lower confidence intervals were both 35,555. [24]

This is a claim of absolute precision in counting a large, mobile, often concealed population at night by thousands of untrained volunteers.

The same level of absolute accuracy was reported for the 8,376 adults and 456 youth in shelters. The standard error was reported to be 0, and the upper and lower confidence intervals were identical with the Count estimates.[25]

The homeless counts have assumed that the only potential cause of error is if a census tract is not counted.

Small standard errors and confidence intervals were reported for unsheltered adult family members and youth.

For the 1,210 *unsheltered adult family members*, a standard error of 30 adults and a confidence interval of plus or minus 58 adults was reported.[26]

For the 4,451 *unsheltered youth* 18 to 24 years of age, a standard error of 450 youth and a confidence interval of plus or minus 882 youth was reported.[27]

Acknowledged Errors

From 2009 through 2017, the Homeless Counts have assumed that the *only* potential cause of error is if a census tract is not counted. Because there was a complete count of all census tracts in 2016 and 2017, this meant that there was *no error in the unsheltered street count* of adult individuals.

In addition, because the Homeless Management Information System (HMIS) reported the number of unaccompanied youth and adults, this meant that there was *no error in the shelter count*.

The only possibility of error identified in the 2017 report was from unsheltered youth between the ages of 18 and 24 and unsheltered households with children, because these estimates came from projecting demographic survey data from a sample of census tracts onto the total street count. For the adult street count, "*no measurement error existed*."[28]

Quality of data is more important than quantity of data.

Unidentified Errors

Confidence intervals and standard errors in the Count have been based on the number of census tracts counted as a share of the total number of census tracts in the continuum of care or a service planning area. This can lead to emphasizing quantity of data over quality of data, whereas the quality of data is more important than the quantity of data. Applying this principal to the Homeless Count, the reliability of data collected within census tracts is more important than the number of census tracts counted.

The existing methodology only accounts for uncertainty due to uncounted census tracts and does not adjust for differences between the reported count in each census tract and the actual number of homeless in that tract. The methodological reports for each Homeless Count from 2013 through 2017 have indicated that the only potential source of error in the street count is when enumeration is not carried out in a census tract, and that if every tract is counted, the possibility of error is eliminated.[29] This assumption is fundamentally flawed. The assertion made in Homeless Count reports that the estimates are perfectly accurate when all the census tracts are surveyed, despite clearly inconsistent results from one count to the next, indicates that better approaches are needed.

Types of *measurement error* that are not identified and corrected in the Homeless Count include:

1. *Discrepancies* within a given year or from one year to the next that result from inconsistency in the procedures used by the thousands of different volunteer teams.
    a. Whether they canvas every street in their assigned geographic area, and if not how canvassed streets are selected.
    b. Whether they investigate every alley, park and vacant lot.
    c. How they determine whether vehicles have homeless occupants.
    d. How they decide whether or not an individual on the sidewalk is homeless.
    e. Level of energy invested in identifying and counting specific subpopulations such as youth, veterans or children.
2. *Undercounts* of homeless individuals who are difficult to find.
    a. Individuals in abandoned buildings.
    b. Individuals in unpopulated areas without road access including

Reliable procedures are needed to calibrate, control and correct measurement error.

national parks, nature preserves and beaches.

c. Individual sleeping on the roofs of buildings, in parking structures, behind walls, or in underground passages.

d. Individuals sleeping in the interior of large institutions such as colleges, universities and churches.

e. Individuals sleeping out of sight in structures that are not meant for human habitation including garden sheds, garages and storage units.

f. Individuals sleeping at their place of work.

g. Individuals sleeping in vehicles that are not dilapidated and not identified as a homeless dwelling or a vehicle that is concealed out of sight.

h. Runaway youth who are minors and adverse to returning home or entering foster care.

3. *Over-counts* of individuals whose homeless status is ambiguous or who are counted in more than one location.

   a. Individuals with unkempt appearance who are housed.

   b. Individuals who move between communities during the same night or from one night to the next and are counted more than once.

   c. Individuals who are riding public transportation throughout the Count night and are counted multiple times.

4. *Inaccurate information* reported on the demographic survey and projected onto street count data.

   a. Children accompanying unsheltered adults who are not reported because their parents are anxious that the Department of Children and Family Services will remove them and place them in foster care.

   b. Under-reporting of stigmatizing information including criminal justice history, severe mental illness, substance abuse, chronic homelessness, and unemployment.

   c. Inaccurate reporting by individuals with cognitive impairments, including age, medical history, employment history, homeless history, and income.

The Homeless Count should be a credible tool for identifying the size, composition and needs of the homeless population, as well as for tracking change from one year to the next. Reliable procedures are needed to calibrate, control and correct measurement error.

Assessment and Recommendations

Assessment of Homeless Count Accuracy

This multi-year assessment of the Homeless Count finds evidence that the counts have not provided accurate and consistent estimates of the size and composition of the homeless population. Problems include:

1. The Homeless Count does not appear to provide reliable year-to-year continuity in information from the demographic survey about the composition of the homeless population in terms of age, ethnicity, gender, or homeless history.
2. The street count may fail to provide year-to-year continuity in the types of dwellings occupied by unsheltered homeless individuals.
3. Projections of the size of the annual homeless population appear to be inconsistent with the size of point-in-time estimates and to understate the size of the annual population.
4. Based on a comparison with the General Relief caseload, it appears that multi-year data from the Homeless Count may have shown the size of the homeless population to be increasing when it was decreasing and may have under-estimated the size of the homeless population.
5. Based on a comparison with school data for homeless students, it appears that the geographic distribution of children in the Homeless Count may be inaccurate.
6. The procedure used to quantify the size of possible errors in the Homeless Count is incomplete because it does not take into account the effect of measurement error and therefore significantly understates the scale of likely error in the Count.

The Homeless Count creates a picture of homelessness during a specific week in January. The quality of these pictures so far is comparable to a missing child's image with thick outlines, rough edges and minimal shading. The image is recognizable and informative but the resolution is too crude to measure crucial details of the image, or to measure change if two different images are overlaid.

Recommendations

The core methodology for carrying out the Count has been unchanged since 2009. Progressively more effort and money has been invested in implementing the methodology, but the results are still not sufficiently accurate. These recommendations outline steps that should significantly improve the Count's accuracy by reducing *measurement error* through more careful and consistent procedures, and by obtaining additional types of information for calibrating and correcting *measurement error*.

New procedures for conducting the street count and demographic survey, volunteer training, and statistical methodology are needed to build on the accuracy already achieved in carrying out the Count and to strengthen the reliability and year-to-year consistency of the Counts.

The research burden for improving the accuracy and consistency of the Homeless Count should be shared by researchers in the region and local governmental agencies that serve homeless residents, rather than falling solely on LAHSA, whose primary task is grant and contract management.

Street Count

1. Require Count volunteers to participate in consistent, substantive training.[30] The training should include standardized procedures for canvassing census tracts, assessing risks and making decisions about investigating areas such as alleys, parks, parking lots and vacant fields. An example might be to specify that when teams encounter an open area - park, vacant lot, parking lot – that extends 50 or more feet from the road, that they get out of their car and canvas the area on foot if it feels safe.
2. Provide a suggested route on the maps that are given to both street count volunteers and teams that conduct the demographic survey, as is done in New York. The suggested route would show the quickest way to cover a team's entire area and also serve to ensure that the entirety of their area is covered once, and only once. Software is available to produce census tract-level map routes on an automated basis.
3. Develop reliable, standardized procedures for determining whether vehicles are occupied by homeless individuals.
4. Maximize the number of enumeration teams in urbanized areas that walk rather than drive their routes. That way, someone sleeping or sitting on the sidewalk side of a parked car will be seen, whereas volunteers in a car might miss this person.
5. Use mobile apps on the cell phones of street count volunteers as well as individuals carrying out the demographic survey to document the GPS coordinates of each homeless sighting and each survey contact. This information could either augment or replace the current paper tallies, and would create a valuable database of the exact location of homeless sightings.
6. Where possible, integrate the demographic survey as a uniformly random component of the street count. This includes the youth survey, an improved version of the family survey, the follow-on surveys recommended later, and possibly some components of the street count. New York City achieves this integration by combining the street count and demographic survey and carrying out both during the day. This appears possible for some, but perhaps not all, components of the demographic survey. The biggest challenge is that in Los Angeles, the street count is carried out at night and the demographic survey of unsheltered adults is carried out during the day.[31]

Demographic Survey

7. Increase the number of families with children that are reached by the demographic survey and explore making greater use of HMIS data regarding children in order to provide more reliable information about homeless children. From 2007 to 2017, an average of only 1 percent of demographic survey respondents have been children. In 2017, 219 children were included in the demographic survey, representing 3 percent of respondents. This was an improvement over the 103 children included in 2016, but still a small

sample. More reliable information about this vulnerable segment of the homeless population is needed.

8. Carry out the demographic survey in a random sample of geographic locations without substituting selected locations based on convenience. The methods reports for every survey from 2009 through 2017 indicate that quasi-random methods were used. In order to reliably extrapolate results of the demographic survey onto the overall homeless population, it is essential that survey responses are obtained from a random sample.

9. Support detailed analysis and widespread dissemination of information from the demographic survey that is operationally important for combating homelessness, for example, barriers to employment, health conditions, justice system involvement, and needed services. In addition, maintain year-to-year consistency in questions that provide valuable information. For example, questions about the circumstances of children who are not physically present with parents when they are interviewed have not been asked since 2009.

10. Assess whether HMIS data, which represents almost the entire universe of individuals and families in shelters, provides a more reliable population profile than the demographic survey and should have a role in describing the street population in addition to the sheltered population. This possibility should be explored because HMIS records provide information for roughly three times as many people as the demographic survey and has much less fluctuation from one count to the next.

Statistics and Data Analysis

11. Give the research organization working with the Count a fully independent and objective role in ensuring the data integrity of the Count rather than a secondary, supportive role. There are multiple descriptions in methodology reports on the Homeless Counts from 2009 through 2017 of ad hoc modifications to sampling plans for both the street count and the demographic survey. Researchers should be empowered to protect and monitor data integrity. This includes the plan and procedures for collecting data, and the task of analyzing and explicating the data.

12. Strengthen the integrity of the Count by identifying, quantifying and correcting *measurement error*. Because the Homeless Count sets out to enumerate the entire population but is able to enumerate and survey only part of the part of the population, a complete and accurate Count is fundamentally a statistical problem. The fact that each methodology paper from 2013-2017 has stated that the only potential source of error in the street count is from uncounted census tracts, and that no methodology paper has ever recognized the pervasive risk of *measurement error*, demonstrates that there is a need for one or more qualified statisticians with expertise in enumerating hidden populations and sampling methodology. In addition, the continued use of a dated and inadequate formula for estimating the annual homeless population is further evidence of the need to strengthen the statistical tools used in the Count.

13. Make it a primary goal of the Count to calibrate year-to-year comparability in population estimates and to identify likely causes for major shifts in the number or composition of the homeless population. Prior to this report, there

has not been any public domain document that analyzed data continuity and comparability from one count to the next. This should be an ongoing component the work done be researchers supporting the count, and problems with data continuity and comparability should be identified and corrected.

14. Increase the sampling framework for the street count and demographic survey beyond the binary breakout of hotspot census tracts and all other census tracts. In 2017 this framework was expanded to include family hotspots and vehicle hotspots. However, this leaves most census tracts lumped together in the non-hotspot stratum even though there is wide variation among these tracts in level of homelessness. This is the first of several problems.

    The second problem is that the sampling frame is based solely on geographic categories: hotspot census tracts and all other census tracts. This is questionable because homelessness causes placelessness. Homeless individuals are less defined by geography than any other member of society.

    Third is a chicken-and-egg problem – an accurate profile of the homeless population is required to develop an accurate sampling frame, but the profile of the homeless population is imperfect and uncertain because it comes from surveys designed without an accurate sampling frame.

    The survey about payday loans to low-income workers that was carried out by The Pew Charitable Trusts is an example of a typical survey sampling frame.[32] The survey was designed, and responses weighted, to obtain proportionate representation of individuals based on age, gender, education, ethnicity, mode of telephone usage, and geography. The population profile came from the American Community Survey and information about telephone usage came from the National Health Interview Survey. Los Angeles lacks a comparable, reliable profile of its homeless population that can be used to develop a dependable sampling frame for the homeless count.

    Local researchers and government agencies that serve homeless residents should work with LAHSA to develop a complete and accurate geographic and demographic profile of homeless residents, including household type, homeless history and type of dwelling.

15. Use a "decoy" quality assurance mechanism in which an independent team of researchers deploy adults throughout each area of the county, posing as homeless adults during the street count, to check whether they are found and counted as visible homeless individuals. The distribution of decoys must replicate that of the homeless population. This decoy plant-capture approach has been used in New York City since 2005 and in Toronto, since 2009. This procedure is reported to have identified a 29 percent undercount in New York City's street count. In New York, independent researchers place teams of two decoys in a sample of areas to be counted by enumerators. To maintain the integrity of the quality assurance mechanism, neither enumerators nor those responsible for the Count know where decoys have been placed. Each decoy is given a unique identifier, which is conveyed to an enumerator when they are surveyed. Alternatively, the GPS capabilities of smartphones or Bluetooth beacons carried by enumeration teams and received by decoys could be used for a post-hoc comparison of the locations in which people are counted to where decoys were placed. The proportion of planted decoys who are uncounted will produce a probabilistic estimate of the proportion uncounted among homeless people on the streets.[33]

16. As an additional tool for quantifying the share of homeless persons who are not found by enumerators, conduct surveys at homeless provider locations in the days following the Count. HUD allows for surveying for up to seven days following the point-in-time night. Based on the experiences of New York and Philadelphia, post-Count surveys can be conducted for up to five days after the point-in-time Count night using a questionnaire designed specifically to determine whether respondents were counted. It might ask, for example, if they spent the night of the Count: on the streets, a bus, walking around, in a park, in a 24-hour store, restaurant or internet café, bank, or other private establishment, or in an abandoned building, stairwell, lobby, yard, squat, car, or similar place.[34]

17. Survey a stratified sample of vehicles that may have homeless occupants to determine whether the vehicles are used as dwellings. The sample can be drawn from blocks with higher numbers of citations that are indicative of individuals residing in vehicles. Examples include citations for overnight parking in areas where it is prohibited, parking when the street is scheduled to be cleaned, and having missing or expired vehicle registration. In addition, the American Community Survey provides census tract level data about number of households living in vans, RVs and other vehicles. The survey should be designed and conducted so as to determine the proportion of different types of vehicles – cars, vans and campers – with different types of appearance – new vs. old, maintained vs. dilapidated – that serve as homeless dwellings.

18. Develop a more accurate statistical model for estimating the annual homeless population using a more detailed and complete breakout of population turnover among individuals who experience homelessness. This model should include descriptions of the attributes of individuals experiencing different durations of homelessness.

19. Use other data sources to assess the accuracy and completeness of the Homeless Count. This includes the number, location and attributes of persons receiving public assistance from the county who are identified as homeless, health care provider reports of services to homeless individuals, and school data about homeless students. For example, public assistance programs obtain and verify much more information about individuals than is possible in the homeless count. Even though those programs, as well as schools, use a definition of homelessness that is broader than HUD's definition, it should be possible to calibrate the overlap of the populations they identify as homeless with HUD's definition and to use this additional information as a benchmark for, and possibly a supplement to, the Homeless Count.

End Notes

[1] In November 2016, Los Angeles City voters approved Proposition HHH, a $1.2-billion bond measure to fund housing for people who are homeless and at risk of becoming homeless, and facilities that provide mental health care, addiction treatment, and other services. In March 2017, Los Angeles County voters approved Measure H, which will raise an estimated $355 annually for 10 years to fund mental health services, job counseling and substance abuse treatment; more outreach to homeless people on the streets; subsidies to rapidly re-house people who became homeless through job losses or other catastrophes; temporary "bridge" housing before people get permanent homes; emergency shelter beds; services for homeless young adults; help for people coming out of jail with no homes; and financial assistance and services for adults on the verge of homelessness.

[2] Each methodology paper from 2009 through 2017 has stated that the demographic surveys were not random. The citations for each paper are as follows:

- Survey Research Unit, Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2009 Greater Los Angeles Homeless Count Methodology* (November 30, 2009), p. 9.
- Survey Research Unit, Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2011 Greater Los Angeles Homeless Count Methodology* (October 2011), p. 15.
- Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2013 Greater Los Angeles Homeless Count Methodology* (December 2013), p. 11.
- Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2015 Greater Los Angeles Homeless Count Methodology* (August 2015), p. 10.
- Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2016 Greater Los Angeles Homeless Count Methodology* (August 2016), p. 9.
- Robin Cox and Benjamin F. Henwood, USC Suzanne Dworak-Peck School of Social Work, *2017 Los Angeles Continuum of Care Homeless Count Methodology Report* (September 2017), pp. 7 to 9. The report states that when interviewers could not identify any homeless adults in a census tract, they swapped it in the field for non-sampled census tracts that contained homeless adults.

[3] The formula used to project the annual homeless population is based on a methodology put forward by Martha R. Burt and Carol Wilkens in a 2005 report titled, *Estimating the Need: Projecting from Point-in-Time to Annual Estimates of the Number of Homeless People in a Community and Using this Information to Plan for Permanent Supportive Housing*. http://www.csh.org/wp-content/uploads/2013/08/Estimating-the-Need.pdf. LAHSA has used the formula since 2005, with several tweaks to replicate and then compile the estimates for sub populations.

The original formula is: **A + ((B x 51) * (1-C)) = annual estimate**
Where:

A = Point-in-time count of currently homeless people – including adults and children

B = number of currently homeless adults and children who 1) became homeless within last 7 days, whether for the first time or not, or 2) were already homeless, but just entered Los Angeles County within the past 7 days

C = proportion (expressed in decimals – i.e., 15% = .15) of currently homeless adults and children in **A** who have had a previous homeless episode within the past 12 months.

The first part of the formula, (B x 51), accounts for those who have been homeless in Los Angeles County for one week or less and assumes that a similar number of additional people will cycle into homelessness during each week of the year. The second part of the formula, (1-C), accounts for

people who will become homeless more than once during the year and therefore would be double-counted if they were not subtracted from the annual population.

The number of people becoming homeless each week, reduced by the number who have multiple homeless episodes, is added to the point-in-time count to produce the annual estimate. This method for projecting the annual population does not account for the annual turn-over of people who are homeless for a month, rather than a week, before exiting homelessness, or other increments of homelessness between one week and one year.

[4] The final weighted count includes adjustments to account for multiple occupants in tents and shelters as well as vehicles.

[5] Creation of a sampling stratum for vehicle hotspots is described in LAHSA's *2017 Los Angeles Continuum of Care Homeless County Methodology Report*, page 5: https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[6] These conversion factors for the number of inhabitants in each type of vehicle are derived from questions asked in the demographic survey about whether the respondents have resided in vehicles, whether it was as a family or as unaccompanied adults, and how many people were in the vehicle. This methodology is explained in LAHSA's *2017 Los Angeles Continuum of Care Homeless County Methodology Report*, pages 18 - 19: https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

Type of Vehicle	*Number Occupied by Individuals*	*Individual Weight*	*Number Occupied by Families*	*Family Weight*	*Average Weight per Vehicle*
Car	639	1.518	51	2.963	1.625
Van	277	1.772	6	3.458	1.808
RV/Camper	350	2.050	9	3.519	2.087
ALL VEHICLES	1,266	1.721	66	3.084	1.788

[7] Data from the demographic survey is presented in unweighted form because the survey is designed to be representative of census tracts throughout the continuum of care. The survey data is weighted when used to describe the population within service planning areas or other subareas of the continuum of care. The methodology papers for the counts refer to weighting survey data to account for nonrespondents, but these weights are not shown. The 2017 methodology paper states that "nonresponse after contact was very low." University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 7. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[8] HMIS do not provide complete demographic coverage for the shelter count because a small number emergency shelter providers do not receive LAHSA funding and do not participate in HMIS. As part of the Shelter Count, these providers are outreached to participate in and provide data for the Shelter Count.

[9] The comparison of year-to-year demographic attributes in Figures 4 - 12 shows the percent distribution of the population in each data source produced by the Count, rather than the absolute number of people enumerated. This makes it easier to compare results from each data source and reduces the visual distraction of variation in the size of different annual counts. The time scale on the bottom axis of each graph shows counts rather than years. Counts were conducted at two-year intervals from 2007 to 2015, and at one-year intervals from 2015 to 2017. The comparisons do not include the Margins of Error based on the number of tracts enumerated that were included in the report for each count.

[10] From 2009 through 2017, the demographic survey had separate questions for race and ethnicity. The ethnicity question asked respondents, "Do you identify yourself as Hispanic or Latino?" In 2017, follow-on questions were added for individuals who responded affirmatively, asking them to choose among the following options: Yes, Mexican, Mexican American, Chicano; Yes, Puerto Rican; Yes, Cuban; or, Yes, another Hispanic, Latino, or Spanish origin. The change introduced in 2017 was associated with only a slight increase in the percent of respondents who identified as Hispanic or Latino.

[11] LAHSA (2017), *2017 Greater Los Angeles Homeless Count - Data Summary, Los Angeles Continuum of Care*. https://www.lahsa.org/documents?id=1355-2017-homeless-count-los-angeles-continuum-of-care-results.pdf

[12] University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 15. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[13] LAHSA's report (August 8, 2017), "*Unsheltered Youth Count Final Sample Weights and Survey Count by Service Planning Area*," shows that a total of 8 non-hotspot census tracts were surveyed.

[14] The Los Angeles Homeless Services Authority (LAHSA) reported that "the total unsheltered youth population for 2017 was estimated to be between 3,569 and 5,333. The mid-point of the range is 4,451. Margin of error is 882 (4,451-3,569=882)."
https://www.lahsa.org/news?article=255-comparing-unsheltered-youth-count-2016-and-2017

LAHSA reported the 2016 unsheltered youth count to be 2,388 with a margin of error of 622. https://www.lahsa.org/documents?id=1556-comparison-unsheltered-youth-count-2016-2017-.pdf. This means that the estimated unsheltered youth count was between 1,766 and 3,010, with a midpoint of 2,388.

The 2017 data was weighted to extrapolate results from census tracts that were surveyed onto tracts that were not surveyed. LAHSA has provided a summary of that methodology: https://www.lahsa.org/documents?id=1557-youth-count-extrapolation-methodology-visual-explanation.pdf.
Based on these estimates, LAHSA reported that the number of unsheltered youth, ages 18 to 24, increased 64 percent from 2016 to 2017. https://www.lahsa.org/documents?id=1355-2017-homeless-count-los-angeles-continuum-of-care-results.pdf

[15] Children 0 to 17 years of age are not shown because they made up only a very small of demographic survey records in most years: 1.0 percent in 2007, 0.5 percent in 2009, 0.3 percent in 2011, 1.4 percent in 2013, 0.2 percent in 2015, 1.7 percent in 2016, and 2.6 percent in 2017. The under-representation of children is a major deficiency in the demographic survey.

[16] The reported rate of chronic homelessness in 2013 is not shown because data from the 2013 demographic survey does not provide this information.

[17] Flags for chronic homelessness were coded by the Economic Roundtable for each demographic survey and HMIS record for all years based on the HUD's most recent definition of chronic homelessness, which was released in 2014 and took effect in 2016. This was done to provide data continuity in comparing the rates of chronic homelessness reported in each demographic survey. The new definition set the standard is more stringent than the previous standard. The previous definition was an individual with a disabling condition who either experienced homelessness for longer than a year, during which time the individual lived in a shelter, safe haven, or a place not meant for human habitation, or experienced homelessness four or more times in the last three years. The new definition specified that the four separate occasions in the last three years must have a combined duration of at least twelve months with a minimum seven day break between each homeless episode. HUD (2015), *Defining "Chronically Homeless" Final Rule*, https://www.hudexchange.info/course-content/defining-chronically-homeless-final-rule-webinar/Defining-Chronically-Homeless-Final-Rule-Webinar-Slides-2015-01-05.pdf

[18] In 2009, the rate of homelessness among General Relief recipients was estimated to be 60 percent. Los Angeles County Public Social Services Commission, *General Relief and the Homeless Population of Los Angeles County* (February 24, 2009). The rate of homelessness within the General Relief caseload is likely to be higher now given increases in housing costs and the unchanged maximum amount of cash aid provided by the program, $221 a month. The estimate that two-thirds of the current General Relief caseload is homeless is probably conservative.

[19] General Relief caseload data for January 2005 to 2015 is from Los Angeles County Department of Public Social Services, *Monthly Statistical Reports*: http://dpss.lacounty.gov/wps/portal/dpss/main/about-us/information-and-statistical-services/!ut/p/b0/04_Sj9CPykssy0xPLMnMz0vMAfGjzOLdDAwM3P2dgo3cfYBMR_8AJ2-vsEADk2AD_YJsR0UAq1Q9ig!!/. Data for 2016 and 2017 is from California Department of Social Services, *Table CA237CW16-17*: http://www.cdss.ca.gov/inforesources/Research-and-Data/Disability-Adult-Programs-Data-Tables/GR-237.

[20] Los Angeles County Department of Public Social Services, *General Relief Program Fact Sheet* (2014). http://file.lacounty.gov/SDSInter/dpss/237578_GENERALRELIEFProgramFactSheet(12-14).pdf

[21] The ratio of one homeless family member for every 10 unaccompanied homeless adults is derived from homeless demographic survey and HMIS data. This ratio varies widely in different datasets: 1:11.8 in 2017 HMIS, 1:8.8 in 2016 HMIS, 1:4.3 in 2017 demographic survey, and 1:12.6 in 2007 demographic survey.

[22] Data for homeless students was obtained through a special data download from the California Department of Education (CDE). *California Longitudinal Pupil Achievement Data System (CALPADS), Homeless K-12 Students per School, 2015-16 School Year.* Obtained fall 2017.

[23] Los Angeles County Office of Education, *Homeless Education Update, 2015-2016 School Year: LA County Homeless Student Count by Grade* (2016).

[24] University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 65. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[25] University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 21. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[26] University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 63. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[27] University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 67. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[28] University of Southern California (September 2017). *Los Angeles Continuum of Care Homeless Count Methodology Report*, page 21. https://www.lahsa.org/documents?id=1645-2017-los-angeles-continuum-of-care-homeless-count-methodology-report.pdf.

[29] Each methodology paper from 2013-2017 has stated that the only potential source of error in the street count is from uncounted census tracts. The citations for each paper are as follows:

- Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2013 Greater Los Angeles Homeless Count Methodology* (December 2013), p. A-3: Table titled "Number of CTs Needed in the Geographic Domain to Meet RSE Requirement" shows that if all tracts are counted there is 0 relative standard error.
- Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2015 Greater Los Angeles Homeless Count Methodology* (August 2015), p. A-2: Table titled "Number of CTs Needed in the Geographic Domain to Meet RSE Requirement" shows that if all tracts are counted there is 0 relative standard error.
- Department of Biostatistics, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, *2016 Greater Los Angeles Homeless Count Methodology* (August 2016). Computation of the relative standard error based on the share of census tracts counted can be seen in pages C-2 to C-4 and E-2 to E-4.
- Robin Cox and Benjamin F. Henwood, USC Suzanne Dworak-Peck School of Social Work, *2017 Los Angeles Continuum of Care Homeless Count Methodology Report* (September 2017), p. 21.

[30] LAHSA's "*Pre-Count Training Video*" for the 2017 Homeless Count is accessible at: https://www.youtube.com/watch?v=NgCikIuNKIA, and the "*Volunteer Training Count Video*" is accessible at: https://www.youtube.com/watch?v=C8EtAJs4XL8 (accessed November 17, 2017).

[31] Information about integration of the count and demographic survey was provided by Dan Treglia, who helped design and implement research methodology for New York City's homeless count.

[32] The Pew Charitable Trusts (2012), *Social Science Research Solutions (SSRS) Omnibus Survey*, http://www.pewtrusts.org/~/media/assets/2012/07/19/pew_payday_lending_methodology.pdf

[33] Kim Hopper, Marybeth Shinn, Eugene Laska, Morris Meisner, and Joseph Wanderling, "Estimating Numbers of Unsheltered Homeless People Through Plant-Capture and Postcount Survey Methods," American Journal of Public Health, Am J Public Health (2008 August) 98(8): 1438–1442, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2446453/.

[34] For information about the methodology used in New York City for the post-count survey, see Kim Hopper and Marybeth Shinn, *op cit.*