Results of the 2021 Volunteer Greater Hollywood Homeless Count

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February 17, 2021

Abstract

1 Introduction

The Los Angeles Homelessness Services Authority (LAHSA) has conducted an annual Point In Time PIT) census of the unhoused population of Los Angeles County every year since 20**XX**. These data are critical to essentially all homelessness-related activities in the County and its municipalities. They inform programmatic funding levels, educate residents, undergird local and state legislative efforts, and shape the day-to-day practices of thousands of professional and volunteer service providers. As the official assessment of the scope of one of the most pressing humanitarian issues of our time, the LAHSA Count is therefore invaluable.

Disruptions from COVID-19 have only further emphasized the need for such data. As incomes fluctuated, many of Los Angeles' already sizable number of housing-unstable residents may have been pushed off couches or out of apartments and onto the street. As such, while the epidemiological considerations of conducting an all-volunteer, countywide census are real, the damage from failing to do so is also substantial.

Given the non-uniformity in volunteerism and resources across LAHSA's large area of operations, the challenges of COVID were ultimately deemed sufficient to cancel the formal 2021 PIT census of unsheltered Angelenos. However, not all communities agreed with this decision, and many had the resources to execute a robust—if unsponsored—survey on their own. Hollywood is one such community.

Greater Hollywood is an epicenter of LA's homelessness crisis. According to the official 2020 Count, the Hollywood and East Hollywood Continua of Care (CoC) were home to 2203 unhoused residents, 1714 of whom (78%) were living unsheltered on the street. This figure corresponds to roughly 5% of LA's homeless population concentrated in an area with only 2.5% (**CITE**) of its total population. In some regions within those CoCs, fully 1-in-30 residents are unhoused compared to 1-in-100 citywide.

While the above statistics are tragic, Hollywood is also marked by its community of professional and volunteer service providers, solutions-minded residents and businesspeople, and attuned political leaders. Increasingly formal coalitions of the above stakeholders are spreading across the district, dedicated to humanely ending the homelessness crisis. All of them rely on the annual PIT count for educational, financial, and programmatic purposes. When communicating with the public, the starting point for many conversations is simply stating the size of the challenge. When communicating with funders, it is similarly critical to convey how many people require services. When designing legislation—especially given the shock of COVID-19 and in the face of looming court proceedings—knowing how many unhoused Angelenos live where is foundational. For these reasons, organizations and individuals in Hollywood decided to with a 2021 Homeless countirrespective of other governmental decisions.

This document describes the methodology and findings of that count, conducted on the night of Thursday, February 25. Below, Section 2 describes the volunteer data acquisition, analysis, and training protocols. Section 3 present estimates of the unsheltered population in the Hollywood, East Hollywood, and Greater Hollywood CoCs. Section 4 contextualizes those findings in

terms of previous LAHSA results and describes factors that would modulate them upwards or downwards. Section 5 summarizes. Additional information can be found in the Appendix, including a table of tract-level results in each of the survey's 39 US Census tracts.

2 Methodology

Our count adhered as closely as possible to the official LHASA 2020 PIT data collection and analysis protocols. The event took place on 25 February 2021 beginning at 7.00 PM. This date and time correspond to roughly one month after and four hours earlier than the official event would have occurred. Ancillary data in other census tracts suggests that the date offset is unlikely to substantially erode comparability between this and past datasets, though **what can we say about time of day effects**.

The count was based out of *The Center at Blessed Sacrament* ("The Center"), a major service provider in Hollywood. All volunteer teams launched from and returned to this location as they would in previous years to a LHASA community counting hub. The major difference was that training was performed remotely as a COVID precaution.

2.1 Data Acquisition

The count covered the 39 US Census tracts constituting the LAHSA-defined Hollywood and East Hollywood Continua of Care (CoC). As such, our results are integrable at the tract, CoC, and Greater Hollywood community levels. The Appendix presents tract-level tallies and raw individual/dwelling counts while the main text discusses CoC-level results. Greater Hollywood results are available but not directly comparable to any official service geography and therefore serve a descriptive purpose only.

All tracts were vetted by professionals from *The Center* prior to assignment. Tracts deemed especially challenging—e.g., due to their proximity to freeway on-ramps and peripheries—were reserved for professional counting teams. Vetting produced 8 such tracts, which were surveyed by outreach personnel from *The Center* and *Covenant Hous* during daylight hours on 25 February (circa **XXX PM**). The remaining 31 tracts were divided among the volunteer car-based teams and surveyed beginning at 7.00 PM. Table **??** records which kind of team surveyed each tract.

We recruited XXX teams of at least two people YYY of which participated in the count itself. We limited participation to existing"pods" of two to three people—typically families—to ensure that the COVID status of each participant was controlled and the possibility of transmission minimized. Singlet volunteers were also admitted but remained on-site to assist with material distribution, collection, and data quality control processes. All participants wore proper personal protective equipment and maintained social distancing when appropriate.

Each car-based volunteer team comprised at least a Driver and a Counter and was assigned two tracts to count. Three-person teams also included a Navigator per 2020 LAHSA PIT protocols. In such teams, the Navigator held the map and directed the Driver while the Counter tallied unhoused individuals/dwellings and the Driver drove. In two-person teams, the Counter doubled as the Navigator. Training emphasized driving techniques aimed at reducing the Counters' cognitive loads and so minimize counting errors. These included driving slowly using hazard lights and covering interior streets in a serpentine pattern before circling the tract border. Teams were instructed to count both sides of interior streets but only interior sides of border streets.

Upon arriving at *The Center*, organizers gave each team a clipboard with:

1. tract maps;
2. tally sheets;
3. a 1-page primer summarizing their training with a contact number for issues when deployed.

Examples of each of the above documents are included in the Appendix.

The tally sheets were the most important data acquisition tool. They contained separate columns for each of the nine categories of unhoused individuals or dwellings recognized in the 2020 LAHSA PIT count: adults (ages $\geq$25), transition age youths (18–24), unaccompanied minors, families (at least one adult with at least one minor), cars, vans, RVs, tents, and makeshift structures (CVRTM).

All teams were deployed to their tracts by **XXX PM** and returned by **YYY PM**.

Upon returning, organizers approached each team with a tablet or laptop computer. Counters then verbally read-off their results for each category to the organizer, who entered the results into a google form/spreadsheet.

Volunteer emails were also retained in case follow-up was necessry. The organizer read back the results for confirmation before recovering all materials—including hand-written tallies—from the volunteers.

Once all materials were collected, the organizers convened to cross-check the electronic records with the physical tally sheets and identify any uncounted areas. **Follow-up teams were then dispatched to count the latter. This was necessary in only XXX instances.**

Given that the number of volunteer teams exceeded the number of tract assignments, a subset of randomly selected tracts were chosen to be counted by multiple teams. Such duplicate measurements are useful for understanding random counting errors and are discussed in Sections 2.3 and 4.

2.1.1 Volunteer Training

Teams underwent mandatory, approximately 30 minute Zoom-based training sessions before arriving for the count. Each participant was also required to watch the official 2020 LAHSA count training video and sign participation waivers.

The training covered the motivation for the count, an overview of the survey geography (the CoCs), the duties of the various team roles, and descriptions of the classes of unhoused individuals/dwellings, including photographic examples of the latter. Volunteers were instructed to count dwellings and individuals separately and not to try to estimate how many people might live in or be associated with a specific dwelling. This ensured that final results could be analyzed as a function of CVRTM weights, which may change with future information (see Section 2.2).

The only "priming" volunteers received pertained to the min/max estimate of tract-level individual+dwelling counts ("0–120") and the likelihood of encountering unaccompanied minors or families ("very unlikely"). Both statements were informed by the official 2020 LAHSA PIT results for the Greater Hollywood community. No other prior count-based information was established to minimize counter biases.

A recording of a volunteer training session is available at **WEBSITE**.

2.2 Data Analysis

The core component of the raw data was a 9 column by $N_{\rm team}$ row spreadsheet containing the tract-level tallies for each unhoused individual/dwelling class. The scheme of the analysis is simple:

1. parse and associate tracts with CoCs;
2. identify tracts counted by multiple teams;
3. assess tract-level counting errors;
4. upweight the CVRTM values by the 2020 LAHSA SPA4 CVRTM weights.

The resultant 9×39 array can then be split and summed to provide CoC-level total counts, or breakdowns of the various classes of unhoused individuals dwellings. *These results will correspond to the most likely values for the respective quantities in any geography.* However, three uncertainties—one small and two large—complicate the interpretation of those sums. We discuss these in Section 4, but account for them as best we can using Monte Carlo techniques to construct the full underlying probability distribution functions (PDFs) for each class in each tract.

All results discussed below derive from 10,000 Monte Carlo realizations of Item (5), above.

2.2.1 Monte Carlo Estimations of Unhoused Probability Densities

The point-in-time (PIT) data obtained by the Counters represent a draw from the underlying probability distribution describing how many people are actually experiencing homelessness in a given tract. We have only the PIT counts, but seek the actual number. We can estimate that as long as we have a model for the intrinsic uncertainties in the PIT counts and demographic CVRTM weights. We have—or can model—both of these uncertainties, and can therefore reconstruct the full probability distribution functions (PDFs) using Monte Carlo sampling.

Here, Monte Carlo sampling is simply the process of randomly generating 10,000 alternate versions of the PIT estimates that reflect what might happen if the count was conducted on a different day or by a different counter. If you know how a quantity is expected to change from one measurement to another, independien

In all cases, baseline Poisson counting uncertainties exist in the raw counts. That is, if n adults were Counted by one team in a given tract, the best guess is that the true number of unhoused adults in that tract falls between $n \pm \sqrt{n}$ about $2/3$ of the time. We therefore translate each raw count into 10,000 simulated counts where each entry refleby a Gaussian random number with standard

deviation $\sqrt{n}$ 10,000 to all raw counts to simulate what we could expect to

In the case of the CVRTM elements, these samplings incorporated both Poisson counting errors in the raw counts (random errors) and uncertainties in the CVRTM weights (systematic errors). In the case of the individual categories, only the Poison counting errors were propagated.

Explicitly, the *i*th estimate for the number of people in the *j*-th class of unsheltered person in any tract is:

$$N_{i,j} = \left[n_j + \mathcal{N}(0, \sqrt{n_j})\right] \times \mathcal{N}(w_j, \sigma_j) \qquad (1)$$

where i runs form 1 to 10,1000, n is the raw visual inspection result, $N(\mu, \Sigma)$ is a Gaussian random number with mean μ and standard deviation Σ, w is the 2020 LAHSA CVRTM weight for the appropriate class, and σ is related to the standard error on that weight. For the individual classes—including families—$(w, \sigma) \equiv (1, 0)$; i.e., weights were simply set to unity for all 10,000 trials.

Equation 1 entails an assumption that the CVRTM weights, w, are normally distributed about their quoted values. If we had access to their full probability distribution of the CVRTM weights, we would not need to make this assumption. But, given that we did not have access to those distributions, σ was calculated by assuming the quoted CVRTM weight was the maximum likelihood value, with a 95%

The outcome is the equivalent of 10,000 $N_{\rm class} \times N_{\rm tract}$ arrays, each containing a different point estimate for the size of the *i*th classes' population in the *j*th tract. Summing across trials thus yields probability distributions that N people of any class are dwelling in any tract.

BASELINE BACKGROUND UNCERTAINTIES

2.3 Duplicate Measurements

3 Results

4 Discussion

4.0.1 Null Entries

The minor issue is null entries. As stated in Section 2.1.1, some tracts may be relatively free of unhoused people. In these instances, many raw data will read "0." This is the best estimate of the relevant count in that geography at the time of inspection, but, due to Poisson noise, it is consistent with a range of small but non-zero values for the *true* count one might expect to find at any given time in that area. As such, null entries must be allowed to

The spreadsheet of raw count data was downloaded from the internet before passing it through a number of programs (written in IDL) to:

5 Summary

A Example Documents