Strategies to Improve Point-In-Time (PIT) Counts of Unsheltered Homelessness

An Evaluation of Hennepin County's Current Approach and Summary of Lessons Learned from Other Communities

Humphrey School Capstone Report

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Executive Summary

The Hennepin County Office of Housing Stability requested assistance from students at the Humphrey School of Public Affairs to conduct a study about how best to reform and improve their point-in-time (PIT) count of people experiencing homelessness. The Hennepin County CoC's PIT counts of both sheltered and unsheltered people experiencing homelessness contribute to the determination of federal funding received to support the County's population experiencing homelessness. Current counting methods are resource-intensive—particularly for the unsheltered count—and likely yield an underestimate of people experiencing homelessness. These concerns have led to skepticism about the practicality of the PIT count, as well as confusion around funding allocations.

The team conducted research over a four-month period, beginning late January 2021. The study relied on frequent meetings with Hennepin County, a literature review to learn about sampling methodologies and how other communities conduct their counts, and interviews with stakeholders and experts to better understand the PIT count process. The literature review revealed several innovative methods for sampling and estimating and the interviews highlighted concerns expressed by those directly involved with the process.

This report provides background on the PIT count process, a summary of the methodological approaches from the literature review, findings from the interviews, and recommendations to strengthen future counts. Lastly, we summarize provide three key recommendations for the Hennepin County CoC to prioritize as they prepare for the next PIT count amidst the COVID-19 pandemic:

1. Create a **strategically designed sampling approach** to use in future iterations of the unsheltered PIT count and **build quality checks into a sampling strategy** to help inform ongoing process improvement.

2. Increase **connection and collaboration** with the network of organizations, agencies, and other stakeholders involved in the PIT count.

3. Use **targeted approaches to increase the number of volunteers**, particularly those who are racially diverse and/or those with lived experiences of homelessness.

Introduction

Background on the PIT count

According to the National Alliance to End Homelessness, in 2019, homelessness had grown nationally for three consecutive years. The impact of COVID-19 threatens to continue, or even heighten, this rate of increase.[i] With homelessness existing in every region of our country, communities are struggling to end this upward trend. Continuums of Care (CoCs) are local or regional planning entities that coordinate housing services and other resources for populations experiencing homelessness. One key source of information providing insight to the ongoing issue of homelessness are point-in-time (PIT) counts. PIT counts provide unduplicated counts of people experiencing homelessness on a single night of the year, including populations who are *sheltered* (i.e., staying in an emergency shelter, transitional housing, Safe Havens, rapid re-housing, permanent supportive housing) and *unsheltered* (i.e., living on the streets or somewhere not considered suitable for habitation). The US Department of Housing and Urban Development (HUD) requires that CoCs conduct PIT counts of sheltered homeless once per year and unsheltered homelessness every other year.

Because the PIT count data that CoCs submit to HUD are used to allocate federal funding for states and counties to address homelessness, it is crucial for the PIT count to be as accurate as possible. However, many in the field have criticized the PIT count as an unreliable and inaccurate source of data. Several studies have shown that CoCs' PIT counts of unsheltered homelessness in particular are likely a significant underestimate of the actual prevalence of unsheltered homelessness.[ii,iii,iv] The unsheltered PIT count is also extremely resource-intensive, as each CoC has to develop and coordinate their own process—often relying on volunteer support—to canvass the city on the night of the count. This logistical complexity also creates barriers to obtaining a more accurate PIT count.

Project Overview

In 2020, officials at the Hennepin County Office of Housing Stability partnered with our team at the Humphrey School of Public Affairs to evaluate the effectiveness of the Hennepin County CoC's current approach to conducting the PIT count as well as to explore alternative methods that might yield a more accurate count. As the CoC lead for the county, the department is uniquely positioned to design a PIT count process that is tailored to the local context and reflective of the community's unique challenges and strengths.

Research Questions

The central questions guiding this research are as follows:

- How does Hennepin County currently count sheltered and unsheltered homeless?
- What subset of the sheltered and unsheltered homeless populations is Hennepin County's current PIT counting methods capturing?
  - Who is not being counted?
  - What are the barriers to getting a more accurate count?
- How do other states, communities, or CoCs estimate sheltered and unsheltered homelessness?
  - What other sources of information can be used to estimate sheltered and unsheltered homelessness?
- How can Hennepin County's CoC improve their estimates of both sheltered and unsheltered homelessness?

Methods

To address these research questions, our team collected data from several sources, including a review of the relevant academic literature and PIT count documentation, and interviews with experts and practitioners.

Literature & Document Review

To understand how the Hennepin County CoC and others across the country implement the PIT count, our team reviewed relevant documentation regarding PIT count processes (e.g., training and data collection procedures) as well as analytic approaches (e.g., sampling and estimation). Because homelessness is a well-researched topic, we were also able to gather insights through a review of the academic literature. Our team reviewed more than 20 journal articles relating to topics such as the accuracy of the PIT count, secondary data sources to model and estimate homelessness, and innovative practices from other CoCs.

Interviews

To understand how various agencies interact with the PIT count, our team reached out to staff at 14 organizations. We were interested in a variety of perspectives, so contacted organizations whose engagement with the Hennepin County CoC PIT count could be considered as *direct* (e.g., coordinating the count, volunteering, managing data), *supportive* (e.g., administering services based on the impact of results), or *indirect (e.g.,* organizations who were not connected with Hennepin County, but provided insights and perspectives from academic research or other CoCs across the country.) These organizations included government agencies (state and local), academic institutions, research organizations, and nonprofit street outreach organizations - both within and outside of Minnesota. Ten organizations agreed to answer questions, providing a nearly 71 percent response rate. A total of 18 individuals contributed to the interviews. Four organizations did not return our request for an interview. The perspectives lost from these four organizations reflected the manner in which Minneapolis schools collect homeless information about children/families and how this data is communicated with Hennepin County, how other in-state CoCs perform their PIT count, and the impact the PIT count has on homeless shelters' staff and clients. (A list of agencies is provided in Appendix A.)

During each interview, we tailored our questions to accommodate the unique experiences and expertise of each respondent. However, our questions generally included the following:

- What is your role and what responsibilities do you have before, during, and after the PIT count?
- What barriers exist to getting an accurate count?
- What, if any, populations are being missed by the PIT count? How can the CoC adjust their process to better capture these populations?
- What are the strengths/challenges of the current way in which the Hennepin County CoC PIT count is implemented?
- How might this process be designed differently if starting from scratch?

Structure of this Report

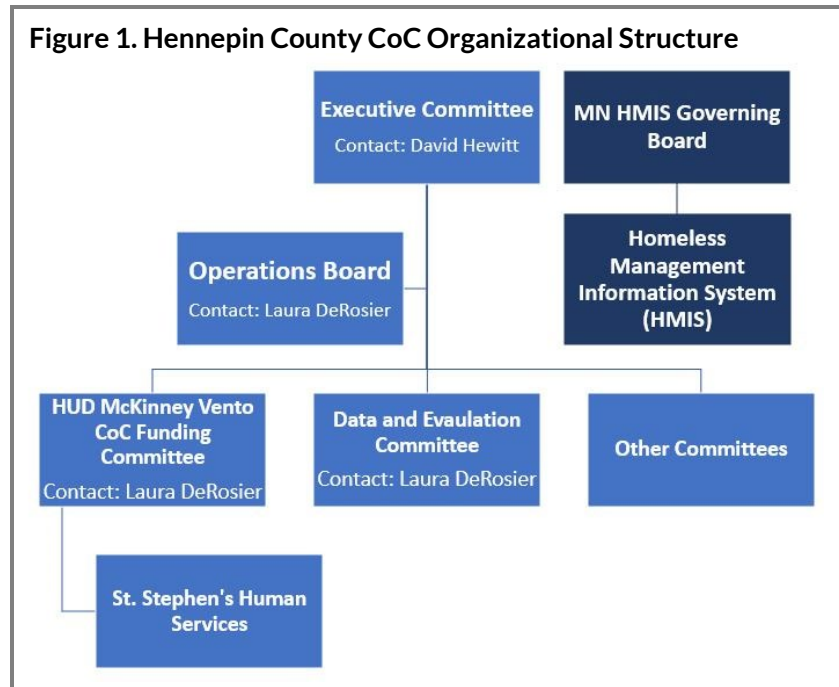The purpose of this report is to describe the findings from our research on PIT count approaches in Hennepin County and other communities across the country. In the *Background on the Hennepin County Continuum of Care* section, we begin by describing Hennepin County's current approach to the PIT count, as these details about the current process help to contextualize the remainder of the report.

Key findings from the study are described in the *Findings* section, and are further broken down by findings relating to methodological approaches to the PIT count and process-related considerations. In the *Recommendations* section, we synthesize the most salient opportunities and barriers to improve the accuracy of Hennepin County's PIT count and also offer concrete suggestions to strengthen future iterations of the count.

Background on the Hennepin County Continuum of Care

Organizational Structure

Hennepin County's Continuum of Care is a partnership among elected officials, housing and service providers, advocates, and people who have experienced homelessness. It is governed by an executive committee, which oversees the homeless response system in the county and assigns work to the operations board and other working committees (see Figure 1). The HUD McKinney Vento CoC Funding Committee is responsible for monitoring and evaluating the performance of all projects funded by the CoC. It is our understanding that this funding committee oversees the partnership with *St. Stephen's Human Services*, the organization contracted to conduct Hennepin County's sheltered and unsheltered PIT count.

Figure 1. Hennepin County CoC Organizational Structure

The *Institute for Community Alliances (ICA)* is the lead agency for the State of Minnesota's Homelessness Management Information System (HMIS). As the HMIS lead, ICA manages client-level data on the provision of services to people experiencing homelessness across the state. After the PIT count, each CoC submits all data to ICA, where staff then conduct data cleaning and validation to ensure data quality, deduplication, and adherence to HUD guidelines. ICA recently developed the PIT LIVE, a system that allows surveyors to submit data electronically on the night of the count, thus eliminating the need for manual data entry from paper surveys.

The *Minnesota HMIS Governing Board* represents all ten of Minnesota's CoC regions. They share ownership of the HMIS system, including the PIT count. Through an agreement reached with a statewide Board of regional CoC representatives and other stakeholders, ICA has memoranda of understanding (MOUs) with each of the state's ten CoC regions (including the Hennepin County CoC). These MOUs dictate the extent to which ICA can tailor their data management services for each individual CoC.

PIT Count Process

HUD requires all CoCs to conduct a PIT count on a single night during the last ten days in January. To capture seasonal differences, the Hennepin County CoC conducts its own midyear PIT count on a single night during July. The *sheltered count* is conducted using shared HMIS data systems maintained by service providers. The *unsheltered count* relies on surveyors to canvass the geographic area to identify and survey individuals experiencing unsheltered homelessness.[v]

Because the unsheltered PIT count in particular requires a large team of staff who can canvass the CoC's geography during a single day, the Hennepin County CoC enlists many volunteers to help support the PIT count. To recruit volunteers, St. Stephen's relies on their staff, former employees, other street outreach staff, people within their networks, a few trauma-informed volunteers, and an occasional politician. Per our discussion with St. Stephen's, they indicated sending out 13 teams of 3 to 6 volunteers (per team) each year. In 2020, St. Stephen's recruited upwards of 65 volunteers to help with the overnight count. During the day, they enlisted around 45 volunteers to survey service sites and two camps. For both the day and overnight counts in 2020, St. Stephen's recruited around 100 volunteers in total.

Staff from St. Stephen's and ICA have collaboratively developed detailed manuals and training videos to support their staff, volunteers, and service providers in collecting and submitting PIT count data. Staff from ICA generally use a "train the trainer" type model, taking the lead on the development of training materials and instructional manuals, which staff from St. Stephen's then use to train staff and volunteer surveyors. The exact nature of training varies somewhat from year to year as ICA and St. Stephen's collaboratively revise the process to better support surveyors. However, prior to collecting any data in the field, volunteers are generally required to review instructional materials in addition to watching short training videos about how to conduct the count. In recent years, volunteers have met with St. Stephen's staff from a 1-hour, in-person training before the night of the count.

The areas to canvass are typically predetermined prior to the count. The transit system was the largest overnight shelter before all-night service was discontinued and the Metro Transit Police established the Homeless Action Team, a group of MTPD officers who offer help or services to those experiencing homelessness. PIT count coordinators relied on information from bus drivers/train conductors to understand how and where individuals experiencing homelessness made use of the transit system and stations. From these discussions, St. Stephen's was able to use social mapping tools to identify areas to canvass. This proved especially helpful for the Park & Rides in suburban areas. With tighter enforcements on the transit systems, PIT count coordinators select areas to canvass based on historical knowledge about where people locate, locations identified from past counts, and current knowledge about active locations. For example, a suburban rest stop is a known location where individuals experiencing homelessness gather, but en route, stops will be made at parking lots of suburban big box stores or strip malls, as well as checking sheltered lobbies of banks' ATMs. Downtown areas are based on active knowledge, especially for parking garages and doorways.

Surveyors canvass these selected areas during the night, starting around 10 p.m. The following day, teams will canvass encampments, known locations in which the surveyors did not feel safe to approach at night, and approximately 15 to 18 sites where individuals gather to receive services: meal sites, drop-in centers, and service agencies (e.g., Mary Jo's, Loaves & Fishes, St. Stephen's drop-in site.) This effort identifies and surveys additional unsheltered individuals who may have been missed during the overnight count.

Surveyors from St. Stephen's conduct the count using one of three forms:

- The *long version survey* is administered by interviewing individuals experiencing homelessness. The survey includes detailed questions about individuals' demographic identities, housing history, health, employment, and education.
- The *short version survey* is also administered via interviews and covers similar topics as the long version, but in fewer, less detailed questions.
- The *observational form* differs from the long and short versions of the survey in that it does not require interviews. Rather, the observational form is meant to be used only in situations where it is not feasible and/or safe to interview an individual experiencing homelessness - for example, if they are asleep or staying in a poorly lit area. The form includes only basic questions about demographic identities, which are completed based on the surveyors' perceptions.

Findings

Innovative PIT Count Methods

The resource-intensive nature of the unsheltered PIT count combined with the high degree of transience among people experiencing homelessness pose unique methodological challenges for CoCs in designing and executing their PIT counts. To identify strategies that the Hennepin County CoC could use to improve the efficiency and accuracy of their unsheltered PIT count, our team reviewed the extant literature for innovative PIT count methodologies being used by other CoCs across the county. This section provides a brief overview of several promising methodologies, including those that include sampling, estimation, and data quality checks, as well as a few innovative uses of technology to automate PIT count processes. Our description of each approach includes a brief discussion of its key strengths and challenges, and further implications for the Hennepin County CoC are further discussed in the Recommendations section of this report.

Sampling, Estimation, & Quality Checks

Random sampling in regions based on expected density of homelessness

Given the resource-intensive nature of the unsheltered PIT count in particular, many CoCs conduct a comprehensive count only in a random sample of regions. This approach allows CoCs to strategically target their available resources to conduct a more thorough count in select regions, which can then be used to more accurately estimate the overall homeless population. In line with HUD's sampling guidance, many CoCs define and sample regions based on their expected density of unsheltered homelessness. Under this approach, regions where a high number of people experiencing unsheltered homelessness are expected to congregate at night would be designated as "high-density," for example, while other regions might be designated as "low-density." CoCs can make these density determinations based on a number of factors. In Connecticut and New York City, for example, regions are categorized as high- or low- density based on both PIT count data from previous years as well as the institutional knowledge of CoC staff, partners, and community stakeholders.[vi,vii] In Connecticut, where a single CoC manages the statewide PIT count, they defined regions as the state's 829 census tracts. The CoC conducted a full count in the 183 "high density" tracts as well as a random sample of 143 of the remaining 646 low density tracts (weighting factor 4.517).[viii] HUD does not specify an ideal size for each region, nor a predetermined list of geographic indicators that should be used to determine regional boundaries. Rather, HUD recommends that CoCs define regions according to local context, prioritizing that each region is uniform in terms of its expected density of homelessness, even if that means that each region within the CoC is a different size. Further details about HUD's recommended sampling approach are provided in Appendix B.

In addition to sampling regions based on the expected density of homelessness, some CoCs and researchers have used other sources of secondary data to develop a more nuanced sampling strategy. Researchers from Los Angeles, for example, used data from the U.S. Census and other administrative sources to identify a sample for a household phone survey to identify hidden homelessness in residential areas. In this study, researchers selected a disproportionately stratified dual-frame random sample of households based on research-based predictors of homelessness, such as median household income, availability of single-family homes and vacancies, and racial/ethnic composition.[ix] Others in the field have leveraged housing market data,[x] consumer reference data,[xi] and even data on local "311" calls[xii] to further understand and predict regional patterns of homelessness. During our interviews with experts, many respondents mentioned the benefits of using sampling and/or secondary data to improve CoC's estimates of homelessness. Further details regarding potential sources of secondary data to model and estimate homelessness are provided in Appendix B (Figure B1), along with more details regarding how these data might be leveraged to inform sampling.

Household phone surveys

Some communities have attempted to address the issue of high transience and low visibility among unsheltered homeless populations, often referred to as *hidden homeless* (see Figure 2),[1] through phone surveys, asking a sample of the general population to report any individuals living unsheltered on their private properties. However, a significant limitation of these approaches is that they often yield imprecise estimates with large standard errors, largely due to small sample sizes.[xiii] To improve estimates, researchers in Los Angeles conducted phone surveys in a stratified sample of households,

but instead of asking respondents to report any unsheltered individuals living only on their private property, they also asked about unsheltered individuals living on their neighborhood block. Sometimes referred to in the literature as *multiplicity or network sampling,*[xiv] this sampling methodology allowed researchers to estimate the unduplicated number of hidden homeless, thus improving the precision of estimates. Counts were used to estimate the

> **Figure 2. HUD's Working Definition of Hidden Homeless**
>
> *Precariously housed* – A person who is staying with the household because he or she has no other regular or adequate place to stay due to lack of money or other means of support and who is sleeping inside the house will be allowed to stay for 8-90 days;
>
> *At-risk of literal homelessness* – A person who is staying with household because he or she has no other regular or adequate place to stay due to a lack of money or other means of support and who is sleeping inside the house, and will have to leave in 7 days or less.

number of unsheltered homeless who were hidden on the night of the PIT count. Using this multiplicity approach, they were able to detect an additional 7,822 cases of hidden homeless not captured in the PIT count, which focused on visible homeless populations.[xv]

While household phone surveys can be used to estimate hidden homeless populations, it relies on self-reported or observational data — meaning that the accuracy of the estimate is highly dependent on the information reported by respondents. Additionally, some of the sampling methods are respondent-driven and time-intensive. Unlike respondent-driven sampling methods, multiplicity-based approaches do not require eligible respondents to complete an interview. Instead, respondents only reported the

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[1] These working definitions were agreed upon by experts from the following agencies: HUD, Urban Institute, Abt Associates, Abt SRBI, the National Alliance to End Homelessness, and Marketing Systems Group.

number of hidden homeless within their area. In Los Angeles, this was beneficial for reducing the sampling error because their staff were able to contact more eligible respondents, which increased their sample size. While multiplicity-based approaches produce more precise estimates, less is known about the hidden populations experiencing homelessness. For example, staff were not able to capture any demographic information.[xvi]

Plant-capture or decoy methods

Estimating the number of people experiencing homelessness who are missed by current PIT count methods may provide valuable information that communities can use to generate more accurate estimates of regional homelessness. Some communities do this through the use of decoys or "plants" who are strategically placed throughout a region on the night of the count. Trained staff serving as decoys are instructed to dress and act as if they are homeless, and then report to the CoC whether they were surveyed on the night of the count. The CoC can then use the proportion of decoys not surveyed in various regions to estimate the number of people experiencing unsheltered homelessness who were missed on the night of the PIT count. New York City used this method during their 2006 PIT count. Of the 127 plants placed across 41 sites, just 59 percent were counted. At least one plant was missed in 29 percent of sites - either because the site was not canvassed or because the surveyor simply did not count the plant. Based on these findings, the city adjusted their PIT count total by 22 percent.[xvii] The researchers noted that this method was relatively efficient to implement, and further noted that the quality-control messaging of the studies seemed to improve volunteers' motivation, at least anecdotally. However, the researchers also highlighted some limitations - namely, that surveyors were quick to ignore or "discount" plants who did not meet stereotypical definitions of what homelessness looks like. Although they did not collect quantifiable data about the frequency with which plants were discounted based on appearance, the authors note that these findings have important implications for the PIT count more broadly, and particularly for how surveyors are trained to identify and approach individuals experiencing homelessness.

Given the efficiency of plant-capture methods combined with their ability to improve estimates of homelessness, many researchers have applied them in varying contexts. For example, using a novel Bayesian technique, McCandless and colleagues used plant-capture data collected in Toronto to calculate 95 percent confidence interval estimates for the citywide population of people experiencing homelessness.[xviii,xix] Plant-capture techniques are included in HUD's list of recommended methodologies.

Post-count interviews of service users

To better understand if individuals experiencing unsheltered homelessness are being missed during the night of the count, a CoC in New York interviewed service users two days following the count. The CoC created a stratified random sample based on neighborhoods and frequency of service. They interviewed individuals at soup kitchens, mobile food programs, drop-in centers, and all of the city's most popular street outreach programs. Interviewers asked service users where they spent the night during the count. Depending on their response, individuals were categorized as not homeless, sheltered, or homeless and unsheltered. The interviewer then asked additional questions, such as where they stayed on the night of the PIT count, to determine if it was possible that the individual could have been seen by a PIT counter during the night of the count. For example, individuals who reported being on the train during the night of the count were asked if they rode to the final stop, where PIT count surveyors were located. The interview allowed the CoC to create probability estimates of individuals being visible and counted. Using location descriptions collected during interviews, respondents classified as homeless and unsheltered were categorized as definitely visible, definitely not visible, and uncertain. They estimated a two-level hierarchical linear regression model to determine if visibility varied by surface (i.e., subway vs street), borough (i.e., Manhattan vs outer

boroughs), and service type. They found that individuals in Manhattan were more likely to be visible during the count, and that those in the subway system were more likely to be visible than those on the street, suggesting that the city's strategy to count homeless subway users at terminal stations was effective. Lastly, type of service (e.g., soup kitchen, mobile food program, drop-in center, street outreach program) was not associated with level of visibility during the night of the count.[xx]

Capture-recapture observational counts

A significant challenge to conducting a more accurate PIT count is the high degree of transience among individuals experiencing homelessness, and particularly those who are unsheltered. To mitigate this barrier, researchers at the University of Toronto employed a novel "capture-recapture" observational technique. Originally developed as a way for conservationists to estimate wildlife populations, the capture-recapture technique is well-suited to model the daytime transience and shifting visibility of those living unsheltered. Multiple times in the same day, staff conducted observational counts of unsheltered homelessness in a random sample of regions throughout downtown Toronto, making note of individuals who were observed during one or multiple timepoints (based on observer recognition). Staff collected data using either a multi-team or single-team approach. Staff using the *multi-team approach* collected data on foot in teams of 2-3, each canvassing a one-block radius surrounding one of 42 intersections strategically placed throughout the city - once from 10-11:00am and again from 2-3:00pm. Staff assigned to the *single-team approach* collected data from inside a slow- moving vehicle (1 driver and 3 observers), canvassing the same predetermined route three times in the same day - from 10-11:00am, 2-3:00pm, and 4-5:00pm. Vehicles used in the single-team approach were equipped with cameras so that recordings could be reviewed for accuracy.

Under this approach, the ratio of individuals observed twice (i.e., "recaptured") is assumed to be the same as the ratio of individuals observed once, relative to the whole population. As such, this method allowed researchers to estimate citywide unsheltered homelessness based on a random sample.[xxi] However, this estimation technique relies on several assumptions that may be difficult to guarantee in practice. First, this approach assumes that sampled areas contain *closed populations* that do not change during the observation period. Although the unsheltered population is highly transient, researchers used short time intervals between observations to minimize any issues. Second, repeated observations rely on observers' *ability to recognize and distinguish individuals at multiple timepoints*, otherwise running the risk of "lost tags" (i.e., missed or misidentified repeat observations). However, research shows that motivated observers can accurately recall more than 24 distinct individuals within a single day.[xxii] Finally, this method assumes *independent samples*, meaning that individuals observed once are equally likely to be observed a second time. To minimize the role of potential observer bias, the researchers trained observers extensively on how to passively identify individuals experiencing unsheltered homelessness, and also had multiple teams canvass the same area to derive sensitivity estimates.

The researchers found that the multi-team approach group conducting observations on foot had a higher detection rate than the single-team approach group conducting observations from a slow-moving vehicle (7.11 sightings/km compared to 5.55 sightings/km, respectively). However, it is important to note that both the research team in Toronto and other scholars who have applied these techniques in other contexts caution that the underlying assumptions behind capture-recapture methods are unlikely to hold in real-world contexts.[xxiii] A further limitation of this approach is that the passive nature of observational data collection does not allow detailed demographic information to be collected. Ultimately, the authors suggest that capture-recapture techniques may be most useful if used in conjunction with another approach (e.g., surveys of service users) to better understand the daytime transience and street-use patterns of people experiencing unsheltered homelessness.[xxiv]

Innovative Technologies & Processes

Automated processes to clean and summarize PIT count data

Another challenging aspect of the PIT count is the amount of time and labor it requires to clean and summarize data after they are collected. In many CoCs data cleaning processes happen at multiple levels, with specified processes for surveyors, service providers, and HMIS staff to ensure data quality and de-duplication. To reduce the burden of this process, a team of researchers at the University of California Riverside worked with Riverside County to develop an automated pipeline for PIT count data. Researchers developed coding systems in Python to automatically input raw data, clean and tabulate it, and generate interactive data dashboards. Once this process was fine-tuned, data processing required only 3 steps: validating self-input living situations, identifying survey locations, and pushing the data into the website's server.[xxv] Although these systems did not increase the accuracy of the CoC's count, they reduced staff hours needed to process data, potentially allowing them to redirect those resources elsewhere.

Using a mobile app to track the count

Several CoCs have leveraged app-based technologies to improve the accuracy and implementation of their PIT counts. Connecticut's Coalition to End Homelessness, for example, used a mobile app called "Counting Us" to track the PIT count. Using this app, they defined boundaries of each geographic area and created a "Setup Key," which was provided to volunteers during the night of the count. Block groups were defined as high or low probability in terms of their expected density of people experiencing homelessness. The app included a survey that can be administered to individuals or households. Surveys include demographic information such as age, race, gender, veteran status, disabling conditions, length of homelessness, and other HUD required variables. The app included GPS functionality to pinpoint the exact physical location where each survey was conducted. In this way, the PIT Regional Command Center - which received the survey data in real time - was able to alert volunteers the moment they strayed outside of their assigned area.[xxvi] Tracking volunteers in real time helped count administrators ensure that high probability block groups were fully and accurately canvassed while also avoiding duplicative counts. During our interviews with experts, several respondents also noted the potential for similar apps and other technologies to improve the PIT count process. However, two respondents had concerns about the ethics of certain technologies. For example, one respondent at Wilder shared that some CoCs have used GIS technology to capture the locations of people experiencing unsheltered homelessness on the night of the count, which raises some concerns about privacy and informed consent.

PIT Count Process & Coordination

In both our review of the literature and interviews with experts, we identified several findings regarding the process and coordination of the PIT count. Throughout this section of the report, our team organized these findings according to four overarching themes:

1. Relationship Building & Communication
2. Volunteers & Training
3. Data Collection & Survey Submissions
4. Other Barriers to a More Accurate PIT Count

Relationship Building & Communication

Challenges building relationships and coordinating with other organizations threaten community buy-in and full participation in the count.

Like many CoCs across the country, the Hennepin County CoC's PIT count involves a network of many agencies and stakeholders. In Hennepin County, the CoC manages and oversees the PIT count process, St. Stephen's coordinates street outreach efforts and trains volunteers to conduct the count, and ICA both manages count data and provides technical assistance to other agencies. Having several organizations involved in the count is beneficial in that each organization brings its own strengths and perspectives. However, many regional stakeholders noted during interviews that this structure may also lead to coordination challenges. Respondents at several organizations, for example, noted *a lack of clarity regarding roles and responsibilities across PIT count processes*. Two respondents both mentioned that it was unclear who had decision-making authority within the CoC leadership. This leads to a host of issues. Respondents from these organizations specifically wondered who or how direction was being set for the count and whether the data collected was credible. Different people could be making different decisions and have different perspectives that aren't in alignment, which may contribute to missing gaps in the PIT count efforts and data collection and dissemination. Further, one respondent noted that measuring homelessness is challenging and a part of that challenge is due to there being so many systems involved. She shared that the needs and experiences of homelessness are widely different across various subgroups (e.g., youth, families, and veterans) and trying to accurately capture this in the PIT count creates a very resource-intensive process.

Most stakeholders we interviewed (n = 7) felt that *strong relationships and frequent communications between these varying agencies were crucial for the success of the PIT count*. Likewise, several respondents noted that weak relationships or infrequent communication have at times led to friction between agencies, which has in turn threatened buy-in and participation in the count. Multiple respondents stated that poor relationships with housing and service providers have impacted the sheltered count. While some providers are not required to participate in HMIS (e.g., domestic violence shelters), HUD requests that CoCs ask those non-HMIS agencies to still participate in the PIT count if they serve people experiencing homelessness. However, several respondents in Hennepin County noted that because the CoC does not maintain ongoing relationships or even updated contact information for these non-HMIS providers, many have not been counted in recent years. When the CoC does not have updated contact information and efforts to obtain it are unsuccessful, ICA helps the CoC decide how to account for missing data to estimate those sheltered counts. Sometimes, ICA's methodological guidance is to use PIT count data from past years to estimate these sheltered counts. Other times, ICA recommends extrapolating data based on what is known. In the last year, respondents from ICA reported supporting the CoC with an extensive effort to contact non-HMIS agencies to collect better sheltered counts, emphasizing the importance of shared, reasonable effort to reach these agencies. Another respondent shared similar sentiments, echoing that the accuracy of the count is dependent upon the community stakeholders, the connections within that community, and what the community is willing to do.

For the unsheltered count, *insufficient attention toward relationship-building and communication may also create a missed opportunity to improve the accuracy of the count*. For example, one respondent from Align Minneapolis (an interfaith collaboration of 17 Minneapolis churches, synagogues, and mosques and people with lived experiences working together to address homelessness and poverty) mentioned that in the past, they would receive a copy of the PIT count survey well in advance of the count so their staff could become familiar with it and help administer surveys on the day of the count. However, this respondent noted that this has not been the case in recent years, thereby limiting their ability to help with the count. During interviews with regional stakeholders, several respondents also noted that community organizations and service providers have deep knowledge of homeless populations and

their concerns, but that the CoC has not appropriately leveraged this knowledge to inform the PIT count. In the same vein, some respondents indicated that they did not feel their efforts related to the PIT count were sufficiently appreciated or valued. Multiple respondents noted that the CoC leadership should consider paying street outreach workers for the time and efforts as a way to both convey appreciation and build stronger relationships over time.

The crucial role of relationship-building and coordination among community-based partners was also echoed in both the academic literature and several interviews with experts. A recent comparative analysis of PIT count processes, for example, highlighted the need for more robust relationship-building and coordination with community based organizations, and further recommended that this process be facilitated by social workers with a trauma-informed lens.[xxvii] Some communities have launched initiatives to develop more intentional and formalized relationships with service providers and outside agencies as a way to improve their PIT count, often with great success. The Camden City School District, for example, partnered with local nonprofits and social service agencies to better understand homeless youth and support families.[xxviii] HUD encourages this type of collaboration with local homeless education liaisons, as they can provide valuable insights and support selecting family- and youth-friendly count sites and structuring effective incentives for count participation. Liaisons may also help recruit PIT volunteers and suggest other local family and youth service providers to assist with the count.[xxix]

Given the broad geography of the county and varying population densities, it may be particularly challenging to maintain communication and partnerships in suburban areas. What surveys are administered in the suburbs typically occur at transit stops as well as specific, known or probable locations. However, several respondents noted there is a lack of counting individuals at day service centers and in engaging suburban-based agencies and groups that work with unsheltered individuals. In spite of this barrier, two respondents felt that suburban service providers may be willing to assist with the count, but noted that more outreach from the CoC would be needed to develop those relationships. Researchers we interviewed from Wilder indicated that their strong reputation and connections throughout the state have allowed them to connect with even the small "ma and pa" type of shelters in rural Minnesota, further supporting the robustness of their count.

Ambiguous communication has led to confusion and contradicting opinions about the purpose of the PIT count.

In our interviews with experts and key regional stakeholders, several respondents expressed a ***desire for more ongoing communication*** specifically about the purpose and timing of the count. Importantly, respondents' perceptions about the core purpose of the PIT count varied significantly. Most respondents viewed the count as a full census count, while a few saw it as more of a performance measure (e.g., target the same areas each year to watch trends), and others saw it as a combination of both. In particular, direct service providers were more likely to view the count as a census, whereas macro-level organizations viewed it more as a performance measure. St. Stephen's indicated that they have always attempted a full census count and that due to the shifting geographical locations of people experiencing homelessness, it may be inaccurate or difficult to conduct the count through targeting sampling the same way every year. These differing views of the PIT count even exist within the agencies who manage and conduct the PIT count.

Along with an unclear purpose, respondents also had varying perceptions about how the PIT count influences the amount of funding received and how those funds are allocated. Funding from HUD is a competitive process. The CoC submits an application to HUD requesting funds on behalf of direct service non-profit agencies; the result from the PIT count is only one piece of this application. The application may request funds for maintaining existing services: this could have significant impacts for an agency, especially given the annual funding cuts HUD makes to existing permanent supportive

housing, transitional housing, and rapid rehousing projects. Once HUD reviews the submitted applications, they award funding to these service agencies. The funding is directed to helping individuals receive rental assistance or help in finding and keeping housing.

One respondent highlighted this point that several factors, not just the pure PIT count number, are at play when competing for funding. Strategies, evidence-based practices, and the way in which efforts are coordinated are some of these elements that are taken into account. This respondent explained the allocation of funding in this way:

> *"You don't fund based on the size of the problem. You fund the entities, the providers, the partnerships, that are delivering results. What that means, each year when we go into the competitive application for hard funding, is that if we're doing well we get bonus funding, so we can do even better. And if we're doing badly, why would they waste more money on us? They'll take money away from us and give it to other communities who are doing well, so that they can do better."*

Respondents from direct service and advocacy organizations had different understandings of how the PIT count influences funding amounts and allocations. Respondents from MICAH (the Metropolitan Interfaith Council on Affordable Housing[2]), for example, noted that they and other street outreach groups perceive that declining PIT counts indicate "a good job." They view that this decrease will translate to continued and/or bonus funding from HUD to local service agencies, impacting the rental assistance and other support services for people exiting homelessness. In this way, several street outreach organizations fear that the CoC has a troublesome conflict of interest in that they are incentivized to under-count or under-report the full count as a way to secure additional funding.

And yet, there is also the perception that some stakeholders may be incentivized to over-count people experiencing homelessness, believing that the perceived scale of the problem will draw the attention of policy makers, activists, and community leaders. These stakeholders hope that attention to the magnitude of homelessness will result in additional resources.

With these opposing and nuanced views, some respondents acknowledged that funding determinations are complex. They noted that if people better understood the purpose of the count, then they may have more faith in the process and be more willing to participate. People experiencing homelessness may struggle to see how the PIT count tangibly benefits them, or may even question whether funding translates into better services. For example, one respondent from Align Minneapolis noted that the homelessness advocacy group Street Voices of Change is primarily focused on improving the culture of safety at existing shelters, an issue that cannot be solved by more federal funding alone.

These misperceptions not only threaten the PIT count and thus funding from HUD, but also buy-in and participation in the count, producing incongruencies in how the count is prepared, collected, and disseminated. Several respondents expressed concerns regarding PIT count trends and how those data are used by politicians and advocacy groups. One respondent recognized the challenges in which activism and advocacy blur into the service provider networks.

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[2] The Metropolitan Interfaith Council on Affordable Housing envisions a metropolitan area where everyone without exception has a safe, decent, accessible, and affordable home.

Volunteers & Training

Limited volunteer capacity inhibits an accurate unsheltered count.

St. Stephen's indicated recruiting approximately 100 volunteers and staff for the 2020 PIT count. This number of volunteers is low compared to cities with a similarly sized population. A review of other cities' recruitment efforts (see Table 1) compared with those of Hennepin County CoC highlight a greater number of volunteers in comparably sized cities. This comparison was created with a few assumptions for ease of data collection:

- Cities, not CoCs, were used as the initial point of comparison, making the assumption that the city would have the most dense population within the CoC.
- The square mileage of the CoC was recorded, recognizing the entire geographic range of the CoC needs to be canvassed.
- The number of volunteers listed is for the entire CoC, unless otherwise stated.

Table 1. Number of 2019 PIT Count Volunteers in Comparably Sized Cities[xxx, xxxi, xxxii]

City	City Population[xxxiii]	CoC	Square Miles of CoC	Volunteers[xxxiv]
Oakland, CA	425,195	Alameda County CoC	Oakland: 78 Alameda County: 739	Oakland alone: 200 volunteers + 75 guides Alameda CO CoC: 489 volunteers + 164 guides
Minneapolis, MN	**422,331**	**Hennepin County CoC**	**607**	**~100 volunteers**
Tulsa, OK	401,800	Oklahoma City CoC	621	37 agencies provided volunteers
Arlington, TX	396,394	Tarrant County CoC	902	550 volunteers + 100 Neighborhood Police Officers
New Orleans, LA	393,292	New Orleans, Jefferson Parish, City of Kenner CoC	665	200+ volunteers

For discussion, Oakland, CA will be used as an example. Oakland has a comparable population to Minneapolis and covers roughly a similar geographic area. Oakland, however, engages over 200 volunteers, with an additional 75 homeless guides.[3,xxxv] The 100 volunteers for Hennepin County's CoC actually represents the entire CoC geographic area of 607 square miles, with a much larger population (1.3 million).

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[3] A homeless guide is considered someone who has lived experiences with homelessness and works with CoC staff and volunteers to conduct the unsheltered PIT count.

During our interviews with regional stakeholders, two respondents felt that this lack of volunteers, particularly within the suburbs, significantly limits the accuracy of the count. More than one respondent expressed concern that the volunteer pool was fairly homogeneous, leaning heavily "white female," and was not reflective of the individuals experiencing homelessness, who tend to be more racially diverse. Another respondent stated that Spanish-speaking volunteers are needed to help with the count. The need to create a more culturally competent and diverse group of volunteers was emphasized not only by these respondents, but also in our review of the extant literature. Several large-scale studies have highlighted the importance of "bureaucratic representation," or alignment between the demographic characteristics of the public service workforce and the populations they serve.[xxxvi],[xxxvii] This research shows that representation is important not only for building trust and buy-in to public systems, but also for improving the provision of services to marginalized groups.

Four respondents recognized the importance of pairing surveyors with someone who was experiencing or recently experienced homelessness as a "guide" to help during the night of the count. They noted that guides would be seen as a trusted individual among the populations experiencing homelessness, which could increase buy-in and make people more comfortable with answering the survey. Respondents also noted that guides were more knowledgeable about "hidden" areas than CoCs and other volunteers. Each respondent discussed how the guide should be considered a partner in this endeavor and be compensated appropriately for their time and knowledge. One respondent shared her experience working with paid youth guides for a PIT count in Philadelphia, sharing that this was a useful and effective method for finding and engaging youth experiencing homelessness.

Insufficient training about data collection contributes to data quality issues.

The Hennepin County CoC relies heavily on volunteers to conduct both the sheltered and unsheltered PIT count. Staff from ICA serve in a "train the trainer" role, wherein they develop instructional materials and best practice guidelines that St. Stephen's staff then use to administer training. In recent years, volunteer training included a 1-hour, in-person training session. Among the regional stakeholders and experts we interviewed, four respondents indicated that current volunteer training processes are insufficient. Respondents from ICA noted, for example, that although they had developed a detailed, 30-page instructional manual for volunteer surveyors, that the only document used during volunteer training was an abbreviated 1-page tip sheet. In this instance, staff from ICA were able to quickly respond by developing a slightly more detailed 2-page tip sheet for the following year, recognizing that volunteers were unlikely to read the full 30-page manual. However, several respondents shared concerns that these and similar gaps in training may lead to issues with the quality of PIT count data.

A few respondents shared that improper training has led to *volunteers taking liberties with how surveys are administered* in the field. The CoC maintains two different versions of the unsheltered PIT count survey - a *long version* that includes all questions, and a *short version* that includes only crucial demographic questions. In instances where it is not feasible to interview an individual experiencing homelessness (e.g., if the individual is sleeping or in an unsafe location), the CoC allows surveyors to complete a much shorter *observational form*. One respondent mentioned that in the past, volunteers have sometimes improperly used the observational form in lieu of the long or short versions. Although the observational form is only meant to be used when an interview is not possible, we heard reports that some volunteers used the observational form as a "shortcut" to minimize the number of questions asked. Others have used the observational form for a simple head count when it was not feasible to survey a large group of people. Two respondents from ICA noted that data collected using the incorrect form (i.e., observational form instead of the long version survey) resulted in these data not being included in the final count due to data quality concerns. Specifically, these data can be thrown out due to an inability to differentiate between true observational data or data collected through direct questioning. Because the short version of the survey was recently developed and has not yet

been used in Hennepin County due to the COVID-19 pandemic, the extent to which this additional version of the survey will exacerbate or alleviate this confusion remains to be seen.

Insufficient training has led to some ***confusion on how to manage and prioritize certain data elements***. Staff from ICA mentioned having to throw out surveys if the surveyor did not enter the household ID or the CoC region, both of which are needed in order to ensure an unduplicated PIT count, as required by HUD. While some data entry errors are inevitable, the reported frequency of surveys being submitted with missing required information indicates that volunteers may not have a strong understanding of which data elements are required and which are optional on the forms that Hennepin County CoC uses for PIT count activities. During our interviews with regional stakeholders, several respondents also mentioned a lack of clarity regarding how missing demographic data should be handled. Respondents shared that some service providers had thrown out observational forms before submitting their overall counts to ICA, often because of missing demographic information. A couple respondents speculated that surveyors may have prioritized conducting a "head count" in these instances, leaving demographic questions blank because they either did not have time to complete them or did not feel comfortable making assumptions about other people's identities. Additionally, surveyors are often literally unable to see the individuals, such as when you have a large group on a train car bundled under blankets sleeping, which is very common. Respondents from ICA indicated that service providers should not make these types of decisions to throw data out by themselves, but should submit all data and work with ICA staff to resolve discrepancies or address missing data. The disconnect between what service providers, ICA, and the CoC perceive as "acceptable" levels of missing data further highlight potential gaps in training.

Insufficient training can also lead to ***less visible data issues, such as bias in the sample*** of people experiencing homelessness who are included in the count. For example, some respondents shared concerns that volunteers may not be equipped to appropriately identify individuals experiencing homelessness. Without clear training about who to approach, volunteers may have to rely on biased stereotypes about who "looks homeless," systematically missing individuals who may not fit those stereotypes. These findings were also echoed in our review of the literature, as several CoCs have found evidence that PIT count surveyors often "discount" individuals who do not meet stereotypical notions of what homeless individuals look like. For example, the researchers who implemented New York City's plant-capture strategy (see the Innovative PIT Count Methods section) noted that their surveyors seemed to disproportionately ignore the homeless decoys who dressed less stereotypically.[xxxviii] Additionally, two respondents mentioned the need to have trauma-informed training for volunteers: four respondents specifically emphasized the need for this type of training when asking questions of youth.

Data Collection Processes

Lengthy versions of the PIT count survey create undue burden on both surveyors and people experiencing homelessness, thereby further limiting the accuracy of the count.
All CoCs within the state of Minnesota maintain the same versions of PIT count surveys, including the long version, short version, and observational form. These surveys were developed collaboratively, and key stakeholders such as St. Stephen's and staff from the Hennepin County CoC were deeply engaged in that process. In the past, surveyors completed these forms on paper and then worked with their respective agency to clean and submit them electronically to the Interagency Council to Prevent and End Homelessness and the Department of Human Services. Since 2017, the role of statewide data collection and compilation shifted to ICA, the lead HMIS agency.

In a convening of CoC and state partners, the Heading Home Alliance, all parties mutually agreed to collect common survey questions and date to conduct the PIT count each year. When survey question

changes have been made, ICA has led an engaged process to collect feedback, and the CoC and state partners voted at the Heading Home Alliance to adopt them.

ICA has maintained the paper versions of the survey on behalf of the 10 CoCs and programmed the PIT count survey into Google forms; this "PIT LIVE" system allows data collected during the count to be stored in a centralized, electronic location. Although this process reduces time needed for data entry, a notable limitation is that the programming was designed to accommodate the long version of the survey only. As such, surveyors who are tasked with using the short version have to manually skip over questions from the long version. While several respondents acknowledged during interviews that this process can be burdensome for surveyors, we also heard that there may be some resistance to changing the survey form within ICA. Specifically, staff at ICA noted concerns about the amount of time it would take to revise the PIT LIVE system as well as the extent to which revisions would impact their ability to compare equivalent datasets across years.

During our interviews with regional stakeholders, many respondents also shared *concerns about the length of the survey and the burden it may create for people experiencing homelessness*. Many respondents felt that the long version of the survey may be time-consuming for surveyors to interview everyone they encounter during the count. For instance, one respondent shared an example of a volunteer encountering a group of 15 potential interviewees while riding the train on the night of the count. Although the volunteer should in theory interview all 15 people, time and privacy constraints make it impossible to complete the survey with each person. Similarly, one respondent noted that an ICA staff member volunteered with the PIT count last year and was only able to survey six people in one volunteer shift, despite being in a large shelter. In general, the time to administer a survey is largely contingent on the surveyor's approach, which often involves building rapport through conversation. With limited conversation, respondents from ICA estimated that the survey can be completed in as little as ten minutes, but acknowledged that it can take longer in some situations. In contrast, St. Stephen's reported spending about five minutes per survey, further highlighting the fact that agencies are using and implementing these different versions in different ways.

The sensitive nature of the PIT surveys emphasizes the need for surveyors to recognize the burdens placed on individuals experiencing homelessness and to value their participation.
In addition to the time-related burden that the length of the PIT surveys places on people experiencing homelessness, several respondents mentioned concerns about the sensitive nature of many of the survey questions. Questions about identity, homelessness, domestic abuse, and other sensitive topics can be retraumatizing for some individuals. This respondent further noted that *volunteer surveyors may not have the training or skills to ask questions sensitively*, or to appropriately use discretion in interpreting answers. While more robust and trauma-informed training for volunteer surveyors may mitigate some of these concerns, several respondents recognized the need to not only minimize burden, but also to *more explicitly value the contributions provided by those experiencing homelessness*. Researchers at the Wilder Foundation noted that financial incentives have been an effective way to gain buy-in for their count; four respondents advocated for the continued use and expansion of financial incentives to participants. Although the CoC currently offers $5 to individuals who complete the survey at night, these incentives are not offered to those who complete the survey during the day. Fair financial compensation may need to be considered for these individuals as well, primarily as a recognition of valuing their time. Two respondents also advocated the need to incentivize or financially compensate the street outreach organizations for their efforts in the PIT count. Maintaining good relationships with these organizations is crucial in keeping their help and leveraging their knowledge about their populations.

Other Barriers to a More Accurate PIT Count

HUD's definition does not support a comprehensive understanding of homelessness, which results in several groups of homeless individuals being missed by the count.

Respondents discussed the limitations imposed by the HUD definition of homeless and other guidelines. Respondents challenged HUD's definition of "homeless" to be more inclusive of people living doubled-up. Likewise, some called for revised demographic questions that broadened the ways to refer to gender, for example. Respondents also shared that certain populations are consistently missed by the PIT count, contributing to the skepticism regarding the reported PIT count. Although not included in HUD's narrow definition of homelessness, respondents most frequently identified people doubling-up as the population missed in the PIT count. Respondents noted those doubling-up with family or friends tend to be families with young children. Other populations identified as missing were those experiencing domestic violence, those with chronic health conditions, Native Americans, people living in vehicles, the newly or working homeless, people in the suburbs, and those who are highly mobile. Several interviewees recognized that some individuals who remain hidden or are less visible may be the most vulnerable. However, some acknowledged that it is difficult to capture people living doubled up by virtue of doubled-up situations happening

> **Homeless Children and Youth Act of 2021**
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> Senators Dianne Feinstein (D-Calif.) and Rob Portman (R-Ohio) proposed a new bill to align HUD's definition of homelessness to better meet the needs of youth experiencing homelessness. Currently, the discrepancy in federal agencies' definitions of homeless results in lower eligibility rates for youth to receive federal assistance. Standardizing the definition would allow children living doubled up or staying with people other than their parents eligible to receive assistance. More information about the proposed bill can be found [here](#).

on private properties. Additionally, because the PIT count ultimately intends to understand and alleviate homelessness, one respondent thought it would be beneficial to not only include those experiencing homelessness but also those at-risk of housing instability or homelessness.

HUD's required process for extrapolating missing demographic information may skew perceptions of which populations are most impacted by homelessness.

HUD requires CoCs to submit all PIT count data broken down by the demographic characteristics of individuals experiencing homelessness (e.g., race/ethnicity, gender, age, and others). These data are sometimes challenging to collect in the field, particularly via the observational form, where surveyors may not be comfortable making assumptions about other people's identities. Because HUD does not allow CoCs to submit data with missing demographic information, many CoCs instead use HUD's suggested process for extrapolating missing information based on what data they do have. While *extrapolation can be a useful tool for estimation in some cases, accurate extrapolation requires some degree of confidence that the sample of data being extrapolated (i.e., those with complete demographic information) is representative of the overall population*. In practice, certain groups of individuals experiencing homelessness may be harder to survey on the night of the count than others. In this way, extrapolation may lead to misleading data regarding how the demographic characteristics of people experiencing homelessness change from year to year. Staff at ICA, for example, noted that a couple years ago, surveyors in a region with a predominantly Native American homeless population neglected to complete detailed demographic questions when administering surveys. At the same time, surveyors in the adjacent area, which was predominantly white, did complete demographic questions when administering their surveys. After implementing HUD's suggested extrapolation process, data suggested that there had been a significant reduction in Native American homelessness, when in reality, the change was only due to extrapolation. Although staff from Abt noted that they and other

technical assistance agencies can work with CoCs to identify better processes to handle missing data (e.g., cross-referencing surveyor accounts with prior years' demographic data from a particular area), it is important to note that many CoCs may have limited capacity to engage in this kind of troubleshooting.

Conducting the PIT count in January has some benefits, but also creates some barriers to accuracy in colder climates.

Three respondents discussed the challenges associated with conducting the count in January, as required by HUD. They noted that January is the coldest month of the year and unsheltered homelessness is often at its lowest during this time. Many people experiencing unsheltered homelessness are often living doubled-up and missed in the count. On the other hand, two respondents indicated that January was not an issue. One of these respondents shared that the count is meant to capture trends, so as long as it is conducted consistently during the same month, the time of year does not matter. Abt Associates noted that the PIT count takes place in January because, for many CoCs in the US, it is one of the coldest months of the year, so it is more likely that each CoC is maximizing its resources to serve people's housing needs. This timing can provide a more precise picture of who is unable or unwilling to access emergency shelter or crisis response assistance in the midst of more dangerous outdoor conditions. Furthermore, Abt Associates noted that the PIT count takes place in the last 10 days of the month to ensure that people who can only pay for temporary housing for part of the month are generally included in the count. For example, some people can afford to stay in a motel or rent a room, but only for the first few weeks of a month after receiving their public benefits payments at the beginning of the month. However, it seems that the rationale for the timing of the PIT count has not been clearly or consistently communicated to community stakeholders.

Recommendations

This section provides detailed recommendations for Hennepin County CoC leadership to improve the accuracy and efficiency of the PIT count. In selecting these recommendations, our team drew upon the key findings from both our review of the extant literature and our interviews with experts, noting the particular strengths and challenges of each approach that would impact the feasibility of implementing them in the local context of Hennepin County. It is important to note that the PIT count is a complex process involving many systems and stakeholders. As such, the CoC should work collaboratively with those stakeholders in determining which of these recommendations to implement, how, and when. We anticipate that improving the Hennepin CoC's PIT count will be an interactive and collaborative process that will necessitate adjustments over time.

Innovative Methodologies

Use a strategically designed sampling approach to improve the efficiency and accuracy of the unsheltered PIT count.

Given that Hennepin County spans a large geographic area with widely varying population densities, resource constraints and limited volunteer capacity are likely to pose ongoing barriers to obtaining a more accurate unsheltered count. At the same time, HUD's standards for the unsheltered PIT count stipulate that the CoC must account for all unsheltered homeless within the entire CoC geography, either by a complete census or a HUD approved sampling and estimation approach.[xxxix] Given that resource constraints likely make a complete census count infeasible, **we recommend that the CoC use a sampling approach in future iterations of the unsheltered PIT count**. Under this approach, the CoC would sample a subset of regions in which to conduct the count (based on expected density of homelessness), and then estimate county-wide data based on the counts from the sampled regions.

Many CoCs across the country have successfully implemented similar approaches,[xl] and several expert interviewees also mentioned sampling as an effective and efficient strategy to improve count accuracy.

A key benefit of using a sampling approach is that it would not require a tremendous amount of additional resources or volunteers. Presently, the CoC does not have the resources to conduct a complete census across the entirety of the county, meaning staff and volunteers are only able to canvass certain regions. **A sampling approach would not require a significant departure from the current approach, but would instead provide a way to more systematically deploy existing resources in a way that allows for estimation**. The most significant change if the CoC were to adopt a sampling approach would be additional and more comprehensive canvassing in low-density, suburban regions. However, depending on the extent to which these low-density regions are a priority, the CoC could opt to sample only a small number of low-density regions (i.e., 2 or 3), thus minimizing additional burden. Additionally, unlike some of the other methodologies our team reviewed, sampling is relatively easy to implement in that it does not require an advanced statistical approach. Another notable benefit is that sampling is one of HUD's recommended strategies, and they offer detailed guidance regarding how CoCs should implement sampling to conduct the unsheltered count. A high-level overview of the recommended sampling process, including guidance regarding how to define regions as high- versus low- density, is provided in Appendix B, and more details can be found in [HUD's sampling manual](.)[xli]

HUD recommends that CoCs sample regions based solely on their expected density of homelessness, and more guidance regarding their recommended processes for making these determinations can be found in Appendix B. However, it is worth noting that some CoCs and researchers have used other population indicators, such as communities' racial/ethnic composition, housing market data, or median income. An advantage of these approaches is that they elaborate on HUD's sampling framework to also ensure that various subpopulations (e.g., veterans or youth) are appropriately represented in the count. The CoC should further explore ways to leverage these secondary data sources developing a sampling approach for the unsheltered PIT count. For example, the CoC may wish to prioritize suburban areas with high rates of poverty (e.g., Brooklyn Park),[xlii] or those with heightened eviction rates[4] within their sampling scheme. However, it is important to note that it takes time and planning to conduct more systematic sampling—particularly when taking other population indicators into consideration via secondary data sources. As respondents from Abt Associates stated, CoCs need geographic knowledge, planning, and coordination to understand, categorize, and sample regions appropriately. To this end, **the CoC may benefit from iteratively refining this process over time.** In early years, the CoC may have to rely on institutional knowledge and PIT count data to categorize regional density of homelessness, but can incorporate additional sources of information over time and as needed. Specific suggestions regarding secondary sources of data that the CoC might leverage to improve sampling are provided in Appendix B, Figure B1.

Build quality-checks into a sampling strategy to collect more robust data that can inform ongoing process improvements.

National data suggest that most PIT count approaches yield a substantial underestimate of actual unsheltered homelessness,[xliii,xliv,xlv] a sentiment that was further echoed by many of the key regional stakeholders that our team interviewed. Considering this, **we recommend that the CoC incorporate two data quality check methods–plant-capture and post-count surveys of service users–within a sampling approach.**

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[4] The Court Services Division of the Minnesota Judicial Branch collects ongoing data about eviction filings in Hennepin County.

Plant-capture methods involve sending homeless decoys or "plants" to various locations on the night of the count, and then documenting which decoys are or are not surveyed. Although plant-capture methods require some additional volunteers and training, these needs are relatively less intensive than some of the other quality check methods our team reviewed, and may also yield data that could be used in a number of ways. A CoC in New York City, for example, used plant-capture data to upwardly adjust their overall count, further noting that details about which decoys were missed or "discounted" may be used to inform surveyor training in the future.[xlvi]

Post-count surveys of service users may be another innovative way for the CoC to collect ongoing data about the effectiveness of their PIT count approach. Under this method, CoC staff enlist the support of service providers to survey individuals experiencing homelessness in the days after the count. Surveys can be administered at any service provider location (e.g., meal sites) and include questions about where the individual was staying on the night of the count or if they remember being surveyed. Researchers in New York City administered these surveys widely across the CoC's geography to estimate the number of individuals experiencing homeless who were missed on the night of the count.[xlvii] However, the Hennepin County CoC could administer post-count surveys of service users in a more targeted manner as a way to inform the PIT count process. For example, the CoC could administer surveys in select suburban areas to understand whether the high- versus low-density designations used for sampling are accurate.

A limitation of both these methods is that they require some additional staff and analytical capacity. However, by collecting ongoing data about the quality of the PIT count, **the CoC would not only be able to improve the precision of their estimates, but could also leverage data about who is being missed by the count to inform ongoing improvements to the PIT count process.** For example, if the CoC learned that individuals in certain regions are consistently being missed, they might recategorize those regions as high-density to ensure they are included in the following year's count. Likewise, if the CoC learns that surveyors are consistently discounting individuals who do not appear stereotypically homeless, they might revise surveyor training to include more precise criteria that surveyors can use to determine which individuals to approach on the night of the count. One expert we interviewed remarked that both plant-capture methods and post-count surveys were "the best ideas that communities could feasibly implement" to produce better estimates of unsheltered homelessness.

Another important consideration when implementing a plant-capture method is training for staff or volunteers serving as plants. As noted by the researchers who implemented this approach in New York City, plants need appropriate training to effectively pass as homeless, just as surveyors need training to appropriately and equitably identify people experiencing homelessness during the count. To this end, the CoC might also consider **hiring people who are or have experienced homelessness, either to develop training materials for volunteers or to serve as plants themselves.** By involving those who have lived experiences with homelessness in the PIT count process, the CoC could not only enhance their understanding of regional homelessness, but also show their commitment to valuing the experiences and contributions of the homeless community.

Reduce the frequency of the unsheltered PIT count or reduce the intensity of midyear counts.

As detailed throughout this report, the PIT count—particularly for unsheltered homeless populations—is extremely resource intensive. Although conducting the count multiple times per year is certainly beneficial in that it provides more ongoing data, reducing the frequency of the count may also have some significant advantages. Namely, **by reducing the count to once per year, the county would be**

able to target its available resources to conduct a more comprehensive and accurate count during that time. A less frequent count may also help address issues like limited volunteer capacity and issues coordinating with other agencies. Likewise, less frequent counts would also reduce burden on people experiencing homelessness, and individuals may even be more willing to participate in the survey if it was given with less frequency. Another notable advantage of less frequent counts is that this approach aligns with HUD requirements and therefore would not impact federal funding.

In recent years, Hennepin County has already reduced the frequency of the unsheltered PIT count from quarterly to twice per year. Given this, we acknowledge that there may be some resistance to further reducing the frequency of count. With that in mind, the county might also consider alternative approaches as a way to reconcile disparate views and priorities. The CoC could, for example, **conduct a comprehensive PIT count during January of each year, and employ a lighter-touch approach (e.g., observational counts only) during the midyear count.**

Mitigate sampling error by increasing the number of areas canvassed.

While HUD allows sampling with extrapolation, this methodology is challenging to do and may lead to inaccurate counts. As described, sampling with extrapolation led to data incorrectly suggesting a significant reduction in Native American homelessness within Hennepin County. Similar types of undercounts arise due to systematic sampling errors when not all locations are canvassed. Additionally, estimates from a sample and extrapolation have large variances. The margin of error produced by this methodology can be buffered by increasing the number of census tracts sampled. However, it is also important to consider the tradeoff between larger sample sizes and measurement error. Increasing the number of census tracts covered in a PIT count requires each volunteer to cover more territory which may increase the number of people experiencing homelessness who are missed. Further suggestions to increase the number of volunteers are discussed in a later recommendation.

Streamlined & Coordinated Processes

Build greater awareness about the purpose of the count to foster community buy-in.

There are many organizations, experts, stakeholders, and community members who participate in or are affected by the PIT count. Because so many entities are involved, there are differing opinions by various stakeholders of the purpose of the PIT count. Some see the PIT count as a census count of the homeless population. Others recognize that due to the time of year and other factors, many homeless people are missed and, therefore, the count functions as more of a performance measurement. It is difficult to convey a consistent message from the same office when the purpose is not clearly defined in-house. This inconsistency in communication may lead to limited buy-in from service providers and other stakeholders. Homeless individuals don't necessarily see the tangible benefits of the PIT count and may therefore be less likely to participate.

Produce clear messaging and maintain consistency within the CoC in communicating with stakeholders and community members. While there is some agreement in the purpose of the PIT count as both a performance measure and a census count, that transparency appears to be lost in particular with street outreach organizations who are working directly with people who are experiencing homelessness. The different interpretations of the purpose of the PIT count may also guide the way in which stakeholders design and approach their PIT count process. This could produce inconsistent results in a single PIT count and with PIT count trends over time. In future years, the CoC should engage in more intentional outreach in the months leading up to the count, conveying clear messaging about both the purpose of the PIT count and how federal funds are used to support

individuals experiencing homelessness. This messaging should primarily be targeted toward community partners and other stakeholders with a vested interest in the count, as the CoC needs greater buy-in from these individuals to support a more comprehensive and accurate count. Producing clear messaging in-house and communicating effectively across organizations could yield positive results in a clear and consistent approach to the PIT count without an immense amount of effort.

Benefits from awareness building and increased communication include greater buy-in from service providers and other stakeholders that can ensure that everyone is on the same page when it comes to the PIT count approach in Hennepin County. Greater community awareness may also lead to increased volunteers and increased community involvement and understanding. Finally, there may also be a better understanding of the purpose and process for homeless community members. The PIT count exists primarily to serve and benefit members of the homeless community. Consistency in messaging and methods across all organizations and entities will ensure a homogenous approach to conducting the PIT count.

To support a more accurate and efficient count, improve PIT count process coordination, stakeholder outreach, and training.

Coordination, outreach, and training are tightly interconnected elements of the PIT count process. As described in the Findings section above, respondents noted several issues relating to these areas, including concerns that the responsibilities for coordinating the PIT count have grown beyond the capabilities of any one agency and weak relationships with service providers in low-density areas result in little support for the count. These concerns, along with the heavy reliance on surveyors with trauma-informed knowledge, limits the pool of volunteers, geographic area to canvass, and surveys that can be administered. Several recommendations to address these issues are listed below.

Divide roles and responsibilities among outreach agencies leveraging their strengths. To address the concern that the responsibilities are becoming too great for any one agency, a restructuring of the coordination process may be needed. St. Stephen's currently coordinates the PIT count process, but noted they have too many roles to fill as this project manager to maintain the status quo.

A variety of agencies with unique skills need to be identified and relationships developed with agencies not currently involved in the process. The skills of each agency need to be leveraged, with tasks delegated to utilize their strengths (e.g., recruiting volunteers, access to media for communication). Agencies need to be recruited based on their geographic locations as well. For example, specific agencies should be responsible explicitly for suburban areas. By including these agencies as partners in the process, the oft-missed lower-density areas will be canvassed on a year-to-year basis.

Developing relationships, setting expectations, and ensuring all are following the same protocols requires upfront time and energy. Suburban areas that have been less involved in the count in past years, for example, may need support from more experienced volunteers to establish an efficient PIT count process that is aligned with the countywide approach. However, as the volunteer pool grows and becomes more experienced, this time and energy should decrease.

Increase the number of volunteers. The nature of the PIT count is resource intensive due to the sheer size of the geographic area being canvassed, limited staff, and the time-consuming nature of lengthy surveys. HUD sets the expectation that the entire CoC geographic area will be covered, resulting in the need for large numbers of people to successfully satisfy this requirement. There are numerous avenues to explore to find willing volunteers.

Access knowledge within the homeless community. A tried and successful practice within other cities is pairing a surveyor team with an individual who is experiencing or recently experienced homelessness to act as a guide. People experiencing homelessness are much more likely to know the hidden areas that others find for shelter. Additionally, the guide may provide the credibility needed for others to engage in responding to survey questions. As noted by cities who enlisted the aid of a guide experiencing homelessness, valuing these individuals' time requires compensation for their time during training and the night of the count.[xlviii,xlix]

Leverage and develop additional connections with agencies serving the youth population. As discussed in the Findings section, youth experiencing homelessness have different survival mechanisms on the street than adults, and are likely underrepresented in the PIT count.[l] Connecting with school districts, McKinney-Vento liaisons, Head Start programs, health care providers, youth shelters, and youth social service organizations may provide information specific to youth and where they may be finding shelter. This relationship may prove useful to engaging youth as guides on the night of the count.

Recruit volunteers from nearby colleges/universities. Students studying in the areas of human services/social work are in need of relevant, experiential learning opportunities that may apply towards coursework credit. Other students may be service-focused and interested in helping address social issues. Additionally, some students may currently be experiencing homelessness, or may have experienced homelessness at a younger age. Boston enlists college students to help in their PIT count.[li] Anchorage, Alaska, specifically engaged students in the School of Social Work to participate in the homeless youth count.[lii]

Coordinate with Wilder Foundation. Wilder is successful in conducting a statewide count of people experiencing homelessness every three years. By coordinating with Wilder, the CoC may be able to gain insights about effective counting strategies in low density areas or how to successfully recruit a diverse pool of volunteers, among others. Additionally, when the PIT count and Wilder's October count coincide, this may create additional challenges recruiting volunteers. Volunteers may not be interested in conducting a similar count within the span of a few months. However, more concerning is the added inconvenience and stress on those being surveyed: they are being asked to respond to personal, potentially traumatizing, questions just months apart. Although surveyors may be known street outreach workers, they may be paired with an unknown volunteer. Stress could be further heightened when these traumatizing questions are being asked by a stranger. During the interviews, Wilder expressed an interest in coordinating these overlapping survey efforts with Hennepin County.

Leverage and develop additional connections with agencies in suburban areas. With a scarcity of service providers located in the suburbs, finding and connecting with organizations familiar with the population experiencing homelessness in the area may require relying on the knowledge from a variety of agencies. Churches, hospitals, community centers, parks departments, community councils, and outer-edge motels may have knowledge or even data about people experiencing homelessness. As such, these individuals could provide valuable insights regarding the locations where individuals are congregating or the numbers of individuals in which they have interacted. With some level of caution, contacting police and first responders may prove fruitful, as they probably have the most frequent interactions with the homeless population, or may be able to provide other contacts who are addressing homelessness within their area.

Recruit a diverse volunteer pool. When recruiting volunteers, the CoC should prioritize the racial/ethnic diversity of their volunteer pool. One respondent indicated that volunteers are needed who have fluency in more than one language. Intentionally seeking out multilingual

volunteers will enhance survey participation. Developing relationships with organizations that serve our immigrant communities may help in securing these multilingual volunteers. The CoC could reach out to local community-based organizations (e.g., Somali Multi Service, Ka Joog, or the Hennepin County Cultural Speakers Bureau) for suggestions and support recruiting volunteers.

Recruit others who are not directly affiliated with street outreach organizations. Recruiting from this pool may need some vetting of the individual and training. However, many corporations are adopting a corporate social responsibility philosophy. Part of this philosophy is volunteering within the community. Rely on the company to recruit and provide teams of people. The city of Boston uses volunteers from local corporations.[liii]

Enhance training regarding interactions between volunteers and survey participants. Training is an integral part of the count process to ensure volunteers understand the conditions and agree to the protocols put in place to "do no harm" while surveying individuals. Surveying can feel awkward for some volunteers. The limited time for the PIT count requires surveys to be conducted in a timely fashion. This may feel challenging given the sensitive nature of the questions, and may be even more difficult when volunteers are strangers to those being surveyed. Safe situations for everyone must be created: volunteers should have a sensitivity to what "homelessness" entails, understand that survey questions may actually induce harm, and act through a trauma-informed lens. The consequences of hidden biases and assumptions volunteers may hold must be highlighted.[5] Training for surveyors should also emphasize how individuals approach and build rapport with those experiencing homelessness in order to ask these sensitive questions appropriately.

In order to cover extensive amounts of material, part of the training, or introductory materials, could be provided online, allowing the volunteer to review the information at home. In Berkeley, Alameda County, volunteers watch a YouTube video before attending a one-hour training session.[liv] These in-person sessions are offered in multiple locations throughout the county.

Research and monitor which survey versions typically produce data discrepancies and then target training in those areas. With three types of surveys (long, short, observational), it may prove useful to understand if one type produces more data discrepancies than the others. Especially as the Hennepin County CoC begins to implement the short version of the survey in the future, the CoC should carefully monitor each type of survey for the number of observations deemed unusable (i.e., removed from the count) and questions with high percentages of missing data. These trends may indicate a need for further training of one type of survey instrument over the others. Similarly, the CoC should also continuously review the survey questions and versions to evaluate the quality of data collected and how those data are used. By maintaining this critical lens over time, the CoC can make better informed decisions about how to revise the surveys and how to reduce the burden of the PIT count.

Enhanced training about the survey and survey data. The importance of data collection and the accuracy in which it is documented needs to be emphasized during training. Volunteers need to understand, for example, which data elements are required and which are optional, the importance of writing legibly, and when it is appropriate to use the observational form. Without this knowledge, some surveys may have to be removed from the total count. Additionally, an over-reliance on observational

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[5] St. Stephen's has made it a priority to have their staff conduct unsheltered surveys during the night of the PIT count, as a way to maintain a trauma-informed approach to the count. If they would like a different role within the PIT count process, and yet remain in a leadership position, they could be offered the role of training volunteers in sensitivity and trauma-informed questioning.

data has resulted in HUD flagging Hennepin County CoC's outcomes. ICA speculated that volunteers need more training and practice to minimize these data integrity concerns. These findings highlight the need for further training, but also may suggest the need to pair inexperienced volunteers with experienced volunteers for a longer period. Schneider and colleagues recommend that effective surveys should be created and implemented by social workers who are trained in survey methodology. Not only will these surveys be more culturally sensitive, inclusive, and trauma-informed, but it has been shown to increase the accuracy of the count.[lv]

Benefits achieved through these recommendations addressing process coordination, stakeholder outreach, and training could *bolster the PIT count via covering a greater geographic area and improving survey completion rates*. Attaining a better understanding of the suburban/low-density homeless population allows for future sampling and estimating efforts within these areas. Through engaging more volunteers, an increased awareness of the homelessness crisis results, both within the city and suburban areas, potentially leading to further advocacy and support. Engaging other organizations and homeless populations in the process leads to improved buy-in for the PIT count.

Partner with a research organization to leverage knowledge from data experts, streamlining and improving the PIT count process.

One significant barrier to obtaining a more accurate count is the huge time commitment required to coordinate the PIT count. HUD expectations for survey data collection and accounting for all geographic areas within the CoC range, along with service provider priorities to their clients, has created an unsustainable process for the organizations involved in the PIT count. To help alleviate these responsibilities placed on one central organization, one consideration is to **enlist a research/data analysis organization to manage the Hennepin County CoC PIT count.** In addition to independent, outside research organizations, exploring the expertise within academic institutions may also satisfy this need. To develop a partnership, specific tasks to outsource ought to be defined.

Examples of cities successfully relying on outside organizations for help

- Alameda County, CA, engaged Applied Survey Research to help with the technical aspects of the planning process. That included coordination among and within agencies and outreach organizations, recruitment for volunteers and guides, and help with decisions regarding methodology. [lvi]
- Anchorage, AK, enlisted faculty at the University of Alaska who had expertise in survey design and data analysis.[lvii]
- Locally, Wilder uses estimates within their counts throughout the state. If estimating and sampling is of interest for Hennepin County CoC, Wilder expressed a willingness to discuss process and methodology.

By partnering with an organization whose expertise is in data collection, data modeling, statistical estimating, and/or sampling, the CoC would be able to improve their PIT count methods and processes, thus yielding a more accurate count. An established statistical method from skilled researchers could also support improved year-to-year data comparisons. Although this recommendation may incur a financial cost, there is a time savings for Hennepin County organizations by relying on experts with skills to manage and interpret data. As a result, street outreach services can focus on priorities for their clients. Further, *a third party has no vested interest in the outcome of the count*, which results in two tangential benefits. Enlisting an independent third party removes any political or self-serving motivations that might enter into the coordination process deliberately or unintended[lviii] from a more invested party. Additionally, criticisms of the count would be deflected to the third party, away from the CoC and related agencies.

Partner with and value the perspectives of individuals who have experienced homelessness to both uplift the homeless community and develop a trauma-informed approach.

There is arguably no better person to understand homelessness or the PIT count experience than from those who are or have actually experienced homelessness. Those involved with the PIT count process recognize the ways in which the PIT count cannot always count everyone. Hidden homeless groups or individuals may be living in areas where PIT count surveyors are unaware of and, therefore, they are missed. Additionally, individuals responding to the PIT count survey may experience trauma in revealing details to an unknown individual unfamiliar with the homeless experience. Additionally, individuals responding to the survey may have to re-live and re-explain their trauma to a new stranger during every PIT count. It is necessary and important to acknowledge and fairly compensate for the important information that these individuals are providing. Some members of the homeless population indicate hesitancy towards engaging with the PIT count survey if they are not directly financially benefiting. This may be the only direct tangible result they see from the PIT count.

Continue with or expand the financial incentive during the overnight survey and expand it to the day. St. Stephen's currently provides a $5 incentive during the night survey, but not for the day survey. Individuals responding to the survey are providing not only their time but also their life experience. Without their contribution and participation, there is no PIT count. Therefore, it is important that they are fairly compensated for their contribution to the process.

Partner with and hire members of the homeless community to conduct the count. Members of the homeless community will have the greatest insight on where to lead the count, how best to conduct surveys, and how best to engage with the community. Further, *homeless guides may be better able to locate hidden individuals*, thus supporting a more accurate count. Partnering with individuals new to the homeless experience is also important. Overall, this partnership will further contribute to a trauma-informed approach to conducting the survey. A trauma-informed approach will center the experiences of those answering the surveys where they may have experienced current or past violence, chemical dependency, or other trauma. *An individual who has experienced homelessness may be best suited to accurately design a trauma-informed approach* to conducting surveys and offer feedback to PIT count volunteers and coordinators. This approach is vital to ensure that the survey does not further add to the trauma that individuals answering it may already be experiencing.

Benefits to partnering with and compensating homeless individuals will firstly show that their perspective, time, and lived experience is valued through both financial compensation and through meaningful partnerships. More homeless folks may participate in responding to the survey if they are financially incentivized or if they recognize members of their community leading the effort. Importantly, the workforce of those conducting the PIT count will be diversified and will more accurately represent the homeless community at large. Approaching the PIT count process through a community driven and focused lens will show those in the homeless community that their time and experience is valuable and that they are able to work with and lead the effort in conducting the PIT count to better solve the crisis of homelessness.

Conclusion

Despite the best efforts of CoCs, the PIT count is largely seen as a severe undercount of the homeless population.[lix] We know that certain populations are more mobile, transient, living doubled-up or in other hidden areas and therefore, missed in this yearly count.[lx] These barriers have only been exacerbated by the COVID-19 pandemic, as many people are at-risk of losing their housing.[lxi] However, the PIT count estimates provide important information for creating data-driven policymaking. As the Hennepin County CoC prepares for the next PIT count amidst the COVID-19 pandemic, we suggest that the CoC prioritize the following recommendations:

1. **Create a strategically designed sampling approach to use in future iterations of the unsheltered PIT count.** We suggest first categorizing the CoC into regions of high- and low-density areas according to their expected density of homelessness based on past PIT count data and institutional knowledge of their staff and other key stakeholders. Secondly, determine the sample percentages for high- and low-density regions. Other CoCs, for example, sample all areas categorized as high-probability areas and a portion of low-density areas. Lastly, the CoC will need to conduct the count in sampled regions, weighting counts according to the sampling percentages. This approach will require geographic knowledge, planning, and coordination to understand, categorize, and sample regions appropriately. For this reason, we suggest that the CoC view this process as one that can be refined over time. In early years, the CoC may have to rely on institutional knowledge and PIT count data to categorize regional density of homelessness, but the CoC can incorporate additional sources of information over time and as needed. Relatedly, consider **building quality checks into a sampling strategy to help inform ongoing process improvement.** We suggest hiring people experiencing homelessness as decoys or "plants" around sampled areas to help determine what percentage were surveyed on the night of the count. This may help identify gaps in training as well as improve the estimation by factoring in the proportion of those missed during the count.

2. Increase **connection and collaboration** with the network of organizations, agencies, and other stakeholders involved in the PIT count. We heard from multiple respondents that they lack clarity around the roles and responsibilities of CoC leadership. Additionally, they shared conflicting understandings about the purpose of the PIT count—some reported that the purpose of the count is to capture a full census of homelessness in the county while others saw it as a performance measure, suited for capturing trends over time. That said, we suggest that CoC leadership **produce clear, consistent, and ongoing messaging about the PIT count's purpose and the ways in which the data are used**. Additionally, CoC leadership may consider hosting regular key stakeholder advisory meetings to allow other members of the CoC to weigh in about the process and inform discrete tasks, such as the sampling strategy.

3. Use **targeted approaches to increase the number of volunteers**, particularly those who are racially diverse and/or those who have lived experiences with homelessness. As the CoC considers sampling approaches, we suggest that they simultaneously consider ways to leverage existing networks to increase the number of volunteers. In particular, CoC leadership may consider relying on partner organizations to help recruit volunteers and identify people to hire who have lived experiences with homelessness. **Hiring surveyors with lived experiences can help build rapport and buy-in among people being counted.** Additionally, surveyors with lived experiences can potentially provide insights about areas to canvass or where to locate those who are typically considered hidden during the night of the count.

Appendix A: Organizations Participating in Interviews

Organization Type	Organization Name	Number of Staff Interviewed	Involvement with Hennepin County CoC PIT Count
Academic	Individual: Associate Professor Boston University, School of Social Work	1	Indirect
Faith-based, Advocacy: Affordable Housing	Metropolitan Interfaith Council on Affordable Housing	2	Direct
Faith-based, Advocacy: Homelessness	Align Minneapolis	1	Direct
Shelter, Street Outreach	St. Stephen's Human Services	4	Direct
Government	MN Interagency Council on Homelessness	1	Indirect
Government; Research Organization	Philadelphia, PA CoC (volunteer) Researcher with housing expertise	1	Indirect
Government	Hennepin County	1	Direct
Research	Wilder Research	1	Indirect
Technical Assistance	Institute for Community Alliances (ICA): Homeless Management Information Systems Lead Agency	2	Supportive
Technical Assistance	Abt Associates	4	Supportive

Appendix B. HUD Sampling Guidance

More detailed guidance for sampling to conduct the unsheltered PIT count can be found in HUD's sampling manual.[lxii] The overview of these steps provided below is meant to illustrate the process at a high-level, while also highlighting key considerations for designing an approach.

Step 1: Within the CoC's geography, categorize regions according to the expected density of unsheltered homelessness.

Regions or "subareas" should be determined based on expected density of homelessness, which can be determined using a combination of historical data and community knowledge from CoC staff, partner organizations, and local service providers. CoCs can determine their own categories to describe regional density of homelessness, but should include at least three distinct categories (e.g., high, medium, or low density).

To determine regional boundaries, HUD suggests that CoCs consider geographic markers ranging from census tracts and zip codes to major streets and bus stations. Regions do not need to be of uniform size, however, so CoCs should simply use these markers as a starting point, leaving room for adjustments based on stakeholder input. Ultimately, CoCs should define regions in a way that best balances the rates of unsheltered homelessness within each region. *(Note that further details about other sources of data that can be leveraged to predict the expected density of regional homelessness are provided in Figure B1.)*

Step 2: Identify regions with unique populations that must be included in the sample.

Within each CoC, there are likely regions that are unique in terms of their unsheltered homeless population. For example, some regions may have an extremely high density of unsheltered homelessness, or may have unsheltered homeless populations with distinct demographic characteristics (e.g., race/ethnicity). HUD refers to these unique regions as "certainty regions" that should always be included in the sample, as their uniqueness means that it would be challenging to select another sufficiently similar region as a basis for estimation.

Step 3: Determine sampling percentages for each type of region.

Using the regional categories developed under Step 1, the CoC should next determine sampling percentages for each type of region (e.g., high, medium, or low). These percentages will dictate how many regions from each category will be sampled and surveyed on the night of the count. HUD does not have specific guidance regarding what percentages of each category should be sampled, but generally recommends sampling the highest possible percentage of high-density regions (e.g., 50%). For medium- and low-density regions, they recommend sampling a lower percentage (e.g., 25%), but not so low that the counts from these regions cannot be used for meaningful estimation.

Step 4: Using sampling percentages, randomly select regions within each category.

Using the sampling percentages determined under Step 3, randomly select the appropriate number of regions from each category. If a CoC categorized 12 regions as high-density and decided to sample 50% of high-density regions, for example, they would then randomly select 6 of those regions to conduct the unsheltered PIT count. Note that any "certainty regions" designated under Step 2 are not part of this sampling process, as these regions are unique and should therefore always be included in the count.

Step 5: Conduct a full census count of unsheltered homelessness in sampled regions.

On the night of the PIT count, the CoC should conduct a complete unsheltered count in all sampled regions as well as certainty regions.

Step 6: Weight the counts from sampled regions to estimate an overall count of unsheltered homelessness.

Weights for the counts from each sampled region can be determined using the sampling percentages specified under Step 3. Weights for each region can be calculated as the total number of regions within that category divided by the number of regions sampled within that category. Those weights can then be multiplied by the total count from all sampled regions in that category to derive an estimate for the overall count in all regions within that category. For example, if a CoC designated 12 regions as high-density and sampled 6 of them (50%), the weight for the high-density count across all sampled regions would equal to 2 (12 total regions divided by 6 sampled regions). If the CoC counted a total of 200 individuals across those 6 high-density regions on the night of the PIT count, the estimate for the overall count after applying the weight would be equal to 400 (200 counted individuals multiplied by the weight of 2). This process can then be applied for each category of region to determine an estimate for the overall count of unsheltered homeless across the CoC's entire geography.

Figure B1. Using Secondary Data and Statistical Modeling to Estimate Homelessness and Inform PIT Count Methods

Most CoCs rely on historical PIT count data and the insights from community stakeholders to predict the density of regional homelessness and develop a sampling approach. However, research on the causal determinants of homelessness points to other factors, ranging from housing costs to the adequacy of social safety net programs, that may also be useful in predicting and estimating homelessness. For CoCs using sampling to conduct the unsheltered PIT count, these predictors could provide valuable, additional information to determine the relative density of homelessness in certain areas and inform geographic boundaries for sampling regions. Some in the field have further leveraged secondary data to statistically model and estimate homelessness. Although these approaches are beneficial in that they do not necessitate primary data collection (e.g., surveys of people experiencing homelessness), it is important to note that they do not align with HUD's PIT count requirements. As such, CoCs can use statistical modeling techniques to supplement and enhance the PIT count, but not to replace it. Potential sources of secondary data that could be used to inform sampling are outlined below. If the CoC wishes to pursue more statistical modeling approaches, further research on those approaches would be needed.

Secondary data sources

A recent analysis by Byrne and colleagues (2012) suggests that the structural and community determinants of homelessness can be best understood according to the following factors.[lxiii] The overview provided below draws largely on their analysis, but also incorporates relevant findings and examples identified through our interviews with experts and review of the literature.

Housing market data, transience, and evictions. Many in the field have pointed to housing market data as a strong predictor of homelessness. Researchers have used publicly available data including the percentage of renter households, number of subsidized or low-rent housing units, housing costs (e.g., Zillow Rent Index[lxiv]), rent-to-income ratios, and others to estimate both sheltered and unsheltered homelessness.[lxv] One study found that transience, defined in this case as the proportion of people who have recently moved as well as the availability of highways and public transit, is also associated with homelessness, perhaps because areas with high mobility have more competitive housing and labor markets.[lxvi] Likewise, Phillips (2020) used publicly available data from consumer reference companies, which track housing moves throughout the entire United States for most of the adult population, to predict housing instability, which may also be useful for understanding fluctuations in homelessness. Some data may even be available at the local level. For example, the Court Services Division of the Minnesota Judicial Branch collects ongoing data about eviction filings in Hennepin County. Similar data are compiled into the Hennepin County Eviction Dashboard.

Economic conditions. Because homelessness and poverty are inextricably connected, data on local economic conditions may offer a useful source of information to better understand and predict homelessness. Many studies have found that both poverty and unemployment rates are correlated with homelessness, and as such, these factors may be an appropriate proxy for local economic conditions. In our review of the extant literature, we found that several studies used data from the Census or American Community Survey to analyze these factors.[lxix]

Community demographic characteristics. In their review of the extant literature, Byrne and colleagues caution that findings regarding the predictive power of communities' demographic compositions are mixed, and thus should be used in practice conservatively. However, they cite some

studies finding that factors such as racial/ethnic composition, the percentage of female-headed households with young children, and the percentage of single-person households are all positively associated with rates of homelessness.[lxx]

Weather patterns and climate events. As Bryne discusses, several studies have found a relationship between weather patterns and rates of homelessness—specifically, higher temperatures and less precipitation are both associated with increased rates of unsheltered homelessness.[lxxi]

Other Potential Sources of Information

In our interviews with experts and review of the extant literature, we also identified several other sources of information that communities are using to understand regional homelessness. Although there is limited research on these applications, CoCs interested in using a sampling approach within their PIT count and/or developing statistical models to estimate homelessness should explore the feasibility of leveraging these and other creative sources of information.

Canvassing the county by vehicle to identify high-density regions and track variation over time. Although there is limited data regarding how regional density of homelessness fluctuates day to day, some preliminary research suggests that homelessness "hotspots" can change quite rapidly.[lxxii] To capture and incorporate these fluctuations into PIT count sampling approaches, CoCs could canvass regions of the city in the weeks leading up to the PIT count. Further, the CoC could borrow methods to do this preparatory canvassing from other PIT count approaches discussed in this report. For example, the single-team approach from Berry's capture-recapture methods involves a team of four people counting individuals experiencing unsheltered homelessness from a slow-moving vehicle. The CoC could use this approach, even without conducting repeat observations, to gain a general understanding of where unsheltered homeless populations are congregated in the weeks leading up to the count.

Using HMIS data. In response to COVID-19, a CoC in Connecticut did not hold a volunteer-based count. They pivoted their methodology to review data from their year-round data collection efforts captured in their statewide HMIS. Additionally, they provided a data collection option for non-HMIS users via a paper and online form. Their team then created a process to verify which clients were unsheltered on the actual night of the count by engaging outreach workers and shelter staff to verify within 14 days of the PIT.[lxxiv] The CoC should consider this and other innovative ways to leverage HMIS data as a way to supplement and improve the accuracy of the PIT count.

Mapping "311" calls reporting individuals experiencing homelessness and/or encampments. To better understand the location and determinants of homelessness in New York City, researchers plotted the latitudinal and longitudinal coordinates of "311" calls made about someone perceived as being homeless or an encampment. By tracing these calls, they found that unsheltered homelessness is most common in neighborhoods with more public transportation, homeless shelters, and supportive housing beds, restaurants, and places near the city center.[lxxv]

Work with Head Start and Early Head Start providers to better understand youth and family homelessness. Because Early Head Start (EHS) and Head Start (HS) prioritize their programming for young children experiencing homelessness, they also collect data about youth and family homelessness as part of their Program Information Report (PIR).[lxxvi] Leveraging local EHS/HS data along with their knowledge of families experiencing homelessness may provide CoCs with more information about this sub-group.

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