Measuring the Quality of the Homeless Point-in-Time Count Using HMIS Data

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Executive Summary

This paper presents methods to measure the quality and accuracy of a community's unsheltered homeless Point-in-Time count (the number of persons living homeless and unsheltered on one given day) using data from its Homeless Management Information System (HMIS). While numerous researchers and advocacy organizations have developed technical assistance guides to implement a more rigorous homeless Point-in-Time (PIT) count among the unsheltered population, little to no methods have been proposed to analyze the quality of the count or to attempt to quantify empirically problems of undercounting unsheltered persons. Typically, the unsheltered PIT count number is viewed as an underestimate, since it is known that all persons homeless cannot be accurately counted using a one-day, canvassing approach. The extent of the error of the omitted persons has also received little attention.

This paper uses results from the 2013 Honolulu (Island of Oahu) Unsheltered PIT count and data on unsheltered persons recorded by outreach homeless service providers into the Hawaii HMIS over the 2012 to 2013 time period. Key methods proposed and results using the Hawaii data are provided below:

1) Tabulation of the percentage of unsheltered persons with complete name information (first and last) collected through the PIT count. The collection of complete names is necessary to link persons found in the PIT count with names recorded in the HMIS database. This linkage is a pre-requisite for subsequent quality analyses. In the 2013 Hawaii PIT count, a total of 1,087 out of 1,375, or 79 percent, of the persons encountered provided complete names information.
2) Tabulation of the percentage of PIT persons with existing, historical data in the HMIS system. Before determining an estimate of persons missed by the count, it is necessary to calculate the number of persons found through the PIT count that have existing HMIS records. This computation is also a measure of the quality of the community's ability to engage with unsheltered persons and to record their full and accurate information in the HMIS. In the Hawaii sample, a total of 637 out of the 1,087 PIT count persons with complete names, or 59 percent, had historical records in the HMIS.
3) Comparison of the number of persons with outreach encounters recorded in the HMIS during the PIT count period who were also canvassed in the count. This check can be seen as a basic measure of count implementation quality, since all individuals recorded as homeless in the HMIS on the day of the count, or the days of the count period, should be included in the PIT count. Hawaii data showed only 216 out of 537 persons, or 40 percent, with encounters entered in the HMIS and recorded as literally homeless during a seven day period starting on the PIT count date were also found through the PIT count.
4) A two-by-two cross tab that distributes the number of persons found in the PIT count with the numbers of persons with encounters recorded in the HMIS within a 28 day period ranging from 14 days prior to the PIT count date and 13 days after the PIT count date. While the PIT count can be seen as a tight net in which to count unsheltered homeless persons, the 4 week period casts a wider but prudent net to estimate the number of unsheltered homeless on a given date. The 2 x 2 cross tab distributed persons into four quadrants based on whether or not they were found in the PIT count and had an HMIS-recorded encounter.

Data from Hawaii shows that a total of 1,962 persons (treating the 288 persons without names information as missing) were found in either the PIT count and/or the HMIS. A total of 291 (15%) were found in both the PIT and HMIS sources, a total of 796 (41%) were found in the PIT but not in the HMIS, and 875 (45%) were found in the HMIS but not in the PIT. This analysis supports an undercount between 875 (maximum) and 587 (minimum) or between 40 to 59 percent higher than the reported unsheltered count. Augmenting the PIT count number of 1,450 persons (adults and children) with this undercount estimate would produce an unsheltered homeless count of between 2,052 and 2,340 person. A community's goal and a measure of PIT quality should be to maximize the match percentage of those found in both the PIT and HMIS.

5) The study also suggests methods to estimate quadrant four of the 2 x 2 table which is left as the null set since it denotes persons found neither by the PIT count nor the HMIS. While the estimate can be known as "greater than zero," the estimate of this number, or reducing this number to zero with confidence, is essential in generating more accurate counts. While replication of the PIT count (in the following week) is one method, this method is typically quite unfeasible due to capacity constraints in most communities. Replication of a sample of key geographic areas is one suggested method, since many unsheltered persons remain in unsheltered encampments for a significant period of time. Burden of recounts in a smaller area is more feasible, especially key public areas of community concern.

The authors highly recommend using an expansion of the Hawaii PIT count method to estimate Quadrant 4 by tabulating the number of new unsheltered homeless persons entered into the HMIS for a three-month period following the PIT count date that provides self-reported evidence that their tenure of homelessness in the community existed prior to the PIT count date and they were not in an emergency or transition shelter on the PIT date.. This method could provide an estimate of those not captured on the PIT date, while maintaining some level of methodological rigor. A three-month period of time is not dissimilar and is less problematic than survey methods that ask persons to recall drug or alcohol behavior.

The authors highly recommend that HUD as well as individual communities adopt and refine these measures of PIT count quality for their own communities. The authors welcome additional research on the methods proposed in this paper and additional empirical tests using PIT and HMIS data in other communities. Replication can help develop benchmark levels denoting low, medium, and high quality in areas such as names collection and HMIS/PIT linkage rates.

The authors also note that the importance of the PIT count has not been met with either a funding level or the technical support needed to complete accurate counts. The fact that the count remains only a bi-annual requirement by HUD speaks to the low level of priority assigned to a data point of such importance. Increasing the frequency of the unsheltered is essential in developing more accurate counts by increasing the skill and capacity of the local communities.

The use of these counts for national plans to end veteran homelessness or reduce chronic homelessness underscores the need to increase knowledge and evaluation tools to implement and evaluate the results of these counts.

Measuring the Quality of the Homeless Point-in-Time Count Using HMIS data

INTRODUCTION:

Communities receiving Homeless Assistance funding under the McKinney-Vento Act are required to complete a Point-in-Time count of homeless persons at least bi-annually. These homeless counts enumerate two populations: 1) Sheltered homeless persons, those living in Emergency or Transitional Homeless Facilities, and 2) Unsheltered homeless persons, often known as "street homeless" who are formally defined by the U.S. Department of Housing and Urban Development (HUD) as "living in a place not fit for human habitation."

While enumeration of sheltered homeless persons can be performed with a high level of accuracy by collecting the nightly census of each emergency or transitional facility, obtaining an accurate count of the number of persons experiencing unsheltered homeless faces numerous challenges. Research on the difficulties of performing an accurate count and recommendations to improve unsheltered count accuracy have been the subject of multiple technical assistance publications from HUD, research institutes including The Urban Institute, and key advocacy groups such as the National Alliance to End Homelessness (NAEH).

The current strategy for completing the unsheltered count involves the canvassing of all areas of the communities with special attention to known areas where homeless persons congregate (parks, underpasses, etc.). Communities typically use a combination of homeless service provider staff and trained volunteers to complete the one-night canvas. Suggested hours to complete the census count are early morning, but vary depending on the community. A brief questionnaire that includes basic demographic questions (name, sex, age, veteran status, disability) is completed with each willing participant who identifies as homeless through pre-screening questions or obvious markers of unsheltered homelessness (e.g. unsheltered encampment using tents, shopping carts, boxes, etc.).

Due to the infrequent nature of the count (some communities do complete a count yearly) and the nature of trying to correctly identify every person who is living unsheltered, the quality of many PIT counts is undetermined. In addition, some communities have changed their methodology over the years making year to year (or biennial count comparisons) difficult and often meaningless. Decreases or increases in unsheltered homelessness cannot often be attributed to real decreases or increases in the true unsheltered count.

While technical assistance guides for improving the count have been disseminated, and mandates by HUD to enforce a consistent methodology have been implemented, there remain few tools or methodologies to analyze the accuracy of these counts. The capacity of the homeless service provider community is often too limited or without expertise to complete follow-up studies of the quality of their counts. Quality is generally only assessed by the efforts put forth with the count, often measured simply by the number of people involved, the number of geographic areas completed within the count, and a general sense of the count number compared to key informants (major service providers) in the community.

History of Hawaii's Point-in-Time Counts:

Biannual PIT counts were conducted on the islands of Oahu, Maui, Kauai, and Hawaii from 2003 through 2009. From 2010 onward, the State of Hawaii elected to adopt an annual PIT count. Prior to 2009, the count relied on estimation (including combinations of physical enumerations and estimations) that many homeless service providers in Hawaii believed underestimated the total number of homeless and underlying disability characteristics. Table 1 below summarizes the totals found in State of Hawaii PIT count since 1999. Increases in sheltered homelessness have been documented to be related to the capacity of these facilities which have greatly increased since 2003, with the opening of more than eight new facilities where persons residing are defined as "homeless." Since increases in homelessness may have occurred between 1999 and 2003, the doubling of the homeless count from 1999 to 2003 is thought to be primarily due to significant methodological differences. The authors are aware of a homeless census count completed in 1991 that found between 5,000 to 6,000 homeless sheltered or unsheltered. A copy of this report cannot be located.

Table 1: State of Hawaii Homeless Sheltered and Unsheltered Counts 1999-2013

Year	Methodology	Sheltered		Unsheltered		State Total
		Oahu	Rural Counties	Oahu	Rural Counties	
1999[1]	Estimation	934	1,018	869	350	3,171
2003[2]	Estimation	1,244	779	2,053	2,052	6,029
2005[3]	Estimation	1,525	1,063	1,400	1,522	5,510
2007[4]	Estimation	1,957	746	1,793	1,565	6,061
2009[5]	Actual Count	2,445	823	1,193	1,321	5,782
2010[6]	Actual Count	2,797	738	1,374	925	5,834
2011[7]	Actual Count	2,912	720	1,322	1,234	6,188
2012[8]	Actual Count	3,035	691	1,318	1,202	6,246
2013[9]	Actual Count	3,091	654	1,465	1,125	6,335

The methodology of the current annual PIT count is a variant of the HUD-recommended methodology, which suggests the selection of one night in the last ten days of January to measure unsheltered homelessness. For the unsheltered count, the City received HUD's permission to deviate from the conventional one-night unsheltered PIT Count methodology and to instead conduct a physical count using a seven-day period from Wednesday, January 23, 2013 to

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[1] Market Trends Pacific, Inc. 1999. Homeless Needs Assessment Study.
[2] SMS. 2003. Homeless Point in Time Count Report.
[3] Market Trends Pacific, Inc. 2005. Methodology and Results of the 2005 Homeless Point-in-Time Count.
[4] SMS. 2007. State of Hawaii: Homeless Point-in-Time Count Report.
[5] State of Hawaii. 2009 Hawaii Point-in-Time Homeless Count
[6] State of Hawaii. 2010 Hawaii Point-in-Time Homeless Count
[7] State of Hawaii. 2011 Hawaii Point-in-Time Homeless Count
[8] State of Hawaii. 2012 Hawaii Point-in-Time Homeless Count
[9] State of Hawaii. 2013 Hawaii Point-in-Time Homeless Count

Tuesday, January 29, 2013. These dates fell within the last ten days of January 2013 as mandated by HUD.

The key methodological difference of the Hawaii count required that all unsheltered persons encountered by field enumerators during the seven day physical count were asked "*Where did you sleep this past Tuesday, January 22nd?*" While the majority of canvassing took place on the first day of enumerating (Tuesday night, January 22nd), additional encounters with unsheltered homeless, either at drop-in centers, emergency shelters, or other unsheltered areas were able to augment the count if individuals identified themselves as sleeping in a location deemed unsheltered and within the federal definition of homelessness.

Field enumerators also asked other survey questions that were based on criteria established in HUD's *Guide to Counting Unsheltered Homeless (*See Appendix 1: Hawaii Homeless PIT Count Survey*).* The surveys collected for unsheltered persons on the night of January 22, 2013 were entered into the PIT count module of the HMIS. After all surveys were entered into the PIT module, the data were cleaned, unduplicated and analyzed to obtain the statistics required by HUD and referenced in this report.

Service providers and advocates have acknowledged problems with the completion of the PIT unsheltered count, regardless of count methodology (1 day versus 7 day), although no empirical studies (preceding or as follow-up) have been undertaken to measure the quality of these counts in Hawaii. Efforts to improve the quality of the count have generally been limited to de-briefing focus groups of staff and volunteers soon after the PIT count has ended and short training sessions prior to each new PIT count in early January. PIT numbers are typically released to the media during May of the count year.

Hawaii Homeless Management Information System (HMIS):

Hawaii's HMIS has an extensive outreach component that houses intake, exit, and encounter records from participating outreach providers. The vast majority of records collected belong to unsheltered homeless; however, there are some programs that minimally focus on sheltered or at-risk clients and enter these households into the HMIS outreach section.

Currently, the outreach component of the HMIS contains data from 19 different organizations encompassing 26 programs. The FY 2012 Homeless Service Utilization Report prepared by the UH Center on the Family cited 7,804 distinct clients as being served by these programs[10]. Of the 6,497 households comprising the 7,804 clients, 5,415 (83%) were identified as being unsheltered, while 948 (15%) were either sheltered or at-risk and receiving "outreach" or "drop-in" services. The remaining two percent were from an unknown setting.

Study Focus

The intent of this analysis is to demonstrate methods that can measure the quality of the annual PIT count using data on unsheltered homeless persons entered into the Homeless Management Information System (HMIS) as well as data from the PIT count that can be shown

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[10] 2012 Hawaii Homeless Service Utilization Report. Center on the Family. University of Hawaii-Manoa. 2012.

to be correlated to accuracy. This study does not make any attempt to measure the accuracy of a 1-day count period (HUD recommended) versus the 7-day enumeration period employed by the State of Hawaii.

This study utilizes data from the State of Hawaii HMIS together with raw data from the Hawaii PIT count completed in January 2013. Since the State of Hawaii requires collection of data on unsheltered homeless individuals on a continuous basis and since coverage by outreach providers is significant due to the State and County funding provided, the Hawaii HMIS offers a large, mostly untapped resource, to measure the quality of the PIT count.

ANALYSIS

Collection of Names during Point in Time Count

The critical data that can link the homeless PIT count with HMIS data is the collection of an accurate first and last name. Collection of data on the age or date of birth of the unsheltered person can also be helpful if common names (e.g. Richard Johnson) occur or if portions of the client's name are missing. Most communities, however, have less than 1% duplicate names which minimizes this linkage problem. Date of birth data collected in the field during the PIT count can also be used as search criteria in the PIT module to identify clients already existing in the HMIS and to help populate the raw PIT count data that is eventually exported for analysis. Ultimately, the extent to which persons enumerated by the PIT can be linked to HMIS records is dependent on accurate and full name (first and last name) information.

Table 2 displays the percentage of names that were gathered during the 2013 PIT count of Oahu in aggregate and by geographic area of Oahu. Overall, full names (first and last) were collected among 79 percent of the 1,375 unsheltered homeless persons identified in the PIT. The 1,375 represents heads of household or other adults in those households that were surveyed, and excludes children that were eventually added to the final enumeration. Significant variation in names collection occurred among the seven areas. Area 7 (Waianae Coast) registered the highest name collection rate at 99 percent, while field canvassers in Area 6 (Upper Windward) were successful only 57 percent of the time. Among the larger geographic areas, Area 1 (downtown Honolulu) had the lowest rate of 67 percent and the greatest number of missing names.

Table 2: Prevalence of Full Name Collection in the 2013 Oahu PIT Count

Area	Total Count	# Full Names Collected	# Missing Names	% With Full Name
1	590	398	192	67%
2	260	202	58	78%
3	64	54	10	84%
4	46	43	3	93%
5	98	85	13	87%
6	21	12	9	57%
7	296	293	3	99%
	1,375	**1,087**	**288**	**79%**

While some data were collected on the 288 persons including first name only, age, self-assessed disability and veterans status, and some physical characteristics descriptions, there is not enough data to confidently link the remaining persons with persons in the HMIS. In comparison, data from the 2012 PIT count revealed a much higher rate of names collection with 89 percent success rate (1,090 out of 1,226 persons).

The low names collection rate in Area 1 significantly diminished the overall rate. Lower rates could be associated with a higher proportion of clients refusing to engage due to mental illness. Lower rates may be also related to the high volunteer to staff ratio of canvassers in an area, since volunteers may be less skilled at collecting information from clients and have less previous knowledge of persons in the area compared to outreach and homeless service staff. The names collection rate without Area 1 was 88 percent, or approximately the 2012 rate. High names collection rates can also be a proxy for selective canvassing where only those persons known are encountered and identified. This problem may help explain the near perfect names collection rate in Area 7. The high rate may also be credible, however, and due to staff and canvassers that are better trained and know the persons living in the area much better than other areas and their canvassers.

Achieving a high complete names rate from the PIT count becomes the key pre-requisite in utilizing the study's proposed PIT quality assessment methods utilizing HMIS information. The lower the names rate collection during the PIT count, the decreased ability to use HMIS-based accuracy methods. The study's authors recommend that HUD include the names collection rate as the first quality measure of the PIT count reported in the annual Continuum application for homeless assistance funding. Appendix II contains the collection rates by provider agencies leading different geographic areas of the count.

PIT Count Persons and Prior HMIS Records

Table 3 below summarizes the prevalence of matching the 2013 PIT names with names of persons previously recorded into the HMIS system due to prior service provision. Overall, less than half (46%) of the adult persons identified in the count had existing service records in the HMIS. This rate includes the 288 with missing names. Excluding persons encountered where names could not be gathered, 59 percent (637 out of 1,087) of persons encountered during the PIT count had prior HMIS records.

Table 3: PIT persons found in HMIS by Area of Oahu

Area	Total	Names and in HMIS	Names and Not in HMIS	% with Names and in HMIS	No Name	Found %
1	590	198	200	50%	192	34%
2	260	178	24	88%	58	68%
3	64	30	24	56%	10	47%
4	46	20	23	47%	3	43%
5	98	45	40	53%	13	46%
6	21	7	5	58%	9	33%
7	296	159	134	54%	3	54%
	1,375	**637**	**450**	**59%**	**288**	**46%**

The most significant finding from this analysis is the fact that 41 percent of all persons identified as homeless who gave canvassers their full name did not have prior records in the HMIS. The 288 persons without names are treated as missing data since they could be in the HMIS but no reliable information is available to link these persons to an HMIS records. However, even if one assumes that these persons have a prior HMIS record, the percentage found in the HMIS would rise to only 67 percent, with a full one-third of PIT count persons having no prior HMIS record of service.

The distribution of linkage rates (% with names and in HMIS) is relatively similar in six of the seven regions, with linkage rates from 47% to 58%. Area 2, which produced a very high names linkage rate, (178 out of 202, or 88%), was primarily collected through a drop-in center in Urban Honolulu where individuals were easily identified as part of the normal drop-in process.

To a large degree, this analysis can be seen as a measure of the performance and coverage of existing outreach services including the diligence of inputting information of unsheltered persons into the HMIS throughout the year. The performance of year-round outreach providers is a critical foundation for improving the yearly count as well as improving any analysis of the accuracy of the PIT count. The study's authors would also recommend that HUD include the percentage of linked PIT unsheltered persons with HMIS records as the second key quality measure required to be reported in the annual Continuum submission for homeless assistance funding.

HMIS Encounters during the PIT Count Time Period

The Hawaii HMIS contains both the intake and discharge dates of clients served by area homeless service providers. Both shelter and outreach providers enter these dates during the program enrollment and program discharge process. The HMIS also contains entry and exit dates of persons and households served by Permanent Supportive Housing, Legal Aid services, and other related services mandated by HUD for HMIS entry.

Clients with a long history of service utilization often have five or more entry and exit dates with one or more service providers over a long period of time. The Hawaii HMIS contains data since 1997 for some providers. Systematic data from nearly all shelter and outreach providers have been entered since 2006. In addition to these entry and exit dates, outreach providers are required to enter a brief set of data including the encounter date for each client encounter. These encounters serve as additional points in time to confirm the housing or homeless status of households served by non-residential programs. Individuals living unsheltered for long periods of time and receiving non-residential outreach services can accumulate over 200 or more encounters since some receive weekly or more services. During FY2012, outreach providers recorded a total of 74,175 encounters for 7,804 unduplicated clients, or an average of nearly 10 encounters per person.

The encounter information in the Hawaii HMIS can be employed as a key tool to measure the quality of the PIT count and specifically the extent to which persons that are identified in the HMIS as homeless were omitted in the official count. PIT canvassing activities

remain separate from the day-to-day outreach service provision activities and associated HMIS data recording.

Encounter data extracted from the HMIS shows that a total of 574 unduplicated persons had service encounters entered into the HMIS during the Hawaii PIT period from Jan 22nd thru Jan 29th. Thirty-seven (37) were recorded with a housing status other than "literally homeless." The expectation would be that 100% of these individuals, less those who had just transitioned to housing, would be included in the point in time count. A comparison of these names and the names found during the PIT count found that only 216 out of 537, or 40 percent, of the 537 persons with service encounters in the HMIS were enumerated in the PIT. A total of 321 persons (60%) recorded in the HMIS as literally homeless were not able to be linked to any person enumerated in the PIT.

While 288 persons were not identified by name in the PIT and could represent a portion of these 321 "missing" persons, the fact that these persons have complete HMIS information would reduce the likelihood, all things equal, of these individuals all being the "missing" persons. In addition, nearly all of these 321 persons were entered into the HMIS by a homeless service agency operating a drop-in center in Area 2 of Oahu, whereas the majority of the non-linkable persons were located in Area 1.

It is unclear why such a large number of persons who had encounter information recorded during the week-long PIT count period were not included in the PIT count. A review of the providers with whom the clients were most recently active revealed that 95 percent of these individuals received services from two agencies – Agency 1: Downtown/Urban Honolulu provider (425 clients) and Agency 2: Leeward area provider (120 clients). A variety of issues could be involved including training of PIT count procedures and inaccurate HMIS housing status data. It is known that Agency 2 has a history of service to many at-risk, but housed, individuals, so it is likely that this categorization issue may account for much of the discrepancy of their clients. Discrepancies attributed to Agency 1 are more problematic, especially given the magnitude of the problem as related above and the reduced likelihood of persons in their system that are not homeless. Generating listings of homeless clients with encounters recorded in the HMIS on the PIT date or during the PIT period (as with Hawaii's 7-day methodology) should be merged with PIT data (be careful to check for potential duplication) as an initial step to reduce this type of omission error. Again, the extent to which names are missing from the PIT count reduces this post-PIT accuracy check.

Comparison of HMIS Cases and PIT Cases

Combining data on PIT persons (with or without prior HMIS records) and HMIS data on active cases with a recorded encounter during the PIT count period, an analysis of the ability of the PIT count to locate al homeless persons active in the HMIS can be completed. The study defined active persons as those individuals recorded as unsheltered homeless with an encounter during the four-week period (January 8, 2013 through February 5, 2013) two weeks prior to and two weeks after the PIT count day of January 22, 2013. While the previous section utilized only the one-week period to identify persons possibly omitted from the study, this analysis used a broader time period to capture persons who may be homeless but not necessarily encountered by service providers during the PIT count period. This problem is typically viewed as the greatest

source of error in PIT counts – persons homeless and unsheltered but not enumerated – since it is physically impossible even with an unlimited number of staff and volunteers to correctly locate all persons unsheltered on any given day in a community, especially a large urban or rural area.

The two-week period before and after the PIT date was employed by the authors since the vast majority persons with bouts of unsheltered homeless who receive services from outreach providers and are entered into HMIS records likely have homeless periods that stretch either 2 weeks after or 2 weeks prior to the count date. Having an actual encounter with an outreach worker in a place not meant for human habitation during this time period can be seen as a proxy of being homeless on the chosen observation date. The one-day enumeration method casts a small net and produces a minimum number, while using a broader time period casts a large net that can produce a maximum number. Replication of this technique by communities using different date ranges are highly recommended by the authors to build knowledge on estimating homeless persons not captured during the PIT count.

This comparative analysis employs a 2 x 2 table for both conceptual and methodological purposes that distributes the total number of homeless persons into the following four groupings. For the purposes of this analysis, the 288 persons without names were excluded from the analysis.

Quadrant 1: Persons Found in PIT and Active in HMIS
Quadrant 2: Persons Found in PIT and Non-Active in HMIS
Quadrant 3: Persons Not Found in PIT and Active in HMIS
Quadrant 4: Persons Not Found in PIT and Non-Active in HMIS

Figure 1 below shows the data available from the Hawaii HMIS and PIT using a 2 x 2 distribution framework.

Figure 1: Two-by-Two Analysis of PIT and HMIS Data

ACTIVITY in HMIS during PIT time	PIT count		
	Found	Not Found	TOTAL
Active	Q1 291 *(15%)*	Q2 875 *(45%)*	1,166 *(60%)*
Non-Active	Q3 796 *(40%)*	Q4 0 *(0%)*	796 *(40%)*
TOTAL	1,087	875	1,962

The table shows that a total of 1,962 were identified as homeless and unsheltered from either the HMIS records or the PIT count. A total of 1,166 were identified as active in the HMIS during the four week period among which 875 persons (40%) were active in the HMIS but not found in the PIT count effort. In addition, a total of 796 persons (45%) found in the PIT but not linked to an HMIS record. A total of only 291 persons (15%) of these individuals were found in the PIT count and were active in the HMIS during the four-week study period. The lower right

quadrant (Q4) denoted persons not enumerated in the PIT and not recorded in the HMIS. Estimating this quadrant will be discussed in the next section.

A separate validity analysis of data from the two week period before and after the PIT count date shows that at least 90 percent of the sample had encounters before and after the PIT count which provides strong evidence that most, if not all, of these persons were, in fact, homeless during the PIT count date. This analysis included persons active during the four week period that entered the system during the two week period after the PIT date. An analysis of 50 persons from this time period showed that at least 70 percent of this subsample gave corroborated information that their homelessness had lasted at least two weeks, covering the PIT count date.

In review, this analysis shows that the true PIT unsheltered count may be underestimated by as much as persons as 875 persons, increasing the count from 1,465 to 2,340. Even if all of the 288 persons without identifying names were really a subset of the 875 persons, the number omitted as identified by the HMIS would still rise by 587, or more than a third higher than the reported number. It is unlikely that all 288 persons were already in the HMIS during the four week period. Most likely about 50 percent were recorded, since that is the general ratio of persons found in the HMIS among those from the count. It can be argued that those persons without information are less likely to have active HMIS information for the same reason they would not divulge their information to PIT count canvassers.

The fact that only 291 persons among the 1,962 (15%) were found in both the PIT count and the HMIS using the four-week interval period is highly problematic and provides further evidence of significant problems in all three key PIT areas: 1) Validity of the count, 2) Execution of PIT count procedures, and 3) General HMIS accuracy.

Further Estimation of the Homeless PIT Count

Quadrant Four (Q4) data can be seen as the key problem for unsheltered counts, in general, even when using HMIS data for improved accuracy. The analysis above assigns the quadrant a magnitude of zero, while assuming that the true number is at least 1 unless a perfect census was completed.

A practical approach to estimating Q4 is the degree to which replication of counts in time periods close in proximity (they eliminate errors due to real changes in homelessness) can produce identical listing of persons. This study uses the HMIS data as a "second count". If a third count yields additional persons that can be corroborated as homeless during the same period and not yet counted, then those individuals would fall into Q4.

On-going HMIS recordkeeping can also produce updates to Q4 by adding individuals encountered and newly entered into the HMIS with information that verifies they were homeless during the PIT count but not enumerated at the time of the PIT. This method is an extension of the Hawaii methodology. The authors would recommend that HUD ask sites to report the number of new unsheltered individuals entering the HMIS system for a period of up to 3 months past the PIT date and the number (and percentage) of these new entries that report being homeless in the PIT community at or prior to the PIT count date. Performance would be

measured by reducing the percentage of new unsheltered persons that should have been captured at the time of the PIT count.

The 2x2 distribution above can be compared with an ideal distribution where all cases would be located in Quadrant I with no cases found in Quadrants 2 and 3. This situation would show a perfect set of matching cases between the PIT count and the HMIS. The congruence percentage in Hawaii for 2013 has been computed as 15 percent. This percentage is only one dimension of an accurate count, since the number and ratio of cases located in Quadrant 4, which can only be estimated, denotes the error in the count. Again, for our initial analysis, the authors have not attempted to estimate Quadrant 4.

METHODOLOGICAL CONCERNS:

The two primary methodological concerns of the study stem from the following: 1) The 288 persons counted but not identified by name in the PIT count, and 2) The reliability of the homeless status of persons recorded in the HMIS outreach section.

While identifying information on the 288 persons would have enhanced the ability to determine the accuracy of the PIT count, the finding that 288 persons out of 1,375 heads of households did not have identifying information to link these records to the HMIS demonstrates the importance of this PIT characteristic. The further analysis of the variation in names collection among areas enumerated adds a further dimension to assessing quality and training needs of the PIT count. With respect to estimation and analysis, the 288 "missing" cases were taken into account with respect to any re-estimation of the PIT count.

The more problematic issue that could not be completely controlled for is the extent to which the HMIS is accurately identifying individuals as homeless since providers are also entering persons who are housed, though at-risk of homelessness, into the outreach section of the HMIS. Furthermore, due to the long duration of many persons active in the Hawaii HMIS outreach database, the existing information on homeless status may not be current. The encounters data used in this analysis are susceptible to this type of error. In their roles as administrators of the HMIS, the authors have recently modified the HMIS encounter information to include an updated homeless status report to minimize this source of error and a report function to track homeless status among unsheltered encounters. Training of providers inputting information is necessary to ensure data recorded are reliable.

Recently, the authors in conjunction with Hawaii Homeless Service Providers have added data fields that require review and input of the homeless status at the time of each encounter instead of just at the time of initial intake. Further validity checks of data being entered and more frequent corroboration of the homeless status of unsheltered clients will reduced the error associated with this issue. Ensuring that people listed as homeless in the HMIS system are in fact homeless is a fundamental issue of validity that all communities need to address.

CONCLUSIONS & RECOMMENDATIONS

This study yielded a numbers of practical methods using HMIS data that can measure the accuracy of the homeless PIT count and provide measures of quality of the implementation and execution of the PIT count. Using the Hawaii 2013 PIT count data and Hawaii HMIS data to demonstrate methods of analyzing quality and accuracy, the study also found significant sources of error in the most recent 2013 Hawaii PIT count execution.

Specific to the analysis of the accuracy of the Hawaii 2013 PIT count, the study results show that when comparing PIT enumerated data with HMIS data the PIT count may have underestimated the true count by as much as 875 persons. This number represented the number of persons found in the unsheltered HMIS database that were active (had recorded encounters) during the PIT count period but not found by PIT enumeration. An analysis of the encounter data on unsheltered persons in the HMIS found that 321 persons with outreach encounters during the 7-day PIT count period may have been omitted from the PIT count. This finding raises even more serious questions about the training procedures of staff and volunteers completing the PIT count.

Since full names were not collected on 288 persons from the PIT count, the above undercount estimates may be biased upward due to this missing data that could be linked to the 875 persons (4 week time period) or the 321 persons (1 week time period). Furthermore, the study acknowledges the known problem of undercounting people not found or identified by either method (HMIS or enumerated in the PIT) denoted by Quadrant 4 in the 2 x 2 framework presented in the study.

The paper developed several measures of PIT count quality which can utilize the ability of the HMIS to measure the efficacy of the count. These measures include:
1) Percentage of persons enumerated by the PIT count with complete name information (first and last name) which is necessary to link the PIT count with HMIS information.
2) The percentage of persons found in the PIT count that had active HMIS records during the PIT count time period. Either defined as "open and active" or defined as the authors have with a recorded encounter within a period of 14 days before or after the PIT date.
3) Reviewing the listing of unsheltered persons in the HMIS data set with encounters on or during the PIT count period and ensuring that these persons have been counted during the PIT count if they are truly in places not meant for human habitation
4) Reporting a 2 x 2 grid showing the distribution of persons found with both PIT and HMIS sources.

The paper highly recommends that other researchers duplicate these methods within other communities that have significant outreach coverage recorded in their HMIS. The additional recommendation to estimate Quadrant 4 (not found in PIT or HMIS) will be reviewed again by the authors in a coming supplement to this paper. The authors encourage other communities to perform replicated counts, compare the names found in counts over a multiple year method, and other creative and empirical methods to estimate the true unsheltered count.

In large geographic areas, the authors also recommend to delineate rigorously bounded areas and to focus on changes in specific known areas with congregate homeless and to monitor the change in the population, rather than just simply focusing on trying to "count everyone

everywhere." The authors are also advocating for the use of lists of active records of unsheltered clients recorded in the HMIS as a starting point for canvassers (similar to addresses used by census workers) with the task to corroborate the list already in the HMIS.

Inclusion of HMIS quality data in yearly HUD Homeless Assistance applications by communities is highly recommended by the authors. Increasing the use of the HMIS to calculate unsheltered homeless at any point in time can be increased in similar fashion to the way the HMIS is used to draw point-in-time data on any day of year. The growing wealth of data on unsheltered homeless persons recorded in communities HMIS databases offers opportunities to apply the paper's recommended approaches.

The Homeless PIT count continues to fall short in methodological rigor for many reasons. Funding to support PIT counts has certainly been a lacking element to support better and more frequent counts. The Hawaii budget is less than $20,000 annually. The infrequent occurrence of the PIT count (yearly) does not provide enough repetition to allow communities to gain expertise in improving the execution of the count. The gravity of the unsheltered homeless should be prioritized to the level given to unemployment data, where monthly numbers are reported, to allow more regular monitoring of changes. Mandates to sequester a portion of HMIS funding to support a more rigorous PIT count including more frequent counts should be prioritize by HUD and advocated for by key groups like the NAEH.

There remains a need for more research and analysis on the PIT count from more communities. The experience of the authors' participation in both the PIT count and as administrators and consultants for the Hawaii HMIS have helped to provide the insight necessary to look for ways to improve the conceptualization of the count, the quality of the count, and the execution of the count. The politicized nature of the count results unfortunately hampers homeless service providers' enthusiasm for the count. Key advocacy groups like the NAEH are largely silent on the need for better and more frequent counts. The empirical nature of the count also tends not to attract much interest by a sector that is not very analytically-oriented. Despite these barriers, it is incumbent upon communities to serve their constituents more effectively by improving the execution and accuracy of this important social welfare measure.

The utilization of these counts to measure the success of key national and local initiatives to end veterans homelessness and reduce chronic homelessness demands more rigor to the count, which can only be achieved through greater frequency of counts and additional tools to execute a better count and to measure the quality of the results.

About the Authors

Carlos Peraro, B.S. *has worked in the field of homelessness in Hawaii for 10 years. Mr. Peraro served as Data Analyst and HMIS specialist for The Institute for Human Services, Hawaii's oldest and largest emergency shelter. He also worked for the State's Homeless Programs Office from 2008 to 2009. In 2009, he established C. Peraro Consulting, LLC. He has served as a lead administrator of the State of Hawaii Homeless Management Information System (HMIS) since 2008. Mr. Peraro lives on the Island of Oahu.*

Michael Ullman, Ph.D. *has worked in field of homelessness, poverty and health services to low-income populations as both a researcher and non-profit administrator for nearly 20 years. He has co-authored peer-reviewed articles in the fields of homeless services, disability and law. Dr. Ullman has worked with the Hawaii HMIS since 2001 as well as nationally as an HMIS consultant from 2004-2005. He currently serves as National Development and Program Evaluation Specialist for U.S.VETS, a national non-profit serving military veteran families experiencing homelessness and housing instability.*

Dr. Ullman has made innovative contributions to the homeless services field both empirically as the first researcher to use PIT counts to generate national homeless estimates, and artistically as the creator and author of "Truly Dually: A Musical about Homelessness," a Broadway-quality musical about the stigma and solutions to chronic homelessness. He is currently working on a manuscript about the deleterious impact of HUD housing policy on the creation and promulgation of modern homelessness. Dr. Ullman lives in Baltimore, MD.

USE THIS FORM IF THE CLIENT IS **_PART OF A HOUSEHOLD_**
(For our purposes households are defined as: an adult with at least one child under 18, adult couples with no children, groups of adults, and children-only household configurations)

2013 City & County of Honolulu Homeless Point-in-Time Count Survey

Interviewer's Name: _____*Agency/Group:*
_____

Site of Interview (Actual Location): _____ *Date:*
_____

<u>Introduction Example:</u> "Hello, my name is _____, and I am an outreach worker/volunteer. We are doing a short survey for an annual homeless count, and your responses will help fund homeless services throughout Hawaii. All of your answers will be confidential. Can I ask you a few questions?"

"Are you living alone or with others?"
To determine whether to use <u>SINGLE</u> or <u>HOUSEHOLD</u> form

"Where did you sleep this past Tuesday, JANUARY 22nd?"
_____

**If answer is sheltered (e.g. house, shelter, hospital, jail), End Survey.
Please try to be as specific as possible.**

"What area of the island did you sleep?"
_____

Enter Area/Region # (1–7)
[Map on back]

1. Including yourself, how many ADULTS are in your household? _____

2. How many CHILDREN UNDER 18 are in your household? _____

3. How long have you been continuously homeless this time?
☐ Less than 1 year   ☐ **1 year or longer*** ☐ Unknown   ☐ Refused

4. How many times have you been homeless in the past 3 years?
☐ 1–3 times   ☐ **4 or more times*** ☐ Unknown   ☐ Refused

5. HEAD OF HOUSEHOLD

First Name: _____*Last Name:* _____

Date of Birth: _____/_____/_____OR if DOB refused, *Age:* _____

Gender: ☐ Male   ☐ Female   ☐ Transgender   ☐ Unknown/Refused

Have you served in the U.S. Armed Forces? ☐ Yes   ☐ No   ☐ Unknown   ☐ Refused

Were you activated, into active duty, as a National Guard member or Reservist?
☐ Yes ☐ No   ☐ Unknown   ☐ Refused

Do you have a mental health disability that limits your ability to work or perform activities of daily living? ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Do you have an alcohol or drug problem that limits your ability to work or perform activities of daily living?   ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Are you currently living with HIV/AIDS?   ☐ **Yes***   ☐ No   ☐ Unknown
☐ Refused

Do you have a physical, developmental, or other disability that limits your ability to work or perform activities of daily living?   ☐ **Yes***   ☐ No   ☐ Unknown   ☐
Refused

6. OTHER ADULT IN HOUSEHOLD #1:

First Name: _____   Last Name:
_____

Date of Birth: _____/_____/_____ OR if DOB refused, *Age:* _____

Gender: ☐ Male   ☐ Female   ☐ Transgender   ☐ Unknown/Refused

Have you served in the U.S. Armed Forces? ☐ Yes   ☐ No   ☐ Unknown   ☐ Refused

Were you activated, into active duty, as a National Guard member or Reservist?
☐ Yes   ☐ No   ☐ Unknown   ☐ Refused

Do you have a mental health disability that limits your ability to work or perform activities of daily living? ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Do you have an alcohol or drug problem that limits your ability to work or perform activities of daily living?   ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Are you currently living with HIV/AIDS? ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Do you have a physical, developmental, or other disability that limits your ability to work or perform activities of daily living?   ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

7. OTHER ADULT IN HOUSEHOLD #2:

First Name: _____   Last Name:
_____

Date of Birth: _____/_____/_____ OR if DOB refused, *Age:* _____

Gender: ☐ Male   ☐ Female   ☐ Transgender   ☐ Unknown/Refused

Have you served in the U.S. Armed Forces? ☐ Yes   ☐ No   ☐ Unknown   ☐ Refused

Were you activated, into active duty, as a National Guard member or Reservist?
☐ Yes   ☐ No   ☐ Unknown   ☐ Refused

Do you have a mental health disability that limits your ability to work or perform activities of daily living? ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Do you have an alcohol or drug problem that limits your ability to work or perform activities of daily living?   ☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

Are you currently living with HIV/AIDS?   ☐ **Yes***   ☐ No   ☐ Unknown
☐ Refused

Do you have a physical, developmental, or other disability that limits your ability to work or perform activities of daily living?　　☐ **Yes*** 　　☐ No 　　☐ Unknown 　　☐ Refused

(If there are more adults in the Household attach a blank copy of this page to this survey)

THANK and END SURVEY

Outreach Workers Only: Check Box if information was filled out by you because client refused to fill out the survey due to Severe Mental Illness and or Substance Abuse. In addition please provide <u>specific location</u> where the person was found AND <u>identifying descriptors</u> – hair color and length, body build, tattoos, scars, wounds, disabilities, etc.)

☐ Check if survey was filled out by Outreach Worker

Description:

☐ **CHECK BOX WHEN THIS SURVEY HAS BEEN ENTERED INTO HMIS**

Region 5: Wahiawa to North Shore -
Turtle Bay to Kaena Pt. + Mililani & Wahiawa

Region 6: Upper Windward
Waihee Rd to Turtle Bay Resort

Region 7: WAIANAE
Ko'olina to Yokohama Bay

Region 4: Kaneohe to Waimanalo
Kaupo Beach Park -Waihee Road

Region 3: Ewa
Aiea to Kapolei

Region 1: Downtown Honolulu
Airport to Piikoi Street

Region 2: East Honolulu
Piikoi Street to Kaupo Beach Park
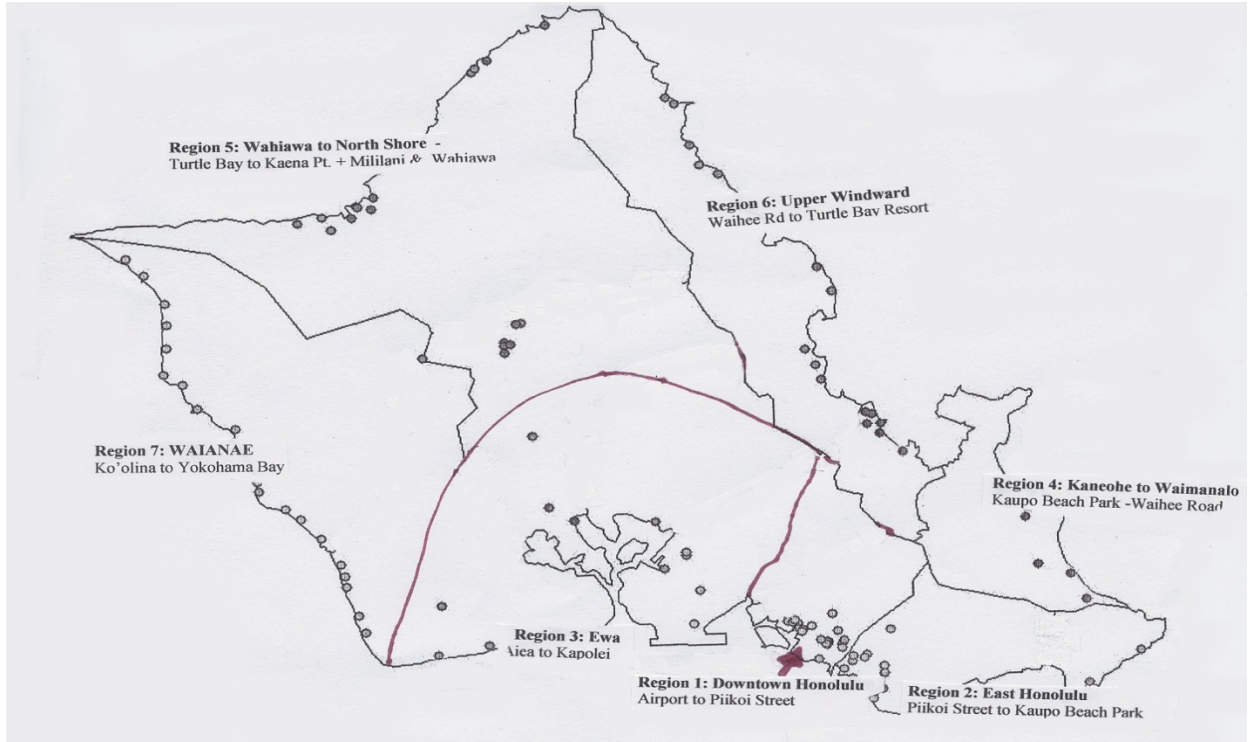
USE THIS FORM IF THE CLIENT IS **_SINGLE (Unaccompanied)_**

2013 City & County of Honolulu Homeless Point-in-Time Count Survey

Interviewer's Name: _____*Agency/Group:* _____

Site of Interview (Actual Location): _____ *Date:* _____

Introduction Example: "Hello, my name is _____, and I am an outreach worker/volunteer. We are doing a short survey for an annual homeless count, and your responses will help fund homeless services throughout Hawaii. All of your answers will be confidential. Can I ask you a few questions?"

"Are you living alone or with others?"
(If living with others including a child under 18 use <u>HOUSEHOLD</u> form)

"Where did you sleep this past Tuesday, JANUARY 22?"
_____
If answer is sheltered (e.g. house, shelter, hospital, jail), End Survey. Please try to be as specific as possible.

"What area of the island did you sleep?"
_____
Enter Area/Region # (1–7) [Map on back]

1. First Name: _____ *Last Name:* _____

2. Date of Birth: _____/_____/_____ OR if DOB refused, *Age:* _____

3. Gender: ☐ Male   ☐ Female   ☐ Transgender   ☐ Unknown/Refused

4. Have you served in the U.S. Armed Forces? ☐ Yes   ☐ No ☐ Unknown ☐ Refused

5. Were you activated, into active duty, as a National Guard member or Reservist?
☐ Yes   ☐ No   ☐ Unknown   ☐ Refused

6. How long have you been continuously homeless this time?
☐ Less than 1 year   ☐ **1 year or longer*** ☐ Unknown   ☐ Refused

7. How many times have you been homeless in the past 3 years?
☐ 1–3 times   ☐ **4 or more times*** ☐ Unknown   ☐ Refused

8. Were you on the street, beach, park, or in an emergency shelter each time?
☐ **Yes***   ☐ No   ☐ Unknown   ☐ Refused

9. Do you have a mental health disability that limits your ability to work or perform activities of daily living? ☐ **Yes*** ☐ No ☐ Unknown ☐ Refused

10. Do you have an alcohol or drug problem that limits your ability to work or perform activities of daily living? ☐ **Yes*** ☐ No ☐ Unknown ☐ Refused

11. Are you currently living with HIV/AIDS? ☐ **Yes*** ☐ No ☐ Unknown ☐ Refused

12. Do you have a physical, developmental, or other disability that limits your ability to work or perform activities of daily living? ☐ **Yes*** ☐ No ☐ Unknown ☐ Refused
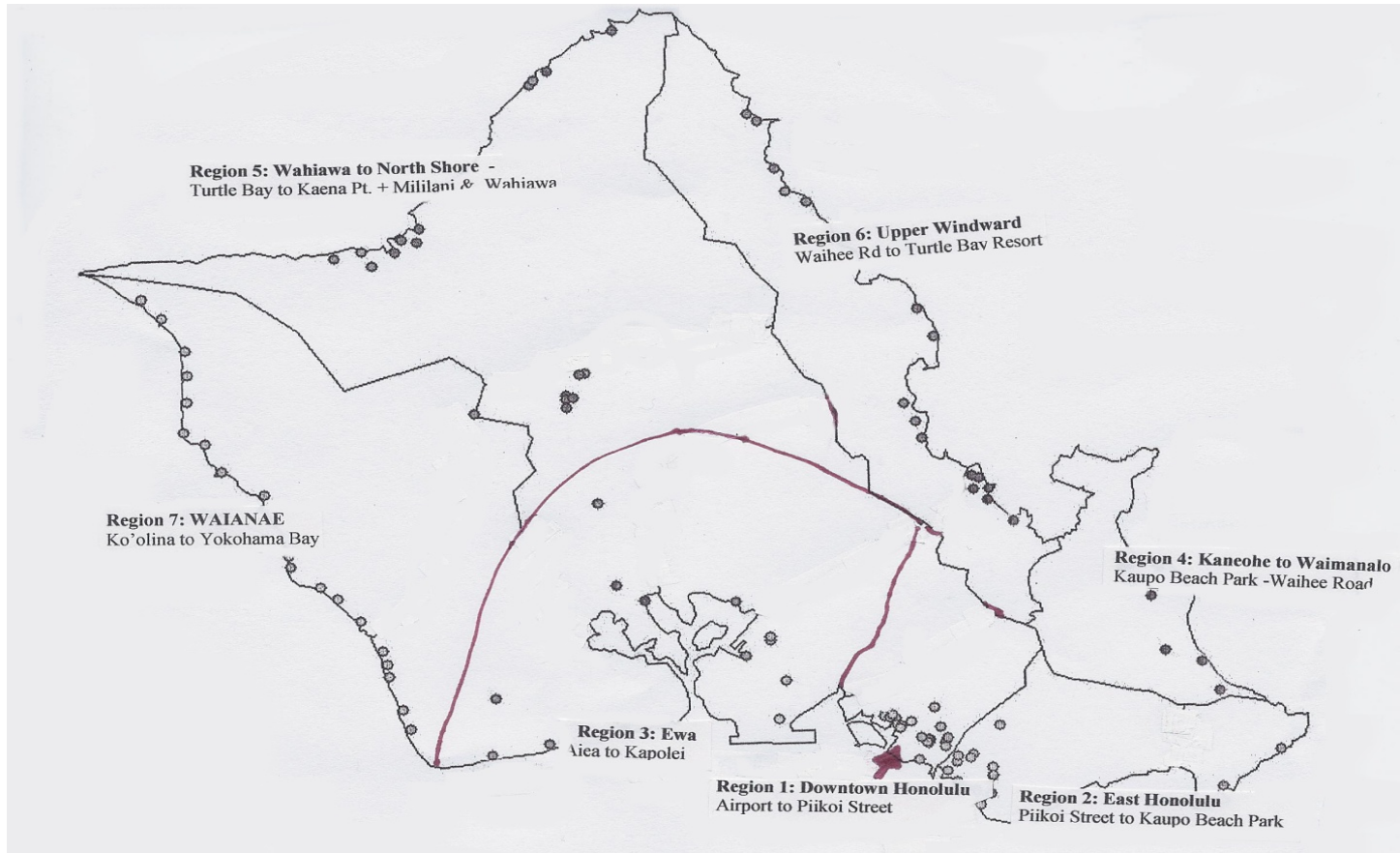
THANK and END SURVEY

☐ **CHECK BOX WHEN THIS SURVEY HAS BEEN ENTERED INTO HMIS**

Outreach Workers Only: Check Box if information was filled out by you because client refused to fill out the survey due to Severe Mental Illness and or Substance Abuse. In addition please provide <u>specific location</u> where the person was found AND <u>identifying descriptors</u> – hair color and length, body build, tattoos, scars, wounds, disabilities, etc.)

☐ Check if survey was filled out by Outreach Worker

Description:

Region 5: Wahiawa to North Shore -
Turtle Bay to Kaena Pt. + Mililani & Wahiawa

Region 6: Upper Windward
Waihee Rd to Turtle Bay Resort

Region 7: WAIANAE
Ko'olina to Yokohama Bay

Region 4: Kaneohe to Waimanalo
Kaupo Beach Park -Waihee Road

Region 3: Ewa
Aiea to Kapolei

Region 1: Downtown Honolulu
Airport to Piikoi Street

Region 2: East Honolulu
Piikoi Street to Kaupo Beach Park

Rates of Names Collection during the 2013 Hawaii PIT Count by Coordinating Agency

Count Coordinating Agency	Total Persons Encountered	Complete Names Reported	% Found
Alternative Structures Int'l	11	10	91%
Catholic Charities Hawaii	31	15	48%
Family Promise of Hawaii	19	19	100%
The Institute for Human Services, Inc.	506	308	61%
Kalihi-Palama Health Care	59	37	63%
Mental Health Kokua	13	13	100%
Steadfast Housing Development Corporation	61	56	92%
U.S.VETS	14	12	86%
Waiainae Coast Comprehensive Health Center	72	67	93%
Waianae Community Outreach	180	180	100%
Waikiki Health Center	315	284	90%
Hale Kipa -Youth Outreach	1	1	100%
YWCA	1	1	100%
Unknown/Missing	92	84	91%
	1375	1087	79%

Persons with an HMIS encounter during the four-week PIT period
not linked to persons found in the PIT count by Intake Year

Intake Year	# of Active Persons
1994	1
1995	1
1997	2
1998	2
1999	2
2000	4
2001	9
2002	10
2003	19
2004	12
2005	26
2006	45
2007	46
2008	36
2009	56
2010	72
2011	88
2012	256
2013	188
Grand Total	**875**