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## Medicaid Redesign Team Supportive Housing Evaluation

# Access Report 2

NEW YORK STATE | **Department of Health**

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# Executive Summary

## BACKGROUND

This report represents a first step in understanding the scope of unmet need regarding Medicaid Redesign Team Supportive Housing for homeless individuals across New York State. We highlight demographic information and shelter utilization trends regarding homeless individuals within Homeless Management Information System (HMIS) reporting shelters in selected regions of Upstate New York and New York City. We also describe the Medicaid utilization and spending of this group, to better understand the pool of homeless individuals who would be eligible for the Medicaid Redesign Team Supportive Housing (MRT-SH) programs.

As such, this work is a preliminary component of the eventual creation of an MRT-SH comparison group. For this process, we must both characterize the shelter use patterns of MRT-SH enrolled "treatment" clients, then identify a matched set of similarly-eligible individuals not enrolled in MRT-SH, but who have a similar history of shelter use, among other factors. An understanding of the patterns of shelter use and Medicaid utilization for both treatment and non-treatment clients is thus a critical phase in this process.

MRT-SH programs serve individuals who are homeless, at risk of becoming homeless, or institutionalized. This report focuses exclusively on the homeless population. Data sources for the report include a literature review; Housing and Urban Development (HUD) Point-in-Time count data; Homeless Management Information System (HMIS) data, which is an administrative data set that stores demographic information about shelter users in New York State; Medicaid Data Warehouse (MDW) data; and Statewide Planning and Research Cooperative System (SPARCS) data.

## KEY MESSAGES

### Section 1: Literature Review

- Homelessness is a significant social problem in the United States, and in New York State particularly. Housing and Urban Development (HUD) data highlight New York State as one of two states with the largest number of homeless individuals (HUD, 2017).

- According to HUD Point-in-Time count data, on a single night in the United States in 2017, roughly 553,742 individuals experienced homelessness. Of this count, 65% of individuals were residing in emergency shelters or transitional housing programs, and 35% were in unsheltered locations (HUD, 2017).

- The HUD 2017 data on New York State counted 89,503 individuals as homeless. This source estimated 37,390 homeless unaccompanied individuals, 2,829 unaccompanied homeless youth, and 52,113 homeless individuals in families including children; 1,244 homeless individuals were veterans, and 5,087 were chronically homeless (HUD, 2017).

- New York State experienced a 3.6% increase in the homeless count between 2016-2017, and a 43% increase between 2007-2017. This increase of 43% within the last ten years was the largest absolute increase in the country, while the increase between 2016-2017 represented the second largest increase in the country, after California (HUD, 2017).

- New York City experienced the second largest city-based increase in homelessness between 2016-2017, surpassed only by Los Angeles. One quarter of all families homeless in the U.S. are located in New York City (HUD, 2017).

- Point-in-Time (PIT) counts, the approach used by HUD to quantify homelessness, are believed to greatly underestimate the scope of the problem, due to a lack of reliability, validity, and "ability to capture an accurate numerical count" of the overall homeless population (Schneider et al., 2016). PIT counts in different states and communities tend to use varying methodologies, with some more comprehensive than others (Burnes & DiLeo, 2016; Schneider et al., 2016). *Thus, the PIT count data presented in this report is very likely to underestimate the scope of homelessness in New York State.*

- Homelessness was once characterized as "a single, white man's issue", but it is now clear that a number of groups are impacted, including single men and women, families, youth, GLBTQ individuals, veterans, individuals fleeing domestic violence, and other groups (Henwood et al., 2015; Schneider et al., 2016).

- Homelessness is a social problem that disproportionally impacts African-Americans, as well as individuals with disabilities, including mental illness (Henwood et al., 2015). Recent research suggests a growing cohort effect in terms of the homeless population, with adults over the age of 55 and youth between 18-25 experiencing increases (Culhane & Byrne, 2013).

- Youth homelessness is a significant issue in the United States, despite the fact that data on the scope of homelessness among young people is limited, and likely underestimates the problem (Anthony & Fischer, 2016). Likewise, family homelessness is often underestimated in homeless counts, as families are often "out of sight," doubling up in housing with others or living in similarly precarious accommodations (Biele, Gilhuly, Wilcox, & Jacobstein, 2014; Brush, Gultekin, & Grim, 2016).

### Section 2: Homelessness in New York State: Scope, Demographics of Shelter Users, and Medicaid Service Utilization

- Based on the 2016 HUD Point-in-Time (PIT) counts, about 0.10% of the adult population in Upstate New York (including the Capital, Hudson Valley, and Adirondack regions) and 0.70% of the population in New York City may be in need of housing. This rate encompasses adults living in emergency shelters and temporary housing, and those who are unsheltered on an individual night. Per the literature, PIT counts are known to underestimate the scope homelessness, particular among certain subgroups (e.g., families, precariously housed individuals, those experiencing short-term homelessness).

- Clients in HMIS-reporting shelters in New York City and selected regions of Upstate New York are similar in age (mean about 38 years, median 36) and gender (about 55% male). Upstate clients are more likely to be white (54%, versus 18% in NYC) and are more likely to report being disabled (28.5%, versus 17.5% in NYC).

- Under the length of stay criteria used in the study, about 6% of upstate HMIS-reporting shelter users are likely to be chronically homeless. In contrast, the rate of chronic homelessness in New York City is 40%.

- Upstate New York HMIS-reporting shelters show less seasonal variation in shelter utilization compared with New York City HMIS-reporting shelters.

- The homeless population in New York State has high rates of serious mental illness, substance use disorders, HIV, and other chronic medical conditions. Almost three-quarters of the homeless upstate (74%) and two-thirds of those in New York City (67%) are estimated to have a diagnosis in at least one of these categories.

- An estimated one-half (50%) of the homeless population with full, continuous Medicaid coverage in New York City and a higher percentage upstate (57%) meet at least one of the eligibility criteria generally used for MRT-SH programs. Many of these people in New York City are also chronically homeless (45% of the eligible homeless), while a much lower percentage of the eligible upstate are chronically homeless (7.5%).

- To generate the estimates in Section 2 of this report, an assumption of equal healthcare utilization rates between those with and without continuous Medicaid coverage was used.

- Overall, it is estimated that roughly 29,221 homeless individuals in New York are MRT-SH eligible, and 11,537 of these are also chronically homeless. Eighty-three percent of the MRT-SH eligible homeless population is in New York City, 13% are upstate, and roughly 4% live on Long Island. Ninety-five percent of those who are both MRT-SH eligible and chronically homeless live in New York City.

- Among the Upstate New York regions where HMIS data were available, the largest percentage of eligible homeless live in the Hudson Valley (34%), and the smallest percentage live in the Adirondacks (7%). No data were available on the homeless population in the Mohawk Valley.

### Section 3: MRT-SH eligibility among individuals without 12 months of continuous Medicaid coverage

- Many homeless individuals experience significant gaps in Medicaid coverage. Twenty-eight percent of the New York City sample and 33% of the upstate sample had less than full coverage, or gaps in coverage exceeding 60 days. Additionally, a large number of homeless individuals had no Medicaid Data Warehouse match (12% of those upstate and 7% in New York City). It is unclear how many of these individuals had no Medicaid records, and how many

had data entry errors in their HMIS records that prevented a match. Overall, in New York City, 66% of the homeless individuals sampled had a record of full, continuous Medicaid coverage. Upstate, 55% had a record of full, continuous Medicaid coverage.

- The estimates derived from both the MDW and SPARCS data consistently indicate that clients without full and continuous Medicaid coverage have, in fact, substantially lower utilization of inpatient and ED services than clients who are consistently covered by Medicaid. They also have lower rates of Health Home enrollment and HARP or SNP enrollment, and are less likely to be in the top quintile of Medicaid spenders.

- While any underestimation of inpatient utilization using the MDW relative to SPARCS is minor, substantial numbers of ED visits not billed to Medicaid occur among this population. Data provided by the SPARCS team indicate that 20% of ED visits for this group of shelter clients are self-pay, and another 4% are paid by private insurance. Therefore, while MDW data may provide a reasonable proxy for eligibility based on inpatient stays, it is not a reliable source of data for eligibility based on ED visits.

- Clients without full, continuous Medicaid are a substantially different population than those who are continuously covered by Medicaid, with different patterns of health care utilization and therefore different rates of MRT Supportive Housing eligibility. Assuming that the rates of eligibility found among continuously covered shelter users apply equally to those not continuously covered may result in sizeable overestimates of the MRT-eligible population (by roughly 21% among NYC clients and 38% among upstate clients).

- There is enough uncertainty inherent in the data on clients without continuous Medicaid enrollment that it is not recommended that estimates of MRT-eligibility presented in Section 2 be directly adjusted. Rather, users should acknowledge the strong probability that these estimates are biased upwards by the methodology used.

# Report Overview

This report uses data from several administrative sources to estimate the scope of unmet need regarding Medicaid Redesign Team Supportive Housing for homeless and unstably housed individuals across New York State. We highlight demographic information and shelter utilization trends regarding homeless individuals within Homeless Management Information System (HMIS) reporting shelters in selected regions of Upstate New York and New York City. We also describe the Medicaid utilization and spending of this group, to better understand the pool of homeless individuals who would be eligible for the Medicaid Redesign Team Supportive Housing (MRT-SH) programs.

MRT-SH programs serve individuals who are homeless, at risk of becoming homeless, or institutionalized. This report focuses exclusively on the homeless population. Data sources for the report include a literature review; Housing and Urban Development (HUD) Point-in-Time count data; Homeless Management Information System (HMIS) data, which is an administrative data set that stores demographic information about shelter users in New York State; Medicaid Data Warehouse (MDW) data; Statewide Planning and Research Cooperative System (SPARCS) data; and interview and focus group data from current Medicaid Redesign Team Supportive Housing providers.

*The main objectives of this report are:*

1. To illustrate the scope of homelessness in New York State to demonstrate the level of unmet supportive housing need;

2. To describe the scope of chronic homelessness in New York State;

3. To determine an approximate proportion of shelter users in New York State who are high-cost, high-need Medicaid users, per the proposed MRT-SH criteria;

4. To highlight an approximate estimate of shelter users in New York State who would meet the specified MRT-SH criteria for supportive housing enrollment;

5. To estimate the MRT-SH eligibility of shelter users who do not have full, continuous Medicaid coverage.

*The report is organized into the following sections:*

**Section 1:** Literature Review. Drawing from scholarly literature on homelessness and published reports, this section summarizes information on the scope of homelessness in New York State. We describe methodological limitations to "counts" of homelessness to contextualize the findings, and provide further information on barriers to supportive housing access.

**Section 2:** Homelessness in New York State: Scope, Demographics of Shelter Users, and Medicaid Service Utilization. Using HUD Point-in-Time count data, we highlight the number of homeless individuals across the various regions of the state. Drawing from HMIS data, we summarize demographic information and as shelter utilization trends for several areas of Upstate New York, as well as New York City. We also estimate the proportion of shelter users likely to be high-cost, high-need Medicaid recipients, drawing a sample from the HMIS population, and then analyzing data from the Medicaid Data Warehouse (MDW).

**Section 3:** MRT-SH eligibility among individuals without 12 months of continuous Medicaid coverage. Service utilization will be analyzed for shelter users who did not meet the 12 months of continuous Medicaid coverage criterion, to better understand their service needs and utilization.

# Section 1:
## Literature Review

### FRAMING HOMELESSNESS IN THE UNITED STATES

According to Department of Housing and Urban Development (HUD) Point-in-Time count data, on a single night in the United States in 2017, roughly 553,742 individuals experienced homelessness (HUD, 2017). Of this count, 65% of individuals were residing in emergency shelters or transitional housing programs and 35% were in unsheltered locations (HUD, 2017). These findings marked an increase in homelessness overall (sheltered and unsheltered) of almost 1% between 2016-2017, the first national increase noted in seven years. The data also showed an increase of 9% regarding unsheltered homelessness within the same timeframe (HUD, 2017).

Nationwide, over one-fifth of homeless individuals in 2017 were children, 70% were over the age of 24, and 10% were between 18-24 (HUD, 2017). Overall, men experienced homelessness more than women (approximately 61% and 39%, respectively). Unsheltered homeless individuals were more likely to be male (71%), while homeless individuals in emergency shelter or transitional housing were more likely to be female (55%). African-Americans comprised a significant proportion of the homeless population, at 41% (HUD, 2017).

### FRAMING HOMELESSNESS IN NEW YORK STATE

The 2017 HUD report notes that half of individuals experiencing homelessness were from one of five states: California, New York, Florida, Texas, or Washington (HUD, 2017). California and New York are the two states with the largest numbers of homeless individuals. Further, on a single night in January 2017, "nearly one of every four people experiencing homelessness did so in New York City or Los Angeles" (HUD, 2017, p. 16).

In New York State, 89,503 individuals were counted as homeless, according to the HUD estimate (HUD, 2017). Specifically, 45 people per 10,000 are homeless in New York State (compared to 17 people per 10,000 in the country overall; HUD, 2017). The HUD 2017 data on New York State estimated 37,390 homeless unaccompanied individuals, 2,829 unaccompanied homeless youth, and 52,113 homeless individuals in families including children; 1,244 homeless individuals were veterans, and 5,087 were chronically homeless (HUD, 2017). New York State experienced a 3.6% increase in the homeless count between 2016 and 2017, and a 43% increase between 2007 and 2017 (HUD, 2017). This increase of 43% within the last ten years in New York State marked the largest absolute increase in the country, while the 2016-2017 increase represented the second largest increase in the country, after that in California.

Consistent with the New York State trends, New York City has also experienced recent increases in homelessness. In New York City, there were 76,501 homeless persons in 2017, including 31,124 individuals and 45,377 individuals living in families. Homelessness in New York City increased by 2,159 individuals [1] between 2016 and 2017, which represents the second largest increase in a metropolitan area, after Los Angeles (HUD, 2017). Further, New York City experienced a 2% increase in family homelessness between 2016 and 2017 (an increase of 819 people). Nationally, one quarter of all families experiencing homelessness in the U.S. are located in New York City (HUD, 2017). Ninety-five percent of those experiencing homelessness in New York City were sheltered, likely due to New York City's right-to-shelter policy.

These HUD estimates underscore homelessness as a significant social problem in the United States, and in New York State particularly. Point-in-Time counts, the approach used by HUD to quantify homelessness, are believed to greatly underestimate the scope of the problem, as discussed in detail in the next section of the literature review. Thus, the magnitude of the problem of homelessness in New York State is likely to be even more pronounced.

[1] Though not calculated in the HUD report, this represents an increase of approximately 6.9%.

## STUDYING THE SCOPE OF HOMELESSNESS: METHODOLOGICAL LIMITATIONS

Approaches to enumerating the scope of homelessness are rife with methodological limitations. As Metraux and colleagues report, few methods in the field "lend themselves to any regular, ongoing enumeration" of homelessness (Metraux & Culhane, 2001). At present, Point-in-Time (PIT) counts are a leading source of data on those experiencing homeless in the United States (Schneider, Brisson, & Burnes, 2016). The PIT survey is "a snapshot or census" of the homeless population at one particular time, which is obtained by staff or volunteers interviewing individuals who appear to be homeless (HUD, 2017). HUD mandates that each Continuum of Care (CoC)[2] conduct a PIT survey. While PIT surveys minimize the risk of double-counting homeless individuals, numerous limitations are described in the literature (Metraux & Culhane, 2001). PIT counts are often critiqued for a lack of reliability, validity, and "ability to capture an accurate numerical count" of the overall homeless population (Schneider et al., 2016) for several reasons, as discussed below.

First, PIT counts are a "time-limited, static representation of homelessness", which is problematic given the fact that individuals tend to egress in and out of homelessness in a dynamic manner (Metraux & Culhane, 2001). For instance, individuals experiencing housing instability and homelessness often experience "a serial progression of different living arrangements," such as drifting between shelters and the streets, staying with family or friends, or obtaining short term accommodations in motels or rooming houses. Additionally, PIT counts describe homeless individuals who are directly seen and observed, thus missing those in precarious living situations, such as "couch-surfing" or "doubling up" with family or friends. Those who are homeless for longer periods of time may be more likely to be seen, and thus, counted (Metraux & Culhane, 2001).

A subpopulation especially likely to be under-counted by PIT surveys is youth. Estimates of youth homelessness vary widely, given the methodological difficulties in studying this group (e.g., the nature of their living arrangements) and inconsistent definitions of youth homelessness (Anthony & Fisher, 2016; Toro, Dworsky, & Fowler, 2007). Youth experiencing homelessness are known to experience instability and fluidity regarding housing arrangements, often couch-surfing or entering into other insecure living situations (Toro et al., 2007). To improve the accuracy of data on the scope of homeless youth, researchers suggest engaging community agencies to participate in county-wide efforts, adopting a "youth-centered" approach, and visiting known "hotspots" for homeless youth via street outreach activities in a given community (Kidd & Scrimenti, 2004, Perlman, Willard, Herbers, Cutuli & Eyrich Garg, 2014; Van Leeuwen et al., 2006).

Additionally, PIT counts in different states and communities tend to use varying methodologies, with some more comprehensive than others (Burnes & DiLeo, 2016; Schneider et al., 2016). In a recent study, Schneider et al. (2016) examined approaches in three cities to understand how PIT counts were conducted and found a substantial degree of variation in the implementation of the count with different methodologies used; as such, the degree to which certain populations may be under-counted may not be consistent or comparable across regions.

Other methods for studying the scope of homelessness in a given community include those based on administrative homelessness data. While administrative data may capture segments of the homeless population "hidden" during PIT counts, these methods still have notable limitations. Studies drawing from administrative data are limited by the specific agencies and services covered by the data system, as well as a potentially limited definition of homelessness, due to rules that dictate who is eligible for a given service within a given agency (Metraux & Culhane, 2001).

## INDIVIDUALS IMPACTED BY HOMELESSNESS

As researchers continue to learn about populations experiencing homelessness, a more varied and diverse picture is emerging. Homelessness was once characterized as "a single, white man's issue", but it is now clear that a number of populations and subpopulations are impacted (Schneider et al., 2016). Research indicates that several groups experience housing instability and homelessness, including women, families, youth, GLBTQ individuals, veterans, and individuals fleeing domestic violence (Henwood et al., 2015). Homelessness is a social problem that disproportionally impacts African-Americans (Henwood et al., 2015). Recent research suggests a growing cohort effect in terms of the homeless population, with adults over the age of 55 and youth ages 18-25 experiencing greater increases than adults ages 25-55 (Culhane & Byrne, 2013).

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[2] A Continuum of Care (CoC) is defined as "a regional or local planning body that coordinates housing and services funding for homeless families and individuals" (National Alliance to End Homelessness, 2010).

Individuals with disabilities, including mental illness, are also overrepresented in the homeless population (Henwood et al., 2015). By some estimates, people with serious mental illness comprise one-third of the homeless population in the United States (Martin, 2015); this figure is believed to be considerably higher among street-dwelling (unsheltered) individuals (Tsemberis & Eisenberg, 2000). Individuals with serious mental illness are disproportionately impacted by chronic homelessness in particular (Martin, 2015). Homeless individuals with serious mental illnesses are especially likely to experience co-morbid chronic health conditions, an exacerbation of their mental health issues, substance abuse, and a higher likelihood of both victimization and incarceration (Tsemberis & Eisenberg, 2000). In national studies, this subgroup of the homeless population is also the least likely to gain access to housing programs (Tsemberis & Eisenberg, 2000).

Emerging research highlights youth homelessness as a significant issue in the United States, despite the fact that data on the scope of homelessness among young people is limited and likely underestimated (Anthony & Fischer, 2016). A recent study of youth homelessness was conducted in Cuyahoga County, Ohio; 584 youth were surveyed using multiple recruitment methods. Compared with a sample of never-homeless youth, youth experiencing homelessness were more likely to have been placed in foster care, more likely to have experienced juvenile justice placement or jail, less likely to be enrolled in school, more likely to be unemployed, and more likely to be parents themselves (Anthony & Fischer, 2016). Youth experiencing homeless also reported higher rates of substance abuse, HIV/AIDS, and mental health problems, than did never-homeless youth (Anthony & Fischer, 2016). Among youth populations, LGBT youth experience an especially heightened risk of homelessness (Morton et al., in press).

Family homelessness is "often a byproduct of unaffordable housing," particularly in larger cities, such as New York (Henwood et al., 2015). Family homelessness is often underestimated in homeless counts, as families are often "out of sight," doubling up in housing with others or living in other precarious accommodations (Biele, Gilhuly, Wilcox, & Jacobstein, 2014; Brush, Gultekin, & Grim, 2016). Since 1987, schools have been federally required to monitor homelessness among public school students. The US Department of Education includes families who have "doubled up" as homeless; thus, Department of Education statistics on family homelessness are considerably higher than the HUD PIT counts (ICPH, 2018). When families are precariously housed or homeless, they often become disconnected from support structures such as their neighborhoods, schools, and communities (Biele et al., 2014). Families at risk for experiencing homelessness include households experiencing domestic violence, families with foster care histories, parental substance abuse, parental mental illness, and racial or ethnic minority background (Biele et al., 2014).

## HOMELESSNESS AND AFFORDABLE HOUSING

A structural factor contributing the problem of homelessness in the past three decades is the loss of low-income (affordable) housing (Martin, 2015). In the 1970s and 1980s, "low income units" with a subsidy declined by thirty percent in twelve of the twenty largest American cities, from 1.6 million units to 1.1 million units, a trend that continued through the 1990s (Martin, 2015, p. 71). During that same time period, poverty grew rapidly, peaking in the 1980s, leveling off in the early 1990s, but persisting at a high rate through the 2000s, with nearly 40 million Americans living below the poverty line (USDHHS, 2010; Martin, 2015). Researchers note that these trends were accompanied by deinstitutionalization of individuals with mental illnesses (Martin, 2015). These factors are all believed to result in increased homelessness (Martin, 2015).

Individuals and families experiencing "extremely low incomes" (defined as a household with an income at or below the poverty guideline or 30% of AMI, whichever is higher) are disproportionately burdened by the affordable housing shortage. Extremely low-income individuals struggle with the shortage of affordable and available rental housing more than any other group (Aurand et al., 2017). According to a recent report, 11.4 million extremely low-income renter households "accounted for 26% of all U.S. renter households and nearly 10% of all households." In total, the United States has a shortage of 7.4 million affordable and available rental homes for extremely low-income renters (Aurand et al., 2017).

Currently, finding affordable housing is increasingly challenging in New York State, and particularly in New York City. In recent years, rents continued to rise across most metropolitan areas of the country, increasing most in areas already considered to be high-rent cities (Chan et al., 2017). Consistent with this trend, median rents grew faster than inflation between 2012 and 2015 in New York City, a high-rent metropolitan area (Chan et al., 2017).

## INDIVIDUALS USING HOMELESS SHELTERS: PATTERNS AND CHARACTERISTICS

Studies of homeless shelter utilization can be instructive in the overall conceptualization of unmet supportive housing need. Kuhn & Culhane developed a typology of homeless shelter users, classifying users into three groups: chronic, episodic, and transitional (1998). Transitional shelter users are homeless once for a short period of time as they transition between stable housing situations; episodic users move between multiple unstable housing situations (shelters, jails, hospitals, and other settings) over time; and chronic users are entrenched in the shelter system, using homeless shelters for long stays (Kuhn & Culhane, 1998). Kuhn & Culhane found that the episodic and chronic clusters of individuals were more likely to have chronic conditions, mental illness, and substance use problems than the transitional group (1998).

More recent research has largely corroborated this typology (Aubry, 2013; Rabinovitch, Pauly, & Zhoa, 2016). Aubry (2013) found that the transitional cluster of individuals made up the highest percentage of shelter users, followed by episodic users (8-10%) and chronic users (2%); however, even though they had a lower proportion of total shelter users, episodic and long stay users accounted for over 50% of bed days. Rabinovitch and colleagues (2016) found similar clusters, but noted differences in the proportions. In terms of demographics, youth were equally represented in both temporary (transitional[3]) and long-stay (chronic clusters), middle aged individuals were most likely to cycle in and out of the shelter, and older adults were "disproportionately likely" to use shelters over an extended time period (chronic users) (Rabinovitch et al., 2016).

In addition to the diverse trajectories experienced by individuals who use shelters, studies have described the relationship between shelter utilization and mortality. In a study of mortality among New York City homeless shelter users, life expectancy was calculated at 64.2 years for single adult males and 68.6 years for single adult females. Among adults in families, life expectancy was calculated at 67.2 years for males and 70.1 years for females (Metraux, Eng, Bainbridge, & Culhane, 2011). In this study, exits from shelter to stable housing were associated with reduced mortality hazard, whereas extended time living in a shelter was associated with increased mortality hazard (Metraux et al., 2011).

Research on shelter use patterns suggests a need for a range of solutions to address the problem of homelessness, given the diverse trajectories individuals experience. Rabinovitch and colleagues (2016) suggest that transitional shelter users may require short-term emergency solutions, while episodic and chronic shelter users require permanent affordable housing with support services in place. Further, findings on the association between exits to housing and reduced mortality hazard underscore the importance of rapid placement in permanent housing for individuals experiencing long term homelessness (Metraux et al., 2011).

[3] Researchers using shelter typologies use different terms to represent the same categories; transitional and temporary are used interchange-ably, as are long stay and chronic.

# Section 2:

# Homelessness in New York State: Scope, Demographics of Shelter Users, and Medicaid Service Utilization

## SECTION OVERVIEW

New York State's Medicaid Redesign Team Supportive Housing programs prioritize high-cost, high-need, adult Medicaid recipients in unstable housing situations. While not all homeless adults may be eligible for supportive housing, most current NYS MRT Supportive Housing programs list housing instability as a key criterion for eligibility. However, the number of potentially eligible clients is unknown. In this report, we systematically explore the scope of unmet need, as related to these two factors, in New York State in 2016 to allow for a more informed determination of the current demand for MRT Supportive Housing.[4]

To start, we estimate the number of individuals who were homeless in 2016 across the state using published counts. We compare the rates of adults in shelter or unsheltered, under a Point-in-Time methodology, to general Continuum of Care and regional adult populations to determine approximate rates of homelessness in the state.

We then undertake a detailed description of the homeless population in New York State in 2016 by examining information from the Homeless Management Information System (HMIS). Our analysis includes client demographics, including the proportion of individuals who had a history of chronic homelessness, in New York City (NYC) and in Upstate New York (Capital, Hudson Valley, and Adirondack regions).

High Medicaid usage is a second key component of MRT Supportive Housing eligibility. To determine how many homeless individuals might also be high Medicaid users, we evaluated Medicaid utilization for a random subsample of shelter clients. The demographic makeup of this subsample and the percentage of clients considered to be high utilizers was examined. We then determined approximately how many of the individuals enumerated as homeless across the state might be adults eligible for MRT Supportive Housing. Taken together, these pieces allow us to estimate the unmet need that could be met by MRT Supportive Housing across New York State in 2016.

## DATA AVAILABILITY AND LIMITATIONS

These analyses drew on information from the Homeless Management Information (HMIS), which includes information from shelters across New York State. Specifically, we obtained information on clients and shelter stays from New York City (CoC NY-600) and from CoCs within the Eastern portion of Upstate New York. These regions account for 89% of the homeless population in New York State in the 2016 HUD PIT counts, providing a strong basis for descriptions of the demographics of the homeless population in New York.

HMIS clients were also linked to their individual Medicaid records in the MDW, allowing for a more detailed analysis of Medicaid spending and service utilization of homeless individuals, and determination of rates of potential eligibility for MRT Supportive Housing programs.

Importantly, though, the data is limited in several ways. First, data was not available from any counties in Central or Western New York or for Long Island. Similarly, and as stated above, not all shelters within an HMIS-reporting CoC submit data to the HMIS: in regions for which HMIS data was available, our counts capture between 52% (Upstate) and 63% (NYC)

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[4] MRT-SH programs serve individuals who are homeless, at risk of becoming homeless, or institutionalized. This report focuses exclusively on the homeless population.

of the adult clients recorded in the HUD PIT counts[5]. We therefore use HMIS data to provide a detailed picture of the homeless population, but rely on other published data to estimate the total count of homeless individuals in the examined time period. Further, such missing cases also make us likely to significantly underestimate chronic homelessness. As only stays recorded in the HMIS are used, time spent in non-reporting shelters and street homeless cannot be included. True rates of chronic homelessness are thus likely to be higher than reported here.

Second, HMIS data quality must also be regarded carefully. Many data fields in the HMIS may be missing or inaccurate, including basic identifying information. While data cleaning and deduplication has been undertaken, these efforts almost certainly resulted in the removal of some unique clients and the combination of other distinct individuals. The datasets can thus be used to give an overall description of demographics of those in shelter in New York, but likely represent an underestimation of the total number of clients in shelter.

Additionally, these HMIS databases record each entry and exit for a client as an individual stay; however, the administering organizations typically consider adjacent exits and entries, or short gaps between the two, to be part of the same overall stay. To adjust for this provision, exits and subsequent entries for a client were considered to be part of the same stay if they were less than seven days apart.

Finally, these analyses also rely on Point-In-Time approaches to enumerating shelter usage. As described in the literature review, PIT approaches have notable limitations, including lack of consistency in how counts are carried out in different regions or between years, and tendencies to underestimate homelessness within particular subgroups.

Given these caveats, the data presented here can be used to describe the demographics of individuals in shelter at several points in 2016. We compared this information to the published HUD PIT reports to establish the scope of the HMIS information and determine whether the available subsample's demographic distributions were similar to those recorded by HUD. Medicaid utilization is then directly examined for these identified individuals, allowing a determination of likely rates of eligibility for MRT Supportive Housing programs for homeless individuals in New York City and Upstate New York.

## HOMELESSNESS IN NEW YORK

New York State consists of 62 counties and, as of 2016, approximately 19.7 million individuals.[6] These counties are clustered into 27 Continuums of Care (CoC). The five boroughs of New York City comprise one (NY-600), and include approximately 8.5 million people; Nassau and Suffolk counties make up another (NY-603), and include approximately 2.8 million people.

Upstate New York thus includes 55 counties, grouped into 25 CoCs, with a total population of approximately 8.3 million people, or 6.6 million adults.[7] Some reflect a single county and others include multiple (see map for graphic representation). These Upstate CoCs were grouped into seven regions: Western, Finger Lakes, Central, Mohawk Valley, Adirondacks, Capital, and Hudson Valley.[8]

The statewide scope of adult homelessness was determined by examining the number of adults in emergency shelters or temporary housing in January 2016. We compiled information from each CoC's 2016 HUD annual reporting. These published reports use a point-in-time (PIT) approach to evaluating homelessness, where the number of in-shelter and unsheltered clients on a particular night in January 2016 was recorded. Accompanying children under 18 and persons in households with only children (i.e., minors entering shelter without accompanying adults) were excluded from our calculations, leaving

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[5] e.g., our HMIS data had records of stays on the same day in January, 2016 for 52% (Upstate) and 63% (NYC) of the individuals recorded in the HUD PIT counts.

[6] As presented in the Annual Population Estimates for New York State dataset, available here: https://data.ny.gov/Government-Finance/Annual-Population-Estimates-for-New-York-State-and/krt9-ym2k

[7] As presented in the Annual Vital Statistics of New York State, Estimated Population for 2015, about 20.5% of Upstate New York and Long Island's population is children under the age of 18; about 20% of New York City's population is children. https://www.health.ny.gov/statistics/vital_statistics/2015/table01.htm

[8] Western includes CoCs 504, 508, 514; Finger Lakes includes CoCs 500, 501, 513; Central includes CoCs 505, 510, 511, 518; Mohawk Valley includes Fulton, Montgomery, Schoharie, and Herkimer counties; Adirondacks includes CoCs 516, 520, 522, 523; Capital includes CoCs 503, 507, 512, 519; and Hudson Valley includes CoCs 601, 602, 604, 606, 607, 608, Putnam county. Note that neither Herkimer nor Putnam counties are currently included in any CoC. No information was available for Mohawk Valley or for Putnam county.

only adults over 18, as individuals or in families. The number of adults in shelter and unsheltered in each CoC was then compared to the total adult population of each CoC to determine the average rate of homelessness across Upstate New York and in each major region of the state, and in New York City.

Under these methods, about 6,530 adults in Upstate New York were in shelter or unsheltered on one night in January in 2016. The average rate of homelessness in CoCs in which there was data was about 0.10%, varying from 0.02% in CoC 514 (Chautauqua county) and 513 (Ontario, Seneca, Wayne, Yates counties) to 0.23% in CoC 503 (Albany county). On Long Island (CoC NY-603), about 1,935 adults were in shelter or unsheltered, or about 0.09% of the adult population. In New York City (CoC NY-600), 47,759 people, or 0.70% of adult residents, were in shelter or unsheltered in January 2016. (see table)

**Table 1.** 2016 Rates of Adult Homelessness in New York State.

| Region | Counties (CoC) | Adult Population | Adult PIT Count | % Homeless |
|---|---|---:|---:|---:|
| Adirondacks | Clinton (NY-516) | 64,453 | 103 | 0.16% |
| Adirondacks | Essex, Franklin (NY-520) | 70,366 | 23 | 0.03% |
| Adirondacks | Hamilton, Saratoga, Warren, Washington (NY-523) | 284,580 | 221 | 0.08% |
| Adirondacks | Jefferson, Lewis, St Lawrence (NY-522) | 199,473 | 107 | 0.05% |
| Capital | Albany (NY-503) | 245,533 | 559 | 0.23% |
| Capital | Columbia, Greene (NY-519) | 86,255 | 75 | 0.09% |
| Capital | Rensselaer (NY-512) | 127,256 | 121 | 0.10% |
| Capital | Schenectady (NY-507) | 122,870 | 282 | 0.23% |
| Central | Broome, Chenango, Cortland, Delaware, Otsego, Tioga (NY-511) | 354,859 | 232 | 0.07% |
| Central | Cayuga, Onondaga, Oswego (NY-505) | 527,118 | 689 | 0.13% |
| Central | Madison, Oneida (NY-518) | 240,503 | 127 | 0.05% |
| Central | Tompkins (NY-510) | 83,372 | 76 | 0.09% |
| Finger Lakes | Allegany, Chemung, Livingston, Schuyler, Steuben (NY-501) | 248,593 | 398 | 0.16% |
| Finger Lakes | Monroe (NY-500) | 594,443 | 635 | 0.11% |
| Finger Lakes | Ontario, Seneca, Wayne, Yates (NY-513) | 206,959 | 41 | 0.02% |
| Hudson Valley | Dutchess (NY-601) | 234,106 | 281 | 0.12% |
| Hudson Valley | Orange (NY-602) | 301,472 | 234 | 0.08% |
| Hudson Valley | Rockland (NY-606) | 259,790 | 131 | 0.05% |
| Hudson Valley | Sullivan (NY-607) | 59,467 | 116 | 0.20% |
| Hudson Valley | Ulster (NY-608) | 142,484 | 233 | 0.16% |
| Hudson Valley | Westchester (NY-604) | 774,761 | 1088 | 0.14% |
| Western | Cattaraugus (NY-504) | 61,753 | 19 | 0.03% |
| Western | Chautauqua (NY-514) | 102,956 | 18 | 0.02% |
| Western | Erie, Genesee, Niagara, Orleans, Wyoming (NY-508) | 1,012,371 | 721 | 0.07% |
| | | *Upstate Total:* 6,405,791 | *Upstate Total:* 6,530 | *Upstate Average:* 0.10% |
| Long Island | Nassau, Suffolk (NY-603) | 2,268,996 | 1935 | 0.09% |
| New York City | Bronx, Brooklyn, Manhattan, Queens, Staten Island (NY-600) | 6,830,138 | 47759 | 0.70% |

Of course, not all clients in shelter would be eligible for MRT Supportive Housing. To determine the approximate number of clients eligible, and thus the degree of unmet need that extant MRT Supportive Housing programs could address, we examined adult clients with data in the HMIS and MDW who were in shelter at four points in time in 2016, in both NYC and in Upstate New York, and found the proportion of such potentially eligible for MRT Supportive Housing.

## HMIS METHODOLOGY

For these analyses, we had access to information from the Cares Regional Homeless Management Information System (CRHMIS) and NYC Coalition on the Continuum of Care Homeless Management Information System (CCOC HMIS). Our datasets included information on over 2.46 million shelter stays from the five boroughs of New York City (CoC NY-600) beginning between 2009 and 2016, and information on over 126,000 shelter stays for the same period across about one dozen Upstate CoCs.[9] As the NYC data was so large as to require subsampling, and because the upstate homeless population was likely to be different than that of NYC, the datasets were analyzed separately. However, the same steps were taken to prepare the data in both cases.

First, client data was deduplicated to remove redundant records and combine separate records from unique individuals.[10] Stays with an entry date recorded as the same day, or after, the stay's exit date were also excluded; these entries likely represent "day usage" of a shelter, where an individual might partake in a shower or a hot meal but not spend the night, or simple error in data entry. Stays in Permanent Housing shelters (project types 3, 9, 10, 12, and 13) were also excluded, as by virtue of being in permanent housing, individuals are no longer homeless, leaving stays in Emergency Shelters and Transitional Housing shelters.

Client stay history was also adjusted to combine adjacent stays. As such, if a client's shelter exit and subsequent entry were less than seven days apart, they were considered to be part of the same stay; gaps of seven or more days were considered to be separate stays. Stay length was calculated both as the time from initial entry to final stay exit, inclusive of all days, and as the time from initial entry to final exit, exclusive of any days not spent in shelter. However, most clients had only small differences between these two computations, reflecting only a few nights spent out of shelter within a stay stretch; as such, stay length, exclusive of gap days, was used for all further work.

Finally, for Upstate CARES data, only stays from CoCs with consistent HMIS usage were included. Stays in shelters from Continuums of Care that had only sporadic, incomplete data (i.e., CoCs 506, 609, and 000) were removed.

CARES clients were also required to have a complete 9-digit SSN; SSN data quality was checked at a later stage for NYC clients.

Robust HMIS information was thus available for 11 Upstate CoCs and separately for the New York City CoC. Regionally, information was available for all Adirondack region CoCs (516, 520, 522, 523), most Capital region CoCs (503, 507, 512), and several Hudson Valley CoCs (601, 602, 606, 608). No information was available for any Western, Finger Lakes, or Central CoCs, or for Long Island.

## POINT-IN-TIME APPROACH TO SAMPLING

Similar to the methodology of the HUD reports, a point-in-time (PIT) approach to sampling shelter use was adopted. Clients were included if they had an emergency or temporary housing shelter stay in a HMIS-reporting shelter encompassing January 25, April 25, July 25, or October 25, 2016.[11] No further entry or exit date criteria were imposed: stays

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[9] While all CoCs submit data to the HMIS, complete statewide data were not available for this investigation.

[10] Client files with the same Social Security Number, date of birth, first name, last name, and gender were combined; files matching on four of these five criteria were then combined. Entries with the same Personal ID and Entry Date but different Entry IDs (and often different Exit Dates) were also deduplicated, with the longer stay kept.

[11] A PIT methodology was chosen to align our analyses with the HUD reports and allow for cross-report comparisons. Four points through the year were chosen to better capture any seasonal shifts in number of shelter users. A stratified random sample was then taken from the NYC dataset, as the number of shelter users identified in that CoC was very large and matching so many clients against MDW data was deemed to be unnecessary.

could last one night (e.g., January 25-26), or multiple years (e.g., beginning in April 2012 and still ongoing as of December 2016).

Within this sample, chronically homeless clients were identified. For the purposes of this study, chronic homelessness was defined as (a) having shelter stays cumulatively lasting for at least 24 months (760 days) over the previous 48 months (i.e., 1/1/2013 through 12/31/2016), or (b) having shelter stays cumulatively lasting for at least 12 months (365 days) over the previous 24 months (i.e., 1/1/2015 through 12/31/2016).[12] These criteria were taken from the NY/NY III and Homeless Housing Assistance Program guidelines for enrolling chronically homeless individuals.[13]

## CHARACTERISTICS OF HOMELESSNESS IN NEW YORK CITY

Within the NYC HMIS data, 45,756 clients had a shelter stay encompassing at least one of the sampled points in time. 28,532 clients were in shelter on January 25; 25,911 on April 25; 21,587 on July 25; and 14,846 on October 25, for a total of 71,645 eligible shelter stays.

About 53% of clients identified as male and 46.5% as female. 83 identified as transgender male-to-female, 9 as transgender female-to-male, and 1 as nonbinary (10 did not know/refused to answer/data was not collected).

65% of clients identified as Black or African-American and 18% as white; 0.5% identified as Native American or Native Alaskan, 0.8% as Asian, and 1.5% as Native Hawaiian or Other Pacific Islander. Thirty-three participants identified as multiracial (e.g., participants selected multiple categories), and 14% did not know/refused to answer/data was not collected. Separately, 31% of participants identified as Hispanic/Latino and 63.5% identified as non-Hispanic/non-Latino (5.5% did not know/refused to answer/data was not collected).

Client ages at shelter entry ranged from 18 to 91. Mean age at entry was 38.52 years (SD: 13.5, median=36). The distribution of ages appears to be binomial, or to have two peaks, with an overall peak at 26 and a second smaller peak at 52, and dips at 42 and 91 (see graph). 36% of clients were between 18 and 29 years of age, 41% were between 30 and 45, and 23% were 46 or older.

Most clients (76%) were listed as Head of Household; 3% were accompanying adult children, 6% a spouse or partner of the Head of Household, and 4% some other relative. (11% did not know/refused to answer/data was not collected). About 24% of clients listed as Head of Household had children (adult or minor) listed as accompanying them in shelter during at least one of the 2016 PIT days.

Using the cumulative stay length criteria described above, 38% of clients (N=17,495) were categorized as chronically homeless. 4,563 clients had at least 4 separate shelter stays in 2015 or 2016; 1,383 clients met both the stay length criteria and had at least 4 separate shelter stays in the previous two years.

Shelter stay duration and the number of shelter stays in the past two and four years were also assessed. Over a 48-month period, the average length of clients' single longest stay was 11.7 months (SD 10.67): about 5% of the population never stayed a month, 7% had a maximum stay of 1 to 2 months, and 8% had a maximum stay of 2 to 3 months. The average length of all stays was around 14.2 months (425 days, SD=11.74 months); about 4% of the population stayed less than 30 days in total, while a few clients were in shelter almost every day of the period. Finally, the average number of stays was 2.4 (SD 2.59). Almost half (48.6%) of clients had only one stay, 22.7% 2 stays, and 11% 3 stays; on the high end, 12 clients had more than 30 stays in the period.

Over a 24-month period, the average length of clients' single longest stay was 8.9 months (SD 6.47); about 6% of the population never stayed a full month, 8% had a maximum stay of 1 to 2 months, and 9% had a maximum stay of 2 to 3

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[12] Stays were not required to have started in these assessed periods, but days prior to each period were not included in these durations. For example, a stay may have begun in October 2012 and lasted until February 2015, thereby reaching 26 months within the 2013-2016 period.

[13] Note that this definition differs from the 2016 HUD definition of chronic homelessness, as found here: https://www.hudexchange.info/resources/documents/DefiningChronicHomeless.pdf

months. The average total length of all stays was about 10 months (299 days, SD=6.59 months); about 4% of the population stayed less than 30 days in total, while a few clients were in shelter almost every day of the period. The average number of stays was 1.8 (SD 1.69). About 62% of clients had only one stay, 20% 2 stays, and 8% 3 stays; on the high end, 21 clients had at least 20 stays in the period.

As such, the majority of clients had only one or two stays, though there was great variability in stay length, both within and across the population. Some clients' stays may thus reflect temporary housing instability or short-term homelessness, while others reflect chronic, long-term homelessness.

Finally, 17.5% of clients reported having a disabling condition, versus 82% who did not (43 did not know/refused to answer/data was not collected). 2% of clients (N=969) were veterans, versus 95% who were not (1516 did not know/refused to answer/data was not collected).

## CHARACTERISTICS OF HOMELESSNESS IN UPSTATE NEW YORK

Within the CARES Upstate HMIS dataset, 2,817 clients had a shelter stay encompassing at least one of the sampled points in time. 1,098 clients were in shelter on January 25; 1,010 on April 25; 948 on July 25; and 691 on October 25, for a total of 3,098 eligible shelter stays. All CARES Upstate clients included in this analysis were required to have a complete 9-digit SSN to enable matching HMIS and MDW information for identified clients.

About 58% of clients identified as male and 41.5% as female; 2 identified as transgender male-to-female and 1 as nonbinary (23 did not know/refused to answer/data was not collected). 39.5% of clients identified as Black or African-American and 54% as white; 1.5% identified as Native American or Native Alaskan, 0.2% as Asian, and 0.4% as Native Hawaiian or Other Pacific Islander. 3% of participants identified as multiracial (e.g., participants selected multiple categories), and 50 did not know/refused to answer/data was not collected. Separately, 11% of participants identified as Hispanic/Latino and 87.5% identified as non-Hispanic/non-Latino (1.5% did not know/refused to answer/data was not collected).

Client ages at shelter entry ranged from 18 to 81. Mean age at entry was 38.08 years (SD: 13, median=36). The distribution of ages appears to be roughly binomial, with a global maximum at 27 and a local maximum at 53, and a global minimum at 81 and local minima at 42 and 59. 35% of clients were between 18 and 30 years of age, 43% were between 31 and 50, and 22% were 51 or older.

Most clients (93.5%) were listed as Head of Household; 0.4% were accompanying adult children, 5% a spouse or partner of the Head of Household, 0.2% some other relative, and 0.5% an unrelated household member. (18 did not know/refused to answer/data was not collected). About 21% of clients listed as Head of Household had children (adult or minor) listed as accompanying them in shelter during at least one of the 2016 PIT days.

**Table 2.** NYC Client Demographics

| Variable | Levels & Proportions |
|---|---|
| All Clients | 45,756 (100%) |
| PIT Counts | January: 28,532 |
| | April: 25,911 |
| | July: 21,587 |
| | October: 14,846 |
| Gender | Male (53%) |
| | Female (46.5%) |
| | Transgender, male to female (N=83) |
| | Transgender, female to male (N=9) |
| | Does not identify as M/F/T (N=1) |
| | DKR (N=10) |
| Race | Black (65%) |
| | White (18%) |
| | American Indian/Alaskan Native (0.5%) |
| | Asian (0.8%) |
| | Native Hawaiian/Pacific Islander (1.5%) |
| | Multiracial (0.1%) |
| | DKR (14%) |
| Ethnicity | Hispanic/Latino (31%) |
| | Not Hispanic/Latino (63.5%) |
| | DKR (5.5%) |
| Age, as of shelter entry | 18–30 (36%) |
| | 31–50 (41%) |
| | 51 or older (23%) |
| Relationship to Head of Household | Self/Client is HoH (76%) |
| | (Adult) Child (3%) |
| | Spouse/Partner (6%) |
| | Other relative (0) |
| | Other unrelated household member (4%) |
| | DKR (11%) |
| Accompanying Children | Yes (24%) |
| | No/Unknown (76%) |
| Chronically homeless | Chronically homeless (38%) |
| | Not chronically homeless (62%) |
| Disabling condition[14] | Has disabling condition (17.5%) |
| | Does not have disabling condition (82%) |
| | DKR (0.1%) |
| Veteran | Veteran (2%) |
| | Not veteran (95%) |
| | DKR (3%) |

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[14] Numbers may not sum to 100% due to rounding.

Using the cumulative stay length criteria described above, 6% of clients (N=196) were categorized as chronically homeless. 196 clients had at least 4 separate shelter stays in 2015 or 2016; 11 clients met both the stay length criteria and had at least 4 separate shelter stays in the previous two years.

Shelter stay duration and the number of shelter stays in the past two and four years were also assessed to describe the extent of chronic homelessness in this population. Over a 48-month period, the average length of clients' single longest stay was 4.7 months (SD 5.79): about 15% of the population never stayed a month, 21% had a maximum stay of 1 to 2 months, and 20% had a maximum stay of 2 to 3 months. The average total length of all stays was around 5.5 months (166 days, SD=6.53 months); 12% of the population stayed less than 30 days in total, while a few clients were in shelter almost every day of the period. Finally, the average number of stays per client was 2 (SD 2.01). Over half (58%) of clients had only one stay, 22% 2 stays, and 8% 3 stays; on the high end, 14 clients had at least 15 stays in the period.

Over a 24-month period, the average length of clients' single longest stay was 4 months (SD 4.07); about 16% of the population never stayed a full month, 21.5% had a maximum stay of 1 to 2 months, and 19% had a maximum stay of 2 to 3 months. The average total length of all stays was about 4.5 months (136 days, SD=4.26); about 13% of the population stayed less than 30 days in total, while a few clients were in shelter almost every day of the period. The average number of stays was 1.7 (SD 1.5). About two-thirds (67%) of clients had only one stay, 20% 2 stays, and 7% 3 stays; on the high end, 5 clients had at least 15 stays in the period.

As in New York City, the majority of clients had only one or two stays, but stays in the CARES system tended to be shorter than those in New York City. Shorter-term homelessness or housing instability might thus be a more widespread issue than chronic or long-term homelessness for this population.

28.5% of clients reported having a disabling condition, versus 65% who did not (6.5% did not know/refused to answer/data was not collected). 6% of clients were veterans, versus 93% who were not (32 did not know/refused to answer/data was not collected).

Last, the geographic distributions of clients' stays were analyzed. Of the 3,098 stays in the upstate HMIS data which occurred over the sampled points in time, 21% were from the NY-503 (Albany) CoC, 16% from the NY-608 (Ulster) CoC, and approximately 14% each from the NY-507 (Schenectady), NY-601 (Dutchess), and NY-602 (Orange) CoCs.

**Table 4.** CARES CoC Locations of each 2016 PIT-Eligible Stay

| CoC Code | Counties | N (%), of 3,098 stays |
|----------|----------|----------------------|
| NY-503 | Albany | 644 (20.8%) |
| NY-507 | Schenectady | 419 (13.5%) |
| NY-512 | Rensselaer | 177 (5.7%) |
| NY-516 | Clinton | 57 (1.8%) |
| NY-520 | Franklin, Essex | 56 (1.8%) |
| NY-522 | St. Lawrence, Jefferson, Lewis | 199 (6.4%) |
| NY-523 | Saratoga, Washington, Warren, Hamilton | 128 (4.1%) |
| NY-601 | Dutchess | 428 (13.8%) |
| NY-602 | Orange | 426 (13.8%) |
| NY-606 | Rockland | 69 (2.2%) |
| NY-608 | Ulster | 495 (16%) |

**Table 3.** CARES Upstate Client Demographics

| Variable | Levels & Proportions |
|----------|---------------------|
| All Clients | 2,817 (100%) |
| PIT Counts | January: 1,098 |
| | April: 1,010 |
| | July: 948 |
| | October: 691 |
| Gender | Male (58%) |
| | Female (41.5%) |
| | Transgender, male to female (N=2) |
| | Transgender, female to male (N=0) |
| | Does not identify as M/F/T (N=1) |
| | DKR (N=24) |
| Race | Black (39.5%) |
| | White (54%) |
| | American Indian/Alaskan Native (1.5%) |
| | Asian (0.2%) |
| | Native Hawaiian/Pacific Islander (0.4%) |
| | Multiracial (3%) |
| | DKR (2%) |
| Ethnicity | Hispanic/Latino (11%) |
| | Not Hispanic/Latino (87.5%) |
| | DKR (1.5%) |
| Age, as of shelter entry | 18–30 (35%) |
| | 31–50 (43%) |
| | 51 or older (22%) |
| Relationship to Head of Household | Self/Client is HoH (93.5%) |
| | (Adult) Child (0.4%) |
| | Spouse/Partner (5%) |
| | Other relative (N=5) |
| | Other unrelated household member (N=13) |
| | DKR (N=18) |
| Accompanying Children | Yes (21%) |
| | No/Unknown (79%) |
| Chronically homeless | Chronically homeless (7%) |
| | Not chronically homeless (93%) |
| Disabling condition[14] | Has disabling condition (28.5%) |
| | Does not have disabling condition (65%) |
| | DKR (6.5%) |
| Veteran | Veteran (6%) |
| | Not veteran (93%) |
| | DKR (1%) |

Notably, the population of a region was not necessarily proportional to the number of eligible stays recorded in the HMIS. For example, the Capital region CoCs (503, 507, 512) make up 24% of the total population of this set, but account for 40% of eligible stays. As such, the rate of homelessness could be especially high in the Capital region, consistent with the HUD PIT counts, or the region could be over-represented in this data. Conversely, the Adirondacks CoCs (516, 520, 522, 523) make up 30% of the total population but only 14% of the stays in the dataset. The Hudson Valley CoCs (601, 602, 606, 608) achieved parity overall, though individual CoCs in the region may be over- (608) or under- (606) represented.

**Figure 1.** Percentage of Stays vs. Percentage of Population, by Region



● Percentage of CARES stays in CoC
● Percentage of CARES Population in CoC
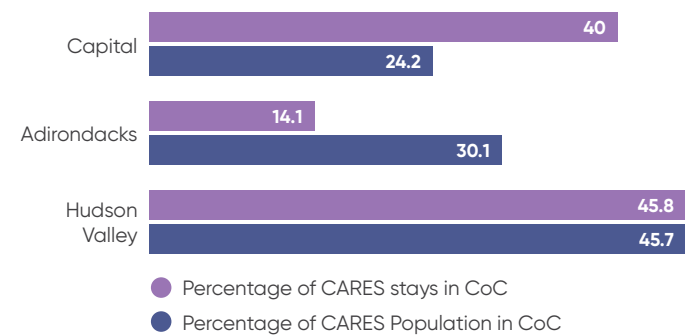
## DEMOGRAPHICS OF NYC VERSUS UPSTATE/CARES POPULATIONS

The clients in shelter in NYC and Upstate CARES shelters in 2016 were similar, especially on gender and age at shelter entry. In both groups, most clients identified themselves as the head of their household (though NYC clients were more likely to be missing this information), and similar proportions of these clients entered shelters with an accompanying child. In neither group were participants likely to be military veterans.

Some factors, though, differed significantly between the regions. First, the two regions demonstrated different racial and ethnic makeup: NYC included more black and Hispanic/Latino clients and fewer white clients than did Upstate shelters, a difference consistent with general demographic shifts between downstate and upstate New York. Although not pictured, Upstate clients were also more likely to report having a disabling condition than NYC clients.

Additionally, client distribution as related to season was also shifted. NYC showed a clear shelter
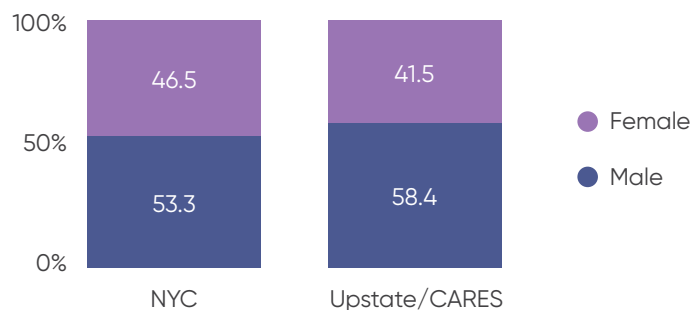
**Figure 2.** *Distribution of Point-in-Time Clients by Gender*



● Female
● Male

**Figure 3.** *Distribution of Clients by Age*
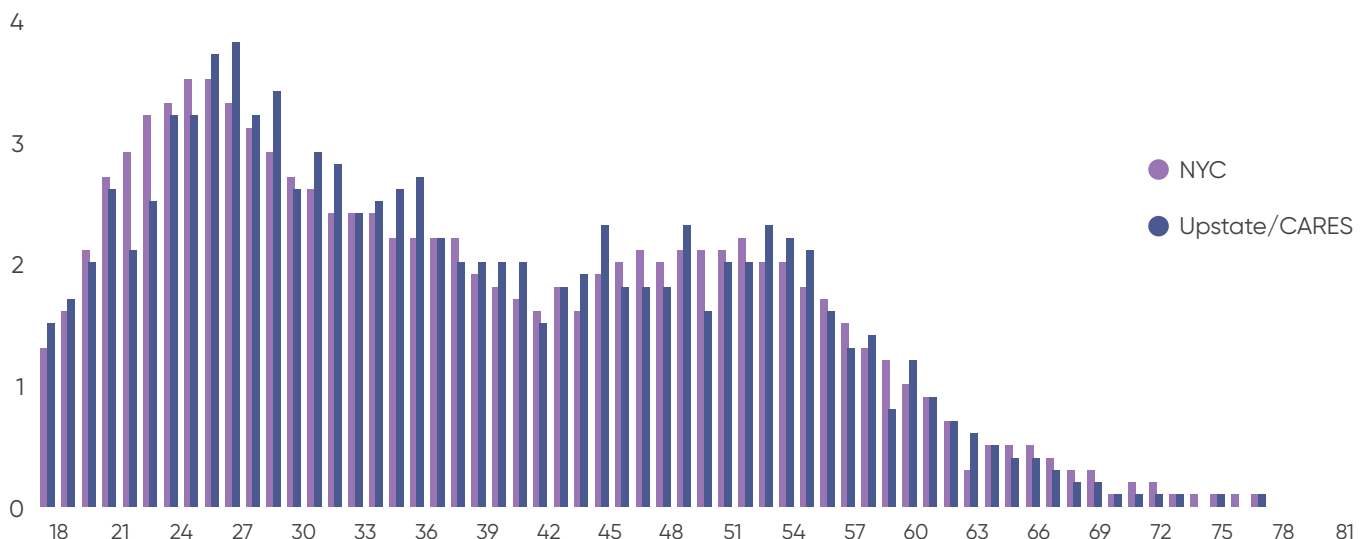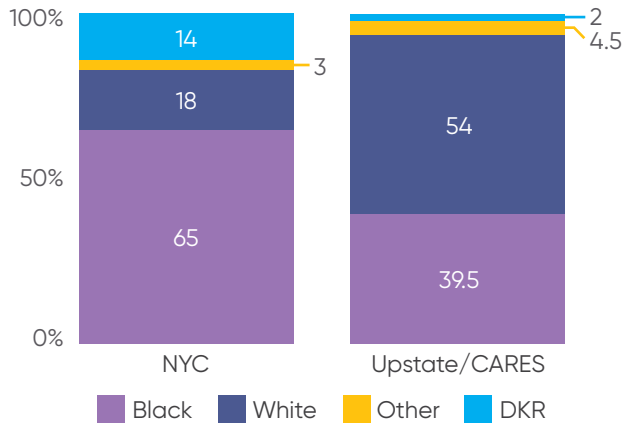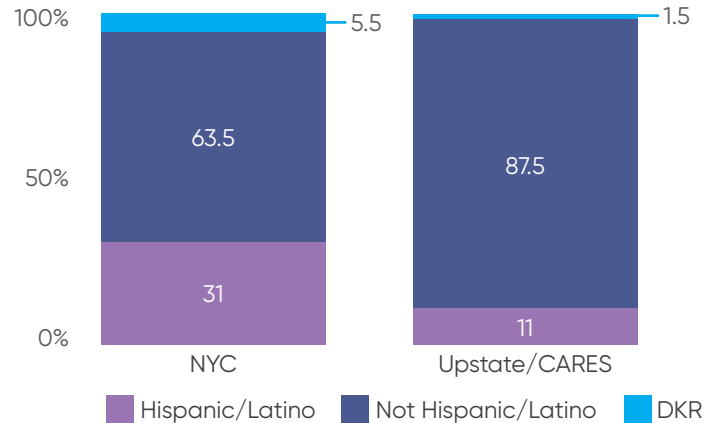


● NYC
● Upstate/CARES

**Figure 4.** *Distribution of Clients by Race*



**Figure 5.** *Distribution of Clients by Ethnicity*



usage peak in the winter, with over 60% of clients in the group having a shelter stay including January 25, then a gradual tapering off through the spring, summer, and fall. In contrast, the CARES shelters showed much less seasonal variation: similar numbers of clients were in shelter in January, April, and July, with a smaller dip in October, meaning that clients were similarly likely to be in shelter at any time point across the year.

**Figure 6.** *Proportion of Clients in Shelter at Each Point-in-Time Interval*
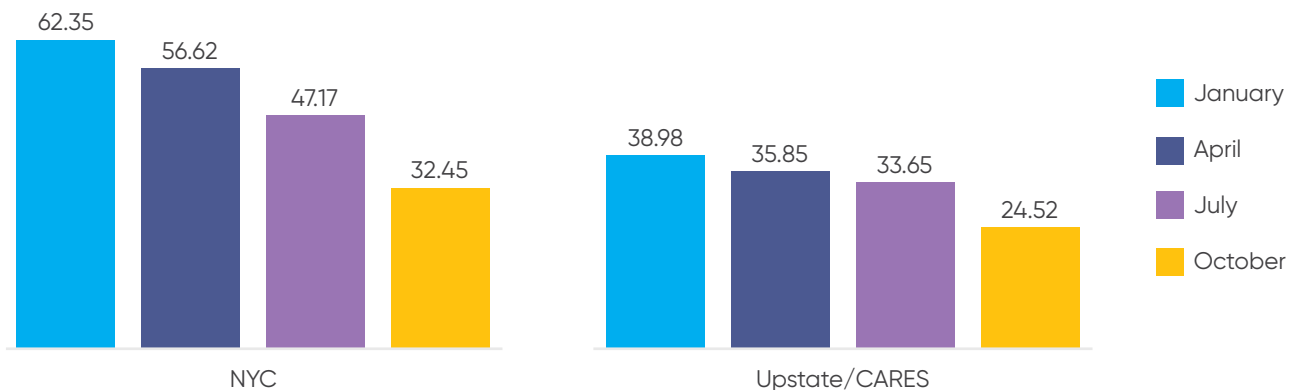


Rates of chronic homelessness were also notably different between the systems. Under the two-year cumulative stay length criterion (i.e., 365 days in shelter within 24 months), 38% of NYC clients were identified as chronically homeless, while only 7% of Upstate clients were identified as such.

The two groups also had markedly different relationships between number and length of stays (see Table 5). Over 85% of Upstate clients had only a few short shelter stays, and thus would not be considered chronically homeless under any methodology; only 7% of clients had long cumulative stay lengths. 6.6% of clients had 4 or more short stays, but under the length-only criteria used by NY/NY III and HHAP capital programs, these individuals would not be identified as chronically homeless. NYC clients, however, were somewhat more evenly distributed across these

**Table 5.** *Client Stay Lengths and Frequencies Proportions, in 2-year period*

| NYC | 1–3 Stays | 4 or more stays |
|---|---|---|
| <365 days | 55% | 6.8% |
| 365 days or more | 35.2% | 3% |
| **CARES** | **1–3 Stays** | **4 or more stays** |
| <365 days | 86.5% | 6.6% |
| 365 days or more | 6.6% | 0.4% |

categories. About half of clients still had only a few shorter stays, but over one-third had longer stays, resulting in a much higher proportion of chronically homeless individuals. Rates, or patterns, of chronic homelessness may thus take different forms between upstate and downstate New York.

## STRATIFIED RANDOM SAMPLING

Next, 30,000 unstably housed individuals were selected for a Medicaid spending assessment. All identified CARES clients who were in shelter at one of the assessed Points in Time were included. A stratified random subsample of clients was taken from the NYC dataset, as the number of shelter users identified in that CoC was very large and matching so many clients against MDW data was deemed to be unnecessary.

Stratified sampling involves dividing a population into smaller groups ("strata"). Samples (here, clients) are then drawn randomly from within each stratum in proportion to the total population, ensuring that the resulting group contains a similar distribution of participants on the bucketed characteristics. Each stratum contains a subgroup of participants fitting a combination of characteristics.[15] The final number of strata is determined factorially, by multiplying the number of levels in each strata criterion.

In this analysis, four stratifying factors were used: Chronic Homelessness (2 levels: Yes/No); Disabling Condition (2 levels: Yes/No or unknown); Age at shelter entry (3 levels: 18 through 30/31 through 50/51 and up); and Gender (2 levels: Male/Not male, including female, transgender, nonbinary, and missing), yielding 24 strata. Finally, as Social Security Number is a critical element in matching clients to their Medicaid Data Warehouse entries, all potential clients were required to have a 9-digit SSN.

Approximately 60% of the available NYC clients were selected, for a subsample of 27,346 clients. Selected and unselected clients were not significantly different on any tested demographic measure, all p's > 0.1 (see Table A1 for selected and unselected subsamples distributions and comparison p-values). These selected NYC clients were combined with the 2,803 CARES Upstate clients for a total Medicaid spending assessment group of 30,149.

## MATCH TO MEDICAID CLAIMS DATA

The identified 30,149 clients were then matched to Medicaid claims data in the MDW to examine their clinical characteristics and utilization. In order to obtain usable estimates of utilization, analyses were limited to clients who had at least 12 months of continuous Medicaid coverage. Due to the unstable nature of this population, this requirement put significant limitations on the number of clients who could be included in the MDW analysis. In New York City, 1,982 people were lost from the sample (7%) due to unmatched social security numbers (SSNs) – either a data entry error was made with their SSN or they did not have any records in the Medicaid system. Then, an additional 7,511 people (28%) were lost due to less than full coverage or gaps in coverage exceeding 59 days in a year. In the upstate sample, 337 people (12% of the sample) were excluded due to unmatched SSNs, and an additional 923 people (33%) were excluded due to the coverage criteria. Thus, the sample that remained after the matching process and the coverage criteria included 17,923 clients in New York City and 1,543 upstate.

## DEMOGRAPHIC CHARACTERISTICS OF CLIENTS WITH CONTINUOUS MEDICAID COVERAGE

A comparison of demographic data from all the clients in the HMIS to those available for the Medicaid claims (MDW) analysis gives us an initial idea of how the continuous coverage limitation may bias the sample. The clients in the MDW sample in New York City were almost identical in their mean age (38.7 versus 38.5) but had a slightly older median age (37 versus 36) compared to the New York City HMIS clients overall. The HMIS clients were 53% male, as compared to 52% for the MDW sample. The HMIS clients were 65% Black/African-American and 31% Hispanic/Latino; the MDW sample was

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[15] In Stratified Random Sampling, a participant can be in only one stratum (e.g., a participant who identifies as Black and White cannot be included in both) and all participants must be stratified by each criterion (e.g., a participant who did not respond to race must be categorized, as "did not know/refused to answer/data was not collected," "not-default-response," et cetera). Similarly, especially small strata (e.g., participants who identify as Native American) can be collapsed into a broader category (e.g., "Race: Other") but cannot be skipped.

65% Black/African-American and 32% Hispanic/Latino. There was a higher proportion of chronically homeless in the MDW sample (46% compared to 40% for the HMIS overall); the proportion of veterans was similar (1.4% versus 2%). Finally, 21% of those in the MDW sample in New York City had a disabling condition, compared to 18% of those in the HMIS overall. The available NYC sample for the MDW analysis is therefore highly similar to than the HMIS clients.

The upstate HMIS clients overall were 58% male, compared 49% of those in the upstate MDW sample. The HMIS clients were 40% Black/African-American and 11% Hispanic/Latino, which was the same as the MDW sample. Mean and median age at shelter entry were also the same between the overall HMIS and the MDW sample. Interestingly, the percentage of homeless with a disabling condition was higher upstate than in New York City – 29% of the HMIS clients overall, and 31% of the MDW sample. The percent of clients who are chronically homeless are also similar between the HMIS and the MDW samples (6% versus 7%). The MDW clients were somewhat less likely than the HMIS clients overall to be veterans (4% versus 6%). The available upstate sample with full, continuous Medicaid coverage, therefore, is substantially less male than the HMIS clients – and less likely to be veterans - but similar in all other respects.

Another source of data on the homeless population is reported annually by various regional CoCs (Continuums of Care) to HUD. Because this data is taken from the HMIS system of each CoC, it should in theory be the same as the HMIS data from which the Medicaid clients were drawn. In practice, however, the HMIS data used for the Medicaid sample was drawn at four points of the calendar year in 2016, while the HMIS data reported to HUD was from a single point of time in January 2017. The HUD data is also available for all CoCs in the state, instead of the limited subset for which we have HMIS data.

The table below compares the demographics of the MDW sample, the HMIS sample, the HUD data from the upstate counties for which we have HMIS data, and the HUD data for all upstate counties (exclusive of Long Island). We can see that the HMIS data are quite close to the HUD data for the same counties, and that the demographics for the counties where HMIS data are available are similar to the demographics for all upstate counties.

**Table 6.** *Demographic characteristics of homeless people in New York City and Upstate New York, from HMIS and HUD data*

|  | New York City | | | Upstate NY | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | Male | Black | Hispanic | Male | Black | Hispanic |
| MDW sample from HMIS | 52% | 65% | 32% | 49% | 40% | 11% |
| HMIS sample | 53% | 65% | 31% | 58% | 40% | 11% |
| HUD data (limited to HMIS counties) | 52% | 72% | 36% | 58% | 38% | 15% |
| HUD data (all counties) | 52% | 72% | 36% | 60% | 44% | 16% |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults. Long Island is not included in these data.*

## CLINICAL CHARACTERISTICS OF CLIENTS WITH FULL, CONTINUOUS MEDICAID COVERAGE

The greatest predictor of meeting at least one of the MRT-SH eligibility criteria in the MDW analysis, however, was not the demographic profile of the client, but their clinical characteristics. In the MDW sample, 35% in New York City and 47% upstate had a serious mental illness; 32% in New York City and 38% upstate had a substance use disorder; 11% in New York City and 6% upstate had HIV; and 46% in New York City and 33% upstate had some other chronic medical condition. Unfortunately, as reliable information on diagnoses is only available from the Medicaid data, there is no way to know how this sample may over- or under-represent those with particular types of diagnoses in the overall shelter population.

The HUD reports are an alternative source of data on comorbidities; however, these data are presumably self-reported to shelters at intake. Not surprisingly, then, the HUD reports appear to dramatically underestimate these conditions relative to the Medicaid claims data (see Table 7). It is also possible or even likely that those with serious comorbidities are more likely to maintain continuous Medicaid coverage, and thus to be included in the MDW analyses, compared to homeless people without such comorbid conditions; however, this potential situation alone is unlikely to account for the extent of the difference. Finally, while the MDW data includes only adults, the HUD data is a count of everyone in the population who has

a particular diagnosis, including children (who constitute 34% of the emergency shelter population in New York City and 33% upstate, but probably a much smaller percentage of those with an SMI or SUD)[16].

Due to all these differences between the MDW and HUD comorbidities data, the percentages calculated from the HUD reports are primarily of use to decide if rates of these diagnoses in a county or region are high or low relative to HUD data in other counties or regions or overall, and cannot be directly compared to the percentages obtained from the MDW. Even then, it is difficult to know whether regional differences in the HUD data are due to real differences in the populations or differences in data quality between various CoCs.

**Table 7.** *Clinical characteristics of homeless people in New York City and Upstate New York, from HMIS and HUD data*

|  | New York City | | | Upstate New York | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | SMI | SUD | HIV | SMI | SUD | HIV |
| MDW sample from HMIS | 35% | 32% | 11% | 47% | 38% | 6% |
| HUD data (limited to HMIS counties) | 16% | 10% | 5% | 16% | 14% | 0.7% |
| HUD data (all counties) | 16% | 10% | 5% | 18% | 15% | 0.7% |

*Note: HUD report percentages are based on all homeless, not just adults. MDW sample is limited to adults with full, continuous Medicaid coverage. Long Island is not included in these data.*

## HOMELESS ADULTS MEETING MRT–SH ELIGIBILITY CRITERIA

MRT–SH rental subsidy programs are run by a variety of partner state agencies, and each has its own eligibility criteria. For example, OASAS programs use criteria based on ED and inpatient utilization, and OMH programs use the criterion of Health Home enrollment. Applicants are currently prioritized for placement into MRT–SH capital units based on a menu of eligibility criteria including Medicaid spending, utilization, institutional residence, Health Home participation, or enrollment in a Health and Recovery Plan (HARP for behavioral health) or Special Needs Plan (HIV/AIDS) in the previous 12 months.

This report examines the number of shelter users derived from the HMIS data who qualify under at least one of these criteria (in addition to housing instability). Overall, of the MDW sample with full, continuous Medicaid coverage, 48% of New York City clients and 57% of upstate were MRT–SH eligible, defined by at least one of these criteria:[17]

- Two or more inpatient stays;
- Five or more emergency department (ED) visits;
- Four or more ED visits and one or more inpatient stays;
- Health Home enrollment;
- HARP or SNP enrollment; or
- High Medicaid spender (defined as being in the top 20% of adult Medicaid spenders: $19,323 for the New York City metro area[18], and $21,212 for upstate).

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[16] An alternative approach would be to calculate the percentages of SMI/SUD in the HUD data using only adults as the denominator, but since unknown numbers of youth with SMI and SUD are presumably included in the numerator, the percentages are presented by the population total without excluding minors.

[17] Institutional residence criteria are not examined in this report since the sample is limited to those who are homeless.

[18] Includes Long Island and Westchester County.

Certain characteristics were associated with a higher likelihood of meeting one of the MRT-SH eligibility criteria. Men were somewhat more likely to be eligible than women, particularly in New York City. In both geographies, homeless people who were neither Black nor Hispanic were more likely to be eligible than those who were Black or Hispanic. Eligibility also generally increased with age.[19]

While demographic characteristics were only moderately associated with the likelihood of meeting at least one eligibility criterion, comorbid conditions were strongly associated with eligibility. In both regions, having any one of the four diagnoses was associated with a higher rate of eligibility than not having any of these diagnoses.

One of the more interesting findings was that the relationship between eligibility and chronic homelessness varied depending on the definition of chronic homelessness used. When chronic homelessness was classified based on total days in shelter (consistent with the NY/NY III and HHAP definitions), chronically homeless individuals were not very different from other shelter users in their likelihood of being MRT-SH eligible. But when chronic homelessness was measured based on number of stays (consistent with one component of the definition used by HUD), chronically homeless clients were substantially more likely to be eligible.

**Table 8.** *Eligibility Criteria for MRT-SH Programs, New York City and Upstate*[19]

| | New York City | Upstate New York |
|---|---|---|
| Health Home enrolled | 37% | 41% |
| HARP or SNP enrolled | 3% | 3% |
| High Medicaid spender (top 20%) | 17% | 18% |
| High Utilizer (any of below): | 24% | 32% |
|    2+ inpatient stays | 14% | 19% |
|    5+ ED visits | 15% | 21% |
|    4+ ED visits & 1+ inpatient stay | 1% | 2% |
| *Any criteria* | **48%** | **57%** |

*Long Island is not included in these data.*

**Table 9.** *Percent Meeting at Least One Eligibility Criterion by Demographic and Clinical Characteristics, Clients with Full, Continuous Medicaid Coverage*

| Eligibility for MRT | NYC | Upstate |
|---|---|---|
| **All Homeless in Shelter Sample** | 48% | 57% |
| **Sex** | | |
| Male | 54% | 59% |
| Female | 43% | 54% |
| **Race/ethnicity** | | |
| Black/African-American | 45% | 50% |
| Hispanic/Latino | 48% | 58% |
| Not Black or Hispanic | 60% | 63% |
| **Age** | | |
| Under 25 | 31% | 48% |
| 26–39 | 41% | 54% |
| 40–44 | 54% | 62% |
| 45–54 | 63% | 61% |
| 55+ | 65% | 65% |
| **Comorbidities** | | |
| SMI | 76% | 79% |
| SUD | 74% | 71% |
| HIV | 99% | 99% |
| Other chronic | 66% | 72% |
| None | 16% | 20% |
| **Chronic homelessness** | | |
| **Chronically homeless (based on days)** | | |
|    Yes | 47% | 58% |
|    No | 50% | 56% |
| **Chronically homeless (based on stays)** | | |
|    Yes | 55% | 69% |
|    No | 40% | 54% |

*Note: Black and Hispanic are not mutually exclusive categories. Long Island is not included in these data.*

[19] Limited to clients with full, continuous Medicaid coverage.

# New York City

According to HUD, there were an estimated 50,671 homeless adults in New York City in 2017 (an increase of 6.1% from 2016). The sheltered count increased by 4%, while the unsheltered count increased by a striking 39%. In January 2017, 8% of the total homeless count were unsheltered.

Demographically, the MDW sample in New York City was quite similar to that from the NYC HMIS overall. Compared to the HUD reports, however, both Black and Hispanic homeless persons were underrepresented.
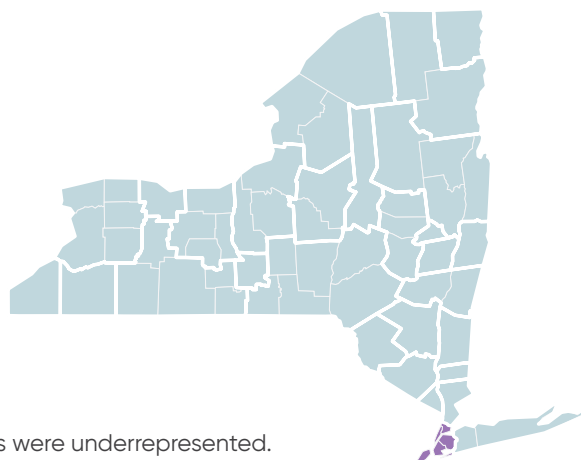
**Table 10.** *Numbers of HUD-reported Homeless Adults, New York City, 2016 & 2017*

| New York City | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
| | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| New York City (NY-600) | 44,924 | 2,835 | 47,759 | 46,740 | 3,931 | 50,671 |

Among those in the overall NYC HMIS sample, 40% were identified as chronically homeless, but the rate was much higher in January (61%). Thus, of the 47,759 individuals reported to HUD in January 2016, an estimated 29,133 would be expected to meet our definition of chronic homelessness.

More than one-third of the MDW population with full, continuous Medicaid coverage in New York City is in a Health Home, and roughly one-quarter (24%) has at least one indicator of high utilization. Seventeen percent are in the top 20% of all adult Medicaid spenders in New York City, and 3% are enrolled in HARP or SNP programs. Overall, 48% of the MDW sample in New York City met at least one of the MRT-SH eligibility criteria.

Of those who met the eligibility criteria, 45% are chronically homeless (based on days in shelter).

New York City is a unique environment within the state, with a very large homeless population. Applying the 48% eligibility rate for those with full, continuous Medicaid coverage to the estimated 2017 homeless population of 50,671 gives us an estimate of 24,332 homeless adults who are likely eligible for MRT supportive housing. Of those eligible shelter users, an estimated 45% also meet the definition of chronic homelessness, yielding an estimate of 10,945 individuals who are both eligible and chronically homeless.

**Table 11.** *Demographic and Clinical Profile of HMIS Sample, MDW Sub-sample, and HUD-reported Population in New York City*

| New York City | MDW Analysis (n=10,613) | NYC HMIS Sample | HUD Reports |
|---|---|---|---|
| Male | 52% | 53% | 52% |
| Black/African- American | 65% | 65% | 72% |
| Hispanic/Latino | 32% | 31% | 36% |
| Median (Mean) Age | 37 (38.7) | 36 (38.5) | N/A |
| SMI | 35% | N/A | 16% |
| SUD | 32% | N/A | 10% |
| HIV | 11% | N/A | 5% |
| Chronic medical conditions | 46% | N/A | N/A |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults.*

**Table 12.** *Eligibility Criteria for MRT-SH Programs, New York City*

| | |
|---|---|
| Health Home enrolled | 37% |
| HARP or SNP enrolled | 3% |
| High Medicaid spender (top 20%) | 17% |
| High Utilizer (any of below:) | 24% |
|     2+ inpatient stays | 14% |
|     5+ ED visits | 15% |
|     4+ ED visits & 1+ inpatient stay | 1% |
| ***Any criteria*** | ***48%*** |

*Note: Limited to clients with full, continuous Medicaid coverage*

# *Upstate New York*
# Capital District
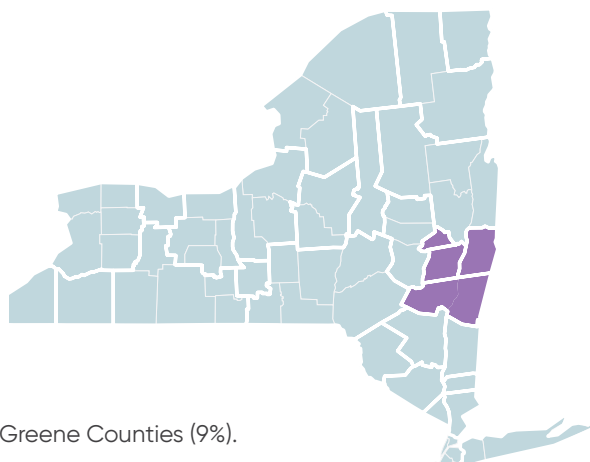
There were an estimated 1,052 homeless individuals in the Capital District as of January 2017 (an increase of 1.4% from 2016). The majority of homeless persons in the region (58%) were found in Albany County, followed by Schenectady County (19%) and Rensselaer County (13%). A small minority were in Columbia and Greene Counties (9%).

**Table 13.** *Numbers of HUD-reported Homeless Adults, Capital District, 2016 & 2017*

| Capital District | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
| | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Albany (NY-503) | 537 | 22 | 559 | 590 | 25 | 615 |
| Schenectady (NY-507) | 227 | 55 | 282 | 182 | 23 | 205 |
| Rensselaer (NY-512) | 110 | 11 | 121 | 115 | 19 | 134 |
| Columbia-Greene (NY-519) | 73 | 2 | 75 | 95 | 3 | 98 |
| Total | 947 | 90 | 1,037 | 982 | 70 | 1,052 |

The MDW sample from the Capital Region (n=619) was very similar to the HMIS population upstate overall, but it had a lower percentage of men and a slightly higher proportion of Black individuals. Compared to the HUD reports, the percent of clients who were Black is lower in the MDW estimates, and the MDW analysis appears to underrepresent men in the Capital Region. The Capital Region generally had lower rates of SMI and SUD than Upstate New York overall. This was consistent with the HUD data, which also showed a somewhat lower rate of SMI in the Capital Region.

**Table 14.** *Demographic and Clinical Profile of MDW Sample and HUD-reported Population in the Capital Region and Upstate*

| | MDW Analysis (n=619) | | HUD Reports | | |
|---|---|---|---|---|---|
| | Capital Region | Eastern Upstate NY | Capital Region | All Upstate | |
| Male | 45% | 49% | 60% | 60% | *Note: Black and Hispanic are not* |
| Black/African-American | 42% | 40% | 47% | 44% | *mutually exclusive* |
| Hispanic/Latino | 7% | 11% | 13% | 16% | *categories. HUD report percentages* |
| Median (Mean) Age | 38.4 (37) | 38.1 (36) | N/A | N/A | *are based on all* |
| SMI | 42% | 47% | 14% | 18% | *homeless, not just adults. Upstate HUD* |
| SUD | 34% | 38% | 15% | 15% | *data do not include* |
| HIV | 4% | 6% | 1% | 0.7% | *Long Island.* |
| CC | 33% | 33% | N/A | N/A | |

Among those in the overall upstate HMIS sample, 7% were identified as chronically homeless, but the number was much higher (15%) in January. Thus, of the 1,037 Capital Region homeless adults reported to HUD in January 2016, an estimated 156 would meet our definition of chronic homelessness.

These demographic differences (fewer men, who are more likely to be eligible; and slightly more Black/African–Americans, who are somewhat less likely to be eligible) and lower rates of comorbidities are reflected in the different rates at which Capital Region homeless persons meet the various eligibility criteria. While about 57% of the entire MDW upstate sample with full, continuous Medicaid coverage was deemed to be MRT-SH eligible, only 52% of the Capital Region MDW sample met at least one of these criteria. Utilization patterns did not appear to vary much, but Capital Region residents were less likely to be enrolled in Health Homes.

If we apply the 52% eligibility rate from the MDW analysis to the estimated 1,052 homeless adults in the Capital Region in January 2017, roughly 547 of those persons would be expected to be eligible for MRT-SH. Of the eligible homeless in the upstate MDW analysis, an estimated 7.5% also meet the definition of chronic homelessness. Applied to the Capital Region numbers, 41 individuals would be expected to be both MRT-SH eligible and chronically homeless.

**Table 15.** *Eligibility Criteria for MRT–SH Programs, Capital Region and Upstate MDW Sample*

| | Capital Region | Eastern Upstate NY |
|---|---|---|
| Health Home enrolled | 36% | 41% |
| HARP or SNP enrolled | 3% | 3% |
| High Medicaid spender (top 20%) | 17% | 18% |
| High utilizer (any of below): | 32% | 32% |
| Two or more inpatient stays | 19% | 19% |
| 5 or more ED visits | 22% | 21% |
| Four+ ED visits and 1+ inpatient stay | 1% | 2% |
| ***Any MRT–SH eligibility criteria*** | **52%** | **57%** |

*Note: Limited to clients with full, continuous Medicaid coverage*

# Hudson Valley

There were an estimated 2,173 homeless individuals in the Hudson Valley as of January 2017 (an increase of 12% from 2016). The majority of homeless persons in the region are in Westchester County (52%); the other counties have smaller homeless populations.
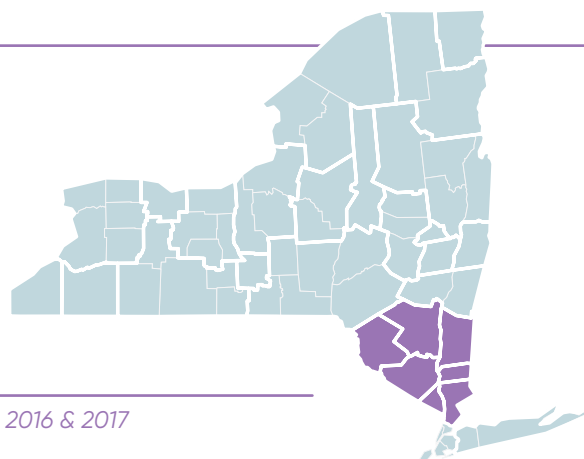
**Table 16.** *Numbers of HUD–reported Homeless Adults, Hudson Valley, 2016 & 2017*

| Hudson Valley | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
| | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Dutchess (NY–601) | 262 | 19 | 281 | 256 | 9 | 265 |
| Orange (NY–602) | 214 | 20 | 234 | 213 | 30 | 243 |
| Westchester (NY–605) | 1,054 | 34 | 1,088 | 1,083 | 47 | 1,130 |
| Rockland (NY–606) | 99 | 32 | 131 | 90 | 58 | 148 |
| Sullivan (NY–607) | 116 | 0 | 116 | 129 | 2 | 131 |
| Ulster (NY–608) | 197 | 36 | 233 | 231 | 25 | 253 |
| Putnam (no CoC) | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 1,942 | 141 | 2,083 | 2,002 | 171 | 2,173 |

The MDW sample in the Hudson Valley (n=690) was very similar in sex, age, and race/ethnicity to the upstate HMIS sample overall. The population was less diverse than the HUD estimates for the Hudson Valley, but it should be noted that Westchester and Sullivan Counties are not part of the CARES region and are therefore not represented in the HMIS data. Westchester County in particular has an extremely diverse homeless population, according to HUD estimates (69% Black

and 23% Hispanic). Given that more than half of the homeless population in the Hudson Valley is in Westchester County, the HMIS data for the Hudson Valley may not be representative of the region as a whole. Furthermore, data on the homeless in Putnam County are not found in either the HMIS or the HUD data, as Putnam County is not part of a CoC.

The Hudson Valley MDW sample had similar rates of the various comorbidities to upstate New York overall, consistent with the HUD numbers showing minimal differences in comorbidities between the Hudson Valley and upstate.

**Table 17.** *Demographic and Clinical Profile of MDW Sample and HUD-reported Population in the Capital Region and Upstate*

| | MDW Analysis (n=690) | | HUD Reports | | |
| --- | --- | --- | --- | --- | --- |
| | Hudson Valley | Eastern Upstate NY | Hudson Valley | All Upstate | |
| Male | 48% | 49% | 60% | 60% | |
| Black/African–American | 39% | 40% | 47% | 44% | |
| Hispanic/Latino | 13% | 11% | 13% | 16% | |
| Median (Mean) Age | 38.3 (36) | 38.1 (36) | N/A | N/A | |
| SMI | 50% | 47% | 14% | 18% | |
| SUD | 40% | 38% | 15% | 15% | |
| HIV | 8% | 6% | 1% | 0.7% | |
| CC | 34% | 33% | N/A | N/A | |

*Note: MDW analysis for Hudson Valley does not include Westchester, Sullivan, or Putnam Counties. Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults. Upstate HUD data does not include Long Island.*

The Hudson Valley population was also extremely similar to the overall upstate MDW sample in terms of their utilization characteristics, but with a somewhat higher rate of Health Home enrollment. Among those in the overall upstate HMIS sample, 7% were identified as chronically homeless, but the number was much higher (15%) in January. Thus, of the 2,083 Hudson Valley homeless reported to HUD in January 2016, an estimated 312 would meet our definition of chronic homelessness.

If we apply the 59% eligibility from the MDW analysis for those with full, continuous Medicaid coverage to the estimated 2,173 homeless adults in the Hudson Valley in January 2017, we can assume that roughly 1,282 of those persons would be eligible for MRT–SH. Of the eligible homeless

**Table 18.** *Eligibility Criteria for MRT–SH Programs, Hudson Valley and Upstate MDW Sample*

| | Hudson Valley Region | Eastern Upstate NY |
| --- | --- | --- |
| Health Home enrolled | 45% | 41% |
| HARP or SNP enrolled | 2% | 3% |
| High Medicaid spender (top 20%) | 19% | 18% |
| High utilizer (any of below): | 33% | 32% |
| Two or more inpatient stays | 18% | 19% |
| 5 or more ED visits | 21% | 21% |
| Four+ ED visits and 1+ inpatient stay | 2% | 2% |
| *Any MRT–SH eligibility criteria* | *59%* | *57%* |

*Note: Limited to clients with full, continuous Medicaid coverage*

in the upstate MDW analysis, an estimated 7.5% also meet the definition of chronic homelessness. Applied to the Hudson Valley numbers, 96 individuals would be expected to be both MRT–SH eligible and chronically homeless.

# The Adirondacks

There were an estimated 469 homeless persons in the Adirondacks as of January 2017 (an increase of 2% from 2016). Forty-three percent are found in the CoC region encompassing Saratoga, Washington, Warren, and Hamilton Counties, while 32% are in the region comprised of Jefferson, Lewis, and St. Lawrence Counties. Clinton County had accounted for 20% of the homeless population, while Franklin and Essex Counties had very few (5%).
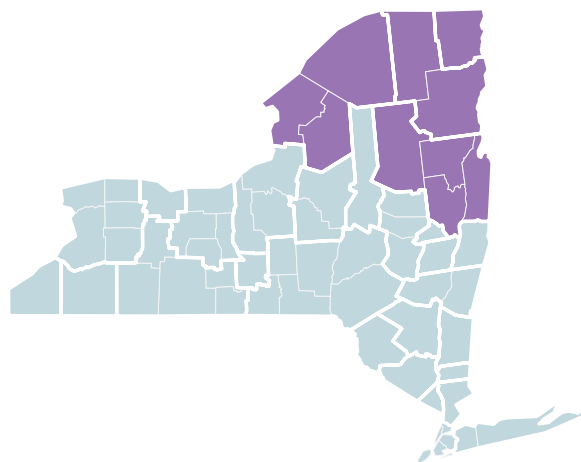
**Table 19.** *Numbers of HUD–reported Homeless Adults, Adirondacks, 2016 & 2017*

| Adirondacks | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
| | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Clinton (NY-516) | 107 | 2 | 109 | 94 | 1 | 95 |
| Franklin, Essex (NY-520) | 22 | 1 | 23 | 23 | 1 | 24 |
| Jefferson, Lewis, St. Lawrence (NY-522) | 98 | 9 | 107 | 121 | 27 | 148 |
| Saratoga, Washington, Warren, Hamilton (NY-523) | 205 | 16 | 221 | 195 | 7 | 202 |
| Total | 432 | 28 | 460 | 433 | 36 | 469 |

The MDW sample from the Adirondacks was younger than that of upstate overall, and the population was considerably more male and less diverse (only 9% Black and 4% Hispanic, compared to 40% Black and 11% Hispanic in upstate overall). For the most part, the clinical characteristics were similar to the population overall, but with somewhat higher rates of SMI (55% versus 47%) and SUD (45% versus 38%).

**Table 20.** *Demographic and Clinical Profile of MDW Sample and HUD-reported Population in the Adirondacks and Upstate*

| | MDW Analysis (n=227) | | HUD Reports | |
|---|---|---|---|---|
| | Adirondacks | Eastern Upstate NY | Adirondacks | All Upstate |
| Male | 61% | 49% | 65% | 60% |
| Black | 9% | 40% | 12% | 44% |
| Hispanic | 4% | 11% | 3% | 16% |
| Mean (Median) Age | 36.7 (34) | 38.1 (36) | N/A | N/A |
| SMI | 55% | 47% | 21% | 18% |
| SUD | 45% | 38% | 16% | 15% |
| HIV | 5% | 6% | 0% | 0.7% |
| CC | 29% | 33% | N/A | N/A |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults. Upstate HUD data does not include Long Island.*

Among those in the overall upstate HMIS sample, 7% were identified as chronically homeless, but the rate was much higher (15%) in January. Thus, of the 460 Adirondack homeless individuals reported to HUD in January 2016, an estimated 69 would meet our definition of chronic homelessness.

Most eligibility criteria among those with full, continuous Medicaid coverage were close to upstate overall, but with a slightly higher rate of Health Home enrollment.

If we apply the 60% eligibility rate from the MDW analysis to the estimated 469 homeless adults in the Adirondacks, we can assume that roughly 282 of those persons would be eligible for MRT-SH. Of the eligible homeless in the upstate MDW analysis, an estimated 7.5% also meet the definition of chronic homelessness. Applied to the Adirondack numbers from January 2017, 21 individuals would be expected to be both MRT-SH eligible and chronically homeless.

**Table 21.** *Eligibility Criteria for MRT-SH Programs, Adirondacks and Upstate MDW Sample*

| | Adirondacks Region | Eastern Upstate NY |
|---|---|---|
| Health Home enrolled | 44% | 41% |
| HARP or SNP enrolled | 3% | 3% |
| High Medicaid spender (top 20%) | 19% | 18% |
| High utilizer (any of below): | 28% | 32% |
| Two or more inpatient stays | 18% | 19% |
| 5 or more ED visits | 19% | 21% |
| Four+ ED visits and 1+ inpatient stay | 2% | 2% |
| ***Any MRT-SH eligibility criteria*** | **60%** | **57%** |

*Note: Limited to clients with full, continuous Medicaid coverage*

# Central New York

There were an estimated 1,096 homeless persons in Central New York as of January 2017 (a decrease of 2.5% from 2016). The majority of the homeless population (59%) was concentrated in the CoC region comprised of Onondaga, Oswego, and Cayuga Counties.
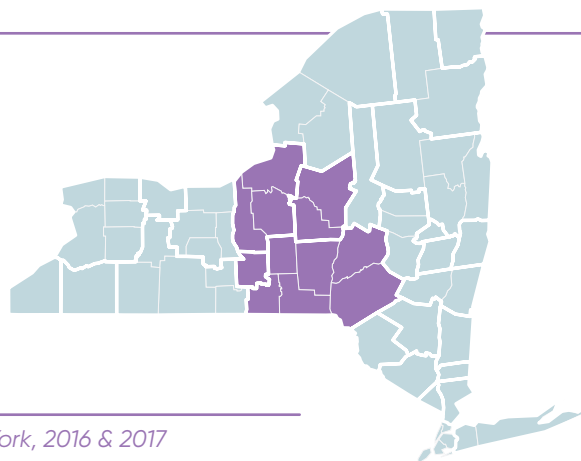
**Table 22.** *Numbers of HUD-reported Homeless Adults, Central New York, 2016 & 2017*

| Central New York | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
| | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Onondaga, Oswego, Cayuga (NY-505) | 666 | 23 | 689 | 617 | 25 | 642 |
| Tompkins (NY-510) | 46 | 30 | 76 | 44 | 20 | 64 |
| Broome, Otsego, Chenango, Delaware, Cortland, Tioga (NY-511) | 208 | 24 | 232 | 213 | 61 | 274 |
| Oneida, Madison (NY-518) | 110 | 17 | 127 | 103 | 13 | 116 |
| Total | 1,030 | 94 | 1,124 | 977 | 119 | 1,096 |

Central New York is outside the CARES region, and therefore HMIS data (and thus Medicaid data) were not available for those in this region. There are, however, some data available in the HUD reports that give us some insight into this population.

While the HUD-reported homeless population in Central New York was demographically similar to that of upstate overall, the population was somewhat more male and less diverse (with only 32% Black and 9% Hispanic, compared to 44% and 16% overall). For the most part, the clinical characteristics were similar to the population overall, but with a much higher rate of SUD (24% versus 15%).

If we apply the number from the overall upstate HMIS sample, which did not include Central New York, 7% were identified as chronically homeless, but the number was much higher (15%) in January. Thus, of the 1,096 Central New York homeless reported to HUD in January 2016, an estimated 164 would meet our definition of chronic homelessness.

Further, across upstate New York, 57% of clients with full, continuous Medicaid coverage were eligible for MRT–SH. As applied to Central New York, of 1,096 homeless persons in 2017, 625 would be eligible for MRT–SH, though the higher rates of SMI and SUD in this region might result in a higher rate of eligibility.

**Table 23.** *Selected Characteristics of HUD-reported Homeless Population in Central New York and Upstate*

|  | HUD Central NY | HUD Upstate |
|---|---|---|
| Male | 61% | 60% |
| Black/African–American | 32% | 44% |
| Hispanic/Latino | 9% | 16% |
| SMI | 22% | 18% |
| SUD | 24% | 15% |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults. Upstate HUD data does not include Long Island.*

Of the eligible homeless individuals in the upstate MDW analysis, an estimated 7.5% also meet the definition of chronic homelessness. Applied to the Central New York estimate of 625 eligible homeless, this yields an estimate of 47 individuals who are both MRT-SH eligible and chronically homeless.

# Finger Lakes

There were an estimated 1,053 homeless persons in the Finger Lakes region as of January 2017 (a decrease of 2% from 2016). The majority of the homeless population (58%) was concentrated in Monroe County (which includes the city of Rochester). Another 27% were in the CoC comprised of Wayne, Ontario, Seneca, and Yates Counties; only 15% were in the CoC comprised of Steuben, Allegany, Livingston, Chemung and Schuyler Counties.
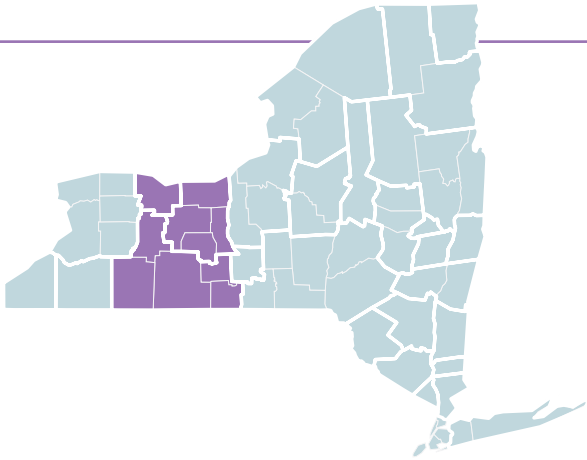
**Table 24.** *Numbers of HUD-reported Homeless Adults, Finger Lakes, 2016 & 2017*

| Finger Lakes | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
|  | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Monroe (NY–500) | 569 | 66 | 635 | 545 | 64 | 609 |
| Steuben, Allegany, Livingston, Chemung, Schuyler (NY–501) | 295 | 103 | 398 | 125 | 32 | 157 |
| Wayne, Ontario, Seneca, Yates (NY–513) | 41 | 0 | 41 | 276 | 11 | 287 |
| Total | 905 | 169 | 1,074 | 946 | 107 | 1,053 |

The demographics of the Finger Lakes homeless population were very similar to those of upstate New York overall. There was, however, a slightly higher rate of SMI and a substantially higher rate of SUD reported in this region.

If we apply the number from the overall upstate HMIS sample, which did not include the Finger Lakes, 7% were identified as chronically homeless, but the number was much higher (15%) in January. Thus, of the 1,053 Finger Lakes homeless reported to HUD in January 2016, an estimated 158 would meet our definition of chronic homelessness.

If we apply the overall upstate eligibility rate of 57% for those with full, continuous Medicaid coverage from the MDW analysis to the 1,053 homeless in the Finger Lakes region, we would estimate that roughly 600 persons in this region would be MRT-SH eligible. Given the demographic similarities, this number is likely to be a relatively good estimate, although the higher rates of reported behavioral health diagnoses might imply a somewhat higher number.

Of the eligible homeless in the upstate MDW analysis, an estimated 7.5% also meet the definition of chronic homelessness. Applied to the Finger Lakes estimate of 600 eligible shelter users, this yields an estimate of 45 individuals who are both high utilizers and chronically homeless.

**Table 25.** *Selected Characteristics of HUD-reported Homeless Population in Finger Lakes and Upstate*

|  | **HUD Finger Lakes** | **HUD Upstate** |
|---|---|---|
| Male | 60% | 60% |
| Black/African-American | 40% | 44% |
| Hispanic/Latino | 14% | 16% |
| SMI | 22% | 18% |
| SUD | 27% | 15% |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults. Upstate HUD data does not include Long Island.*

# Western New York

There were an estimated 790 homeless persons in Western New York as of January 2017 (an increase of 4% from 2016). The vast majority of the homeless population (89%) was concentrated in the CoC region comprised of Erie, Niagara, Orleans, Genesee, and Wyoming Counties.
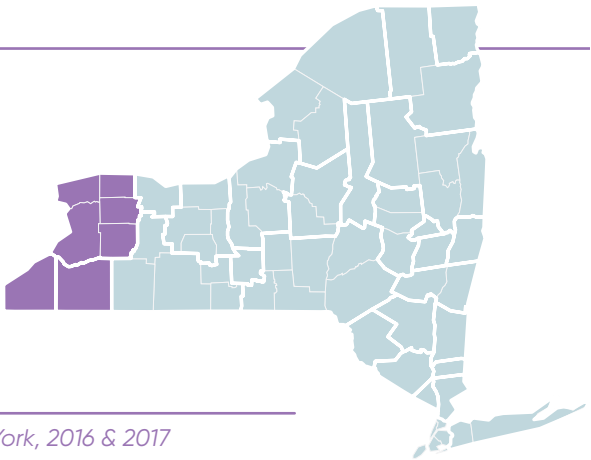
**Table 26.** *Numbers of HUD-reported Homeless Adults, Western New York, 2016 & 2017*

| Western New York | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
|  | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Cattaraugus (NY-504) | 19 | 0 | 19 | 28 | 0 | 28 |
| Erie, Niagara, Orleans, Genesee, Wyoming (NY-508) | 664 | 57 | 721 | 685 | 18 | 703 |
| Chautauqua (NY-514) | 18 | 0 | 18 | 56 | 3 | 59 |
| Total | 701 | 57 | 758 | 769 | 21 | 790 |

The demographics of the Western New York region are similar to those for upstate overall, but reported rates of SMI and SUD are lower.

If we apply the number from the overall upstate HMIS sample, which did not include Western New York, 7% were identified as chronically homeless, but the number was much higher (15%) in January. Thus, of the 790 Western New York homeless individuals reported to HUD in January 2016, an estimated 119 would meet our definition of chronic homelessness.

If we apply the overall upstate eligibility rate of 57% for those with full, continuous Medicaid coverage from the MDW analysis to the 790 homeless in Western New York in 2017, we would estimate that roughly 450 persons in this region would be MRT-SH eligible. Given the demographic similarity, this is likely to be a relatively good estimate, although the lower rates of reported behavioral health comorbidities might imply a somewhat lower number.

**Table 27.** *Selected Characteristics of HUD-reported Homeless Population in Western New York and Upstate*

|  | HUD Western New York | HUD Upstate |
|---|---|---|
| Male | 57% | 60% |
| Black/African-American | 46% | 44% |
| Hispanic/Latino | 14% | 16% |
| SMI | 12% | 18% |
| SUD | 5% | 15% |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults. Upstate HUD data does not include Long Island.*

Of the eligible individuals in the upstate MDW analysis, an estimated 7.5% also meet the definition of chronic homelessness. Applied to the Western New York estimate of 450 eligible homeless, this yields an estimate of 34 individuals who are both MRT-SH eligible and chronically homeless.

# Long Island

Long Island cannot be considered "upstate New York", and is not included with the other non-NYC counties in the above analyses because it both is geographically isolated from the other non-NYC counties and is demographically distinct. Long Island is encompassed by a single CoC with, as of January 2017, an estimated homeless population of 2,101 (an increase of 9% from 2016).
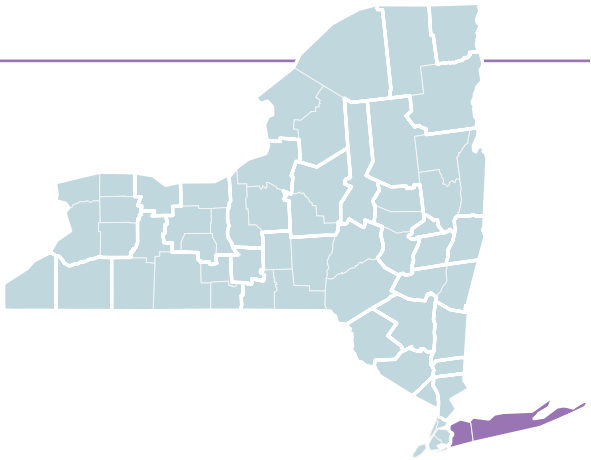
**Table 28.** *Numbers of HUD-reported Homeless Adults, Long Island, 2016 & 2017*

| Long Island | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|
|  | Sheltered | Unsheltered | Total | Sheltered | Unsheltered | Total |
| Nassau-Suffolk (NY-504) | 1,821 | 114 | 1,935 | 2,037 | 64 | 2,101 |
| Total | 1,821 | 114 | 1,935 | 2,037 | 64 | 2,101 |

As shown in the table below, Long Island is more similar to NYC in percent male, and more similar to the upstate counties in percent Hispanic. Although Long Island has a higher percent of Black homeless persons than upstate New York, it has a much lower percent than New York City.

There is a much lower reported rate of SMI and SUD in the Long Island CoC than in either upstate New York or New York City. This difference may be a data reporting issue, or could be reflective of the fact that high housing prices on Long Island make it easier for people without behavioral health conditions to fall into homelessness. It could also reflect the fact that 47% of the homeless individuals reported are children under the age of 18 who are likely to have lower rates of SMI and SUD. This rate is higher than New York City, where only 34% of the homeless population are children.

Given the distinctiveness of Long Island's homeless profile, it is difficult to determine an appropriate metric to apply for MRT–SH eligibility. It is likely that the eligibility rate falls between that of New York City (48%) and upstate New York (57%) for those with full, continuous Medicaid coverage, which would produce an estimate of 1,008 to 1,198.

The percent of those eligible who are also chronically homeless is even more difficult to estimate, given the wide

**Table 29.** *Selected Characteristics of HUD-reported Homeless Population on Long Island, Compared to New York City and Upstate*

|  | HUD Long Island | HUD NYC | HUD Upstate |
|---|---|---|---|
| Male | 50% | 52% | 60% |
| Black/African-American | 56% | 72% | 44% |
| Hispanic/Latino | 19% | 36% | 16% |
| SMI | 4% | 16% | 18% |
| SUD | 3% | 10% | 15% |

*Note: Black and Hispanic are not mutually exclusive categories. HUD report percentages are based on all homeless, not just adults.*

divergence between the New York City and upstate analyses of HMIS data. Chronic homelessness is expected to be between 7.5% and 45% of the eligible individuals, depending on whether Long Island more closely resembles New York City or upstate New York in this regard. This range would lead to an estimate somewhere between 76 and 539 people, which is likely too broad to be useful.

# New York State Overall

When these estimates are combined to give us a picture of New York State overall, it is clear that the majority of MRT-SH eligible homeless people are in New York City. This location is also the greatest nexus between MRT-SH eligibility and chronic homelessness.

Upstate estimates are the most limited, based on the lack of data. Only three regions upstate had HMIS data available to the research team, and one of those regions (Hudson Valley) did not include all counties in the region. Furthermore, the Mohawk Valley region of upstate New York (Herkimer, Fulton, Montgomery, and Schoharie Counties) was not in a CoC and therefore had no HUD estimates available either.

Long Island was also particularly problematic because of a lack of available HMIS data and the demographic divergences from both New York City and upstate New York. The estimated range for MRT eligibility on Long Island is likely reasonable, but any attempt to estimate the overlap between the MRT-eligible and the chronically homeless pushes the limits of the available data.
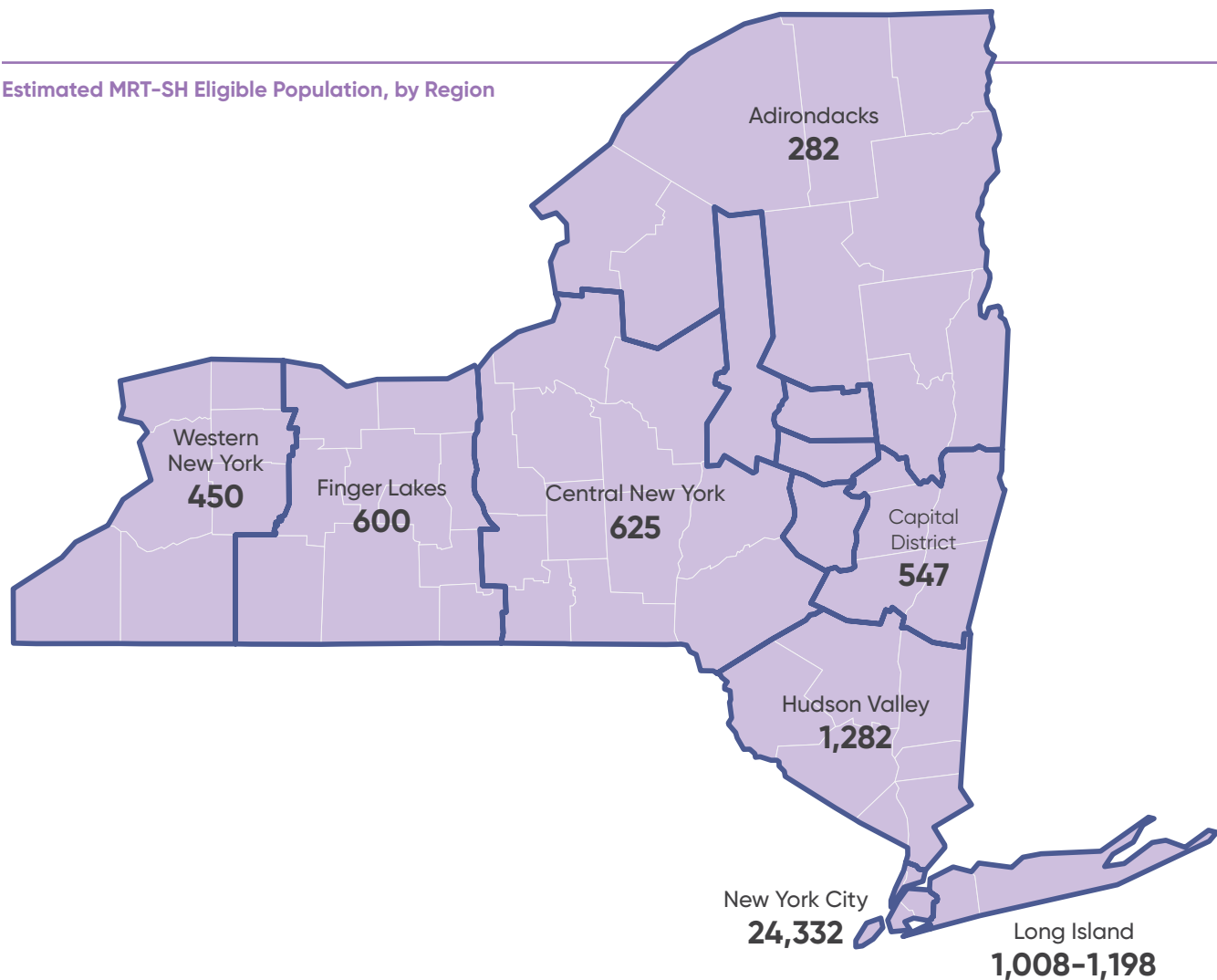
Overall, as captured by the HUD PIT reports, there were about 60,000 homeless adults in New York State in January 2017. Slightly more than half of these individuals are likely to be eligible for MRT supportive housing programs (48% in New York City and 57% upstate), an estimate based on those with full, continuous Medicaid coverage. More than 11,000 homeless New Yorkers (most of whom are in New York City) are estimated to be both MRT-SH eligible and chronically homeless. At the same time, there are significant numbers of homeless people outside of New York City who could benefit from MRT-SH programs, even if they do not meet the chronic homelessness definition – about 13% of the eligible homeless population lives upstate, and another 4% live on Long Island.

**Table 30.** *Adult Homeless Population, Estimated MRT–SH Eligible Population, and Estimated MRT–SH Eligible and Chronically Homeless Population, 2017*

| | HUD PIT–Identified Homeless Adults, January 2017 | MRT–SH Eligible | MRT–SH Eligible + Chronically Homeless |
|---|---|---|---|
| New York City | 50,671 | 24,332 | 10,945 |
| Upstate New York | 6,633 | 3,786 | 284 |
|    Capital Region | 1,052 | 547 | 41 |
|    Hudson Valley | 2,173 | 1,282 | 96 |
|    Adirondacks | 469 | 282 | 21 |
|    Central New York | 1,096 | 625 | 47 |
|    Finger Lakes | 1,053 | 600 | 45 |
|    Western New York | 790 | 450 | 34 |
|    Mohawk Valley | n/a | n/a | n/a |
| Long Island | 2,101 | 1,008–1,198 | 76–539 |
| ***New York State**** | **59,405** | **29,221** | **11,537** |

*\*New York State total estimate uses the midpoint of the ranges for Long Island*

**Estimated MRT-SH Eligible Population, by Region**



Adirondacks
**282**

Western New York
**450**

Finger Lakes
**600**

Central New York
**625**

Capital District
**547**

Hudson Valley
**1,282**

New York City
**24,332**

Long Island
**1,008–1,198**

# Section 3:
# MRT-SH eligibility among individuals without 12 months of continuous Medicaid coverage

## SECTION OVERVIEW

Section 3 uses data from New York's Statewide Planning and Research Cooperative System (SPARCS) to address three related questions:

**1**

Is inpatient and emergency department utilization of home-less adults without continuous Medicaid coverage higher than, lower than, or similar to that of homeless adults with full, continu-ous Medicaid coverage?

**2**

Is the MDW an accurate source for total hospital utilization of homeless adults who churn off Medicaid, or do these clients receive care through other payers?

**3**

How might the estimates of MRT-eligible shelter clients in Section 2 be adjusted in light of SPARCS data?

The estimates presented in Section 2 are based upon utilization patterns for shelter users who have at least 12 months of full, continuous Medicaid coverage. Unfortunately, many of the shelter users in the HMIS experience significant gaps in Medicaid coverage. Twenty-eight percent of the New York City sample and 33% of the upstate sample had less than full coverage, or gaps in coverage exceeding 59 days. Additionally, a number of homeless individuals had no Medicaid Data Warehouse match (12% of those upstate and 7% in New York City). It is unclear how many of these individuals had no Medicaid records, and how many had data entry errors in their HMIS records that prevented a match. Overall, only 66% of New York City individuals sampled, and 55% of Upstate, had a record of full, continuous Medicaid coverage.

This gap is a significant limitation of the data in Section 2, because with MDW data alone we have no way to assess the Medicaid utilization of individuals with less than continuous coverage in a way that is comparable to those with continuous coverage – for example, if we find that an individual with only 6 months of Medicaid coverage in a year's time has half as many Medicaid-covered emergency department visits as an individual with full, continuous coverage, there is no way to know whether this reflects their actual utilization or if half – or more – of their emergency department visits that year were covered by a payer other than New York State Medicaid.

There are a variety of reasons that shelter users may have medical care that is not captured in Medicaid claims. First, they may not be eligible for Medicaid. Generally, only U.S. citizens and legal permanent residents (i.e., "green card" holders) are eligible for Medicaid, although there are exceptions for certain groups (e.g., refugees, asylees, veteran families). Immigrants who are undocumented or have been residing in the U.S. legally for less than 5 years are typically not eligible. Second, shelter users may spend some period of time covered by another payer. This coverage may be during a period of employment, or during incarceration or a stay in a state psychiatric facility. They may also have been covered under some special program or "charity care" at the hospital where they received care, although typically hospitals will enroll eligible uninsured clients in Medicaid when they present for services (for this reason, self-pay is likely to be uncommon). Finally, some shelter users may have received care in states other than New York. The unstably housed are likely to be a transient population who may travel to another state seeking employment or better services, or to temporarily reside with a friend or family member. All of the regions for which we have HMIS data border on other states.

Given these possibilities, if we rely only on Medicaid claims, the likelihood of "missing" some utilization by shelter users without continuous coverage seems high. This concern was the basis for limiting the sample to continuous coverage clients

for the analyses in Section 2. However, this approach implicitly assumes that the excluded clients will in fact have similar rates of utilization to those with full, continuous coverage; the overall estimates of eligibility for MRT-SH from that section are based on this assumption.

Yet there are logical reasons to believe that the utilization of this population could be either significantly higher or lower than that of clients with continuous coverage. Clients who cycle on and off Medicaid may be less stable overall, with more severe behavioral health problems and a higher likelihood of spending time in prisons or psychiatric institutions. This pattern would imply higher utilization of high-cost services (e.g., hospital inpatient or emergency department services) than their peers. On the other hand, since hospitals have every financial incentive to enroll uninsured Medicaid-eligible patients when they present for services, clients who spend periods of time without Medicaid coverage may be clients who are using very few hospital-based services, as they would otherwise have been enrolled.

In this section, we use data from New York's Statewide Planning and Research Cooperative System (SPARCS) to systematically explore the total (not just Medicaid-covered) numbers of inpatient stays and ED visits in New York State in 2016 by all shelter users in the regions for which HMIS data were available. These data are not detailed enough to directly integrate with the Medicaid claims data presented in Section 2, but can provide a framework for understanding how much and in what direction the estimates of MRT-SH-eligible shelter users may be biased. Additionally, for those clients with an MDW match but not full, continuous coverage, MDW records are analyzed. If the MDW data for these clients is similar to the SPARCS data, we are unlikely to be "missing" much inpatient and ED utilization by using Medicaid claims for people who were not continuously enrolled. If utilization in SPARCS is substantially higher than in the MDW, however, it suggests that a considerable number of inpatient and ED visits are taking place among this population that are not billed to New York State Medicaid.

## DATA AVAILABILITY AND LIMITATIONS

These analyses drew on information from the SPARCS datasets, which include information on inpatient stays and ED visits from general acute care and specialty hospitals[20] across New York State. Due to the detailed nature of the SPARCS data, with protected health information on millions of New Yorkers, direct access to identifiable data by the research team was not possible. Instead, the research team provided the SPARCS team at NYSDOH with a list of identifiers for shelter clients without full, continuous Medicaid coverage. The SPARCS team then provided aggregated information by Continuum of Care, including the percentage of clients in each CoC who had two or more inpatient stays, five or more ED visits, or a combination of 1 inpatient stay and 4 ED visits in 2016. The SPARCS team also furnished the research team with a breakout of the stays and visits for this population by primary payer.

These data also have some significant limitations. First, they are limited to hospitals in New York. As noted above, some unknown percentage of shelter users may have received care in other states. Second, the match to SPARCS was predicated on correct patient information, particularly Social Security number (SSN). A number of shelter clients did not match to the Medicaid claims data on SSN (7% in New York City and 12% upstate). This absence does not necessarily mean that their SSNs were incorrect: they may also have been missing from the Medicaid database because they had never been on Medicaid. But given the relatively high percentage of an economically distressed population with no Medicaid match, it seems likely that some portion of SSNs were incomplete or incorrect, and thus would not match SPARCS records either. Given these limitations, the SPARCS data are not used to modify the estimates of eligible shelter users given in Section 2. Rather, they are presented to help understand the limitations of those estimates and the service utilization and needs of those excluded from those analyses.

Additionally, the criteria used for determining MRT-SH eligibility in Section 2 extend significantly beyond inpatient and ED utilization, and include Health Home enrollment, SNP or HARP enrollment, and overall Medicaid spending. Among those with continuous Medicaid coverage, those who qualify for MRT-SH based on inpatient and/or ED utilization (24% in New York City and 32% upstate) represent only about half of those who qualify by any of the criteria (48% in New York City and 57% upstate). However, Health Homes, HARP, and SNP are Medicaid-based programs, so any participation in those programs will be reflected in Medicaid claims data. As such, examination of MDW records for those without continuous

[20] State and private psychiatric facilities and Article 32 substance abuse treatment facilities are excluded.

Medicaid coverage can still inform participation in these programs, despite the expected limitations.

## METRICS

There are several decision points when calculating inpatient and ED utilization metrics for comparison between data sources. One of these relates the exclusion versus inclusion of inpatient stays at Article 32 substance abuse treatment facilities. The SPARCS data system does not include data from these facilities, but the MDW does, and these stays count towards the eligibility criteria used by some MRT-SH programs. The inpatient data presented in Section 2 include Article 32 stays. For this reason, Article 32 stays will be retained in the metric presented for the MDW data in this section as well, but the text will note when their inclusion explains some of the differences between SPARCS and MDW estimates.

Another decision point is the treatment of clients with an unmatched SSN. If the assumption is made that clients whose SSN does not match to any in the MDW largely have errors in their SSNs, they should be excluded from the denominators when calculating the percentage of clients who meet each utilization criteria: their inclusion would artificially deflate the percentages by implicitly assuming zero values for these clients. But if the assumption is made that most clients with unmatched SSNs legitimately have never received Medicaid, it is appropriate to include them in the denominators: their exclusion would artificially inflate the percentages by excluding clients with legitimate zero values. Unfortunately, there is no good evidence to inform this decision. The following tables present the MDW data calculated with the unmatched SSNs excluded from the denominator, and present the SPARCS data calculated both ways to illustrate the potential impact of the different assumptions.
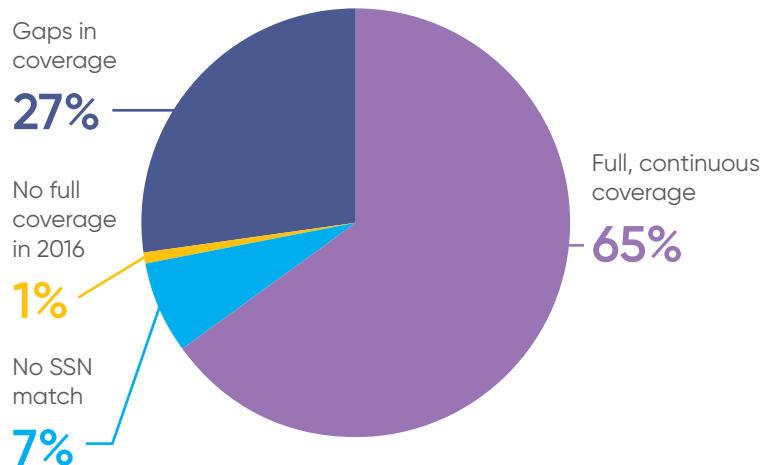
## NEW YORK CITY

Figure 7 shows the breakdown of the 45,733 client in the New York City HMIS sample[21] by how they matched – or failed to match – to the MDW Medicaid data. Two-thirds had the full, continuous coverage required for inclusion in the Medicaid-based analyses. More than one-quarter (27%) matched to the MDW but had gaps in their Medicaid coverage in 2016. Only seven percent did not match to the Medicaid data at all.

This group is a strong sample to match to the SPARCS data, as the majority had valid SSNs (confirmed by their match to the MDW).

The 15,854 IDs for clients without continuous coverage from New York City were sent to the SPARCS team for matching, including

**Figure 7.** *Medicaid coverage status of New York City sample*



3,395 with possibly invalid SSNs. Of this sample, 939 clients were identified as having at least 2 inpatient stays, 1,146 people at least 5 ED visits, and 95 a combination of 1 inpatient stay and 4 ED visits.

The table below shows the percentage meeting each criterion both with and without the possibly invalid SSNs in the denominator. The numbers are then contrasted with those found in Table 8 for clients with full, continuous Medicaid coverage. Clearly, by any measure, those without full continuous coverage are much less likely to meet the thresholds of 2 inpatient, 5 ED, or 1 inpatient and 4 ED episodes than those with full coverage for the entire year.

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[21] This is all NYC clients in shelter on January 25, April 25, July 25, or October 25, 2016, not just the random subsample used in Section 2.

**Table 31.** *Eligibility Criteria for MRT–SH Programs, New York City clients with and without full, continuous Medicaid coverage*

| | Without 12 months of full, continuous Medicaid coverage | | | | Full, continuous coverage, in MDW claims (n=10,613) | |
| | MDW Claims[†] (n=9,493) | | SPARCS | | | |
| | Incl. all inpatient stays | Excludes Article 32 inpatient stays | Full denominator (n=15,854) | Denominator excludes clients without confirmed SSN (n=12,459)[††] | Incl. all inpatient stays | Excludes Article 32 inpatient stays |
|---|---|---|---|---|---|---|
| Health Home enrolled | 15% | 15% | -- | -- | 37% | 37% |
| HARP or SNP enrolled | 0% | 0% | -- | -- | 3% | 3% |
| High Medicaid spender (top 20%) | 7% | 7% | -- | -- | 17% | 17% |
| High Utilizer (any of below): | 9% | 8% | -- | -- | 24% | 23% |
| 2+ inpatient stays | 8% | 6% | 6% | 8% | 14% | 14% |
| 5+ ED visits | 5% | 5% | 7% | 9% | 15% | 15% |
| 4+ ED visits & 1+ inpatient stay | 0.5% | 0.4% | 0.5% | 0.8% | 1% | 1% |
| *Any criteria* | *24%* | *19%* | | | *48%* | *48%* |

[†]Only includes clients with confirmed SSNs
[††] The full NYC client list from HMIS without full continuous coverage, not just the random subsample, was matched to SPARCS

The relationship between the SPARCS and MDW numbers depends upon which assumptions are used for both figures. When the SPARCS data are percentaged based only on those who have a confirmed SSN (as was done in the MDW data), and the MDW data are calculated without the Article 32 stays (consistent with SPARCS), the MDW inpatient data is an underestimate at 6% compared to the SPARCS data at 8% .

The difference between MDW and SPARCS data for ED visits is not so easily resolved. Five percent of clients with a confirmed SSN have 5 or more ED visits based on the MDW data, compared to 9% based on the SPARCS data with the limited denominator. The explanation for this finding may lie in the primary sources of payment for these visits, as provided by the SPARCS team. (This data was not broken out by geography, and thus includes upstate clients, but New York City clients comprise 93% of the IDs sent to the SPARCS team.)

The majority of hospital inpatient stays for this group (88%) were primarily paid for by either Medicaid (64%) or Medicare (24% – and it is likely that most Medicare clients in this group were also dually enrolled in Medicaid and would have at least their Medicare copay covered by Medicaid for these stays). Only 6% of inpatient stays were self–pay, and only 3% were covered by private insurance. Therefore, Medicaid claims data is likely missing a relatively small percentage of inpatient stays for this population. In contrast, ED visits were substantially less likely to be paid by Medicaid (58%) or Medicare (14%). Fully 20% of ED visits for this population were self–pay, and another 4% were paid by private insurance. This difference means that we can expect to miss nearly one in four ED visits when relying on Medicaid data alone.

Overall, the findings support the idea that high utilizers tend to be enrolled in Medicaid by the hospital at which they present, so that more regular hospital use tends to result in continuous coverage. In contrast, patients with less hospital use are disproportionately represented among those without continuous coverage simply because they can cycle on and off Medicaid. This pattern appears to be more true for inpatient than for ED utilization, however. ED visits apparently do not necessarily result in Medicaid enrollment even among those who are likely to be eligible, and are likely to be underestimated by a reliance on Medicaid data only.

## UPSTATE NEW YORK

The chart below shows the breakdown of the 2,803 clients sampled from the upstate (CARES) HMIS by how they matched – or failed to match – to the MDW Medicaid data. Over half (55%) had full, continuous Medicaid coverage in 2016. Almost one-third (32%) matched to the MDW but had gaps in their Medicaid coverage in 2016. Only 12% did not match to the Medicaid data at all.

1,260 IDs were sent to the SPARCS team for matching, including 337 with no valid SSN match. Of these clients, 92 had at least 2 inpatient stays, and 147 had at least 5 ED visits. Only 5 had a combination of 1 inpatient stay and 4 ED visits.

The table below shows the percentage meeting each criterion, both with and without including the possibly invalid SSNs in the denominator. The numbers are then contrasted with those found in Table 8 for clients with full, continuous Medicaid coverage. As with New York City, by either measure, those without full continuous coverage are much less likely to meet the thresholds of 2 inpatient, 5 ED, or 1 inpatient and 4 ED episodes than those with full coverage for the entire year.

**Figure 8.** *Medicaid coverage status of upstate New York sample*



Gaps in coverage
**32%**

No full coverage in 2016
**1%**

No SSN match
**12%**

Full, continuous coverage
**55%**
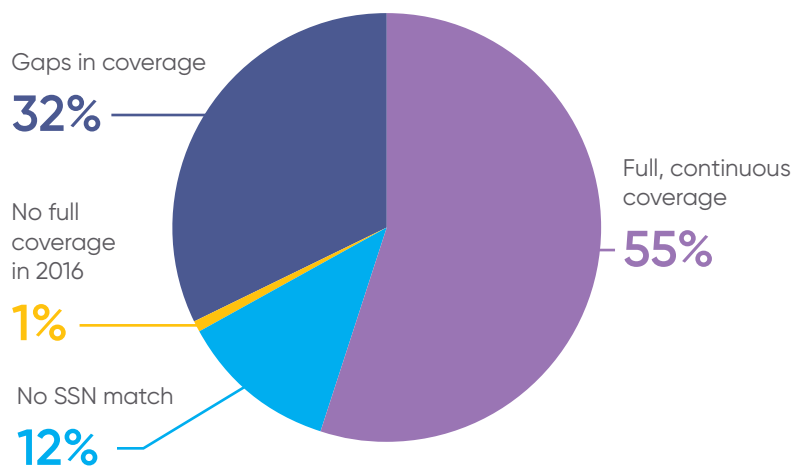
The contrast in inpatient results between the MDW and SPARCS data takes a somewhat different pattern from New York City. When the SPARCS data are percentaged using the full denominator of clients, the number is comparable to that from the MDW (7% versus 8%). When the SPARCS data are percentaged excluding those without confirmed SSNs (consistent with the MDW methodology), the number in the SPARCS data is higher (10% versus 8%). This difference is not large, but it may indicate that inpatient stays are more likely to be "missed" in the MDW data upstate than in New York City. Furthermore,

**Table 32.** *Eligibility Criteria for MRT-SH Programs, upstate New York clients with and without full, continuous Medicaid coverage*

| | Without 12 months of full, continuous Medicaid coverage | | | | Full, continuous coverage, in MDW claims (n=1536) | |
| --- | --- | --- | --- | --- | --- | --- |
| | MDW Claims[†] (n=923) | | SPARCS | | | |
| | Incl. all inpatient stays | Excludes Article 32 inpatient stays | Full denominator (n=1260) | Denominator excludes clients without confirmed SSN (n=923) | Incl. all inpatient stays | Excludes Article 32 inpatient stays |
| Health Home enrolled | 9% | 9% | -- | -- | 41% | 41% |
| HARP or SNP enrolled | 0% | 0% | -- | -- | 3% | 3% |
| High Medicaid spender (top 20%) | 7% | 7% | -- | -- | 18% | 18% |
| High Utilizer (any of below): | 14% | 12% | -- | -- | 32% | 31% |
| 2+ inpatient stays | 8% | 6% | 7% | 10% | 19% | 17% |
| 5+ ED visits | 8% | 8% | 12% | 16% | 21% | 21% |
| 4+ ED visits & 1+ inpatient stay | 0.3% | 0.3% | 0.4% | 0.5% | 2% | 2% |
| *Any criteria* | *22%* | *21%* | *--* | *--* | *57%* | *56%* |

[†]Only includes clients with confirmed SSNs

the MDW data include hospital stays in Article 32 hospitals, which the SPARCS data do not. When these stays are excluded from the MDW data, the MDW number becomes substantially lower (6%; not shown). This figure may be more appropriate for comparison to SPARCS, and implies that as many as 40% of clients who really meet the inpatient criteria would be missed by relying only on MDW records.

The pattern for ED visits is similar to that for New York City, with a higher percentage of clients meeting the criteria in SPARCS (indeed, twice as many when the percentage is calculated excluding clients without a confirmed SSN). This increase is probably a result of the same likely explanation invoked for New York City – ED visits are more likely than inpatient stays to be self-pay. The greater proportion of "missing" ED visits in the upstate MDW may be due to a greater reliance upstate on self-pay or other payment sources during the periods these clients are not on Medicaid (possibly reflective of a less efficient safety-net in less populated areas of the state).

## CAPITAL REGION

There were 1,128 clients in the HMIS from shelters in the Capital Region. The largest percentage (55%) had full, continuous coverage, but there was also a large group (30%) who had gaps in coverage. Smaller percentages didn't match on SSN (15%) or had no or less than full coverage in 2016 (less than 1%).

509 IDs from the Capital Region were sent to the SPARCS team for matching, including 167 with possibly invalid SSNs. Of these 509 clients, 43 had more than 1 inpatient stay; 53 had more than 4 ED visits; and 1 had a combination of 1 inpatient and 4 ED episodes.

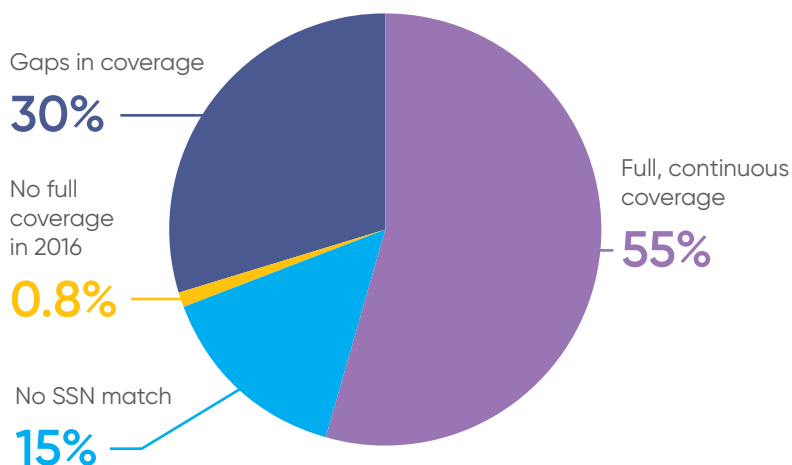**Figure 9.** *Medicaid coverage status of Capital Region sample*



Gaps in coverage
**30%**

No full coverage in 2016
**0.8%**

No SSN match
**15%**

Full, continuous coverage
**55%**

**Table 33.** *Eligibility criteria for MRT–SH Programs Capital Region clients with and without full, continuous Medicaid coverage*

| | Without 12 months of full, continuous Medicaid coverage | | | | Full, continuous coverage (n=619) | |
| --- | --- | --- | --- | --- | --- | --- |
| | In MDW Claims[†] (n=342) | | SPARCS | | | |
| | Incl. all claims | Excl. Article 32 | Full denominator (n=509) | Denominator excludes clients without confirmed SSN (n=342) | Including all claims | Excludes Article 32 |
| Health Home enrolled | 4% | 4% | –– | –– | 36% | 36% |
| HARP or SNP enrolled | 0% | 0% | –– | –– | 3% | 3% |
| High Medicaid spender (top 20%) | 5% | 5% | –– | –– | 17% | 17% |
| High Utilizer (any of below): | 11% | 10% | –– | –– | 32% | 31% |
| 2+ inpatient stays | 7% | 6% | 8% | 13% | 19% | 18% |
| 5+ ED visits | 6% | 6% | 10% | 15% | 22% | 22% |
| 4+ ED visits & 1+ inpatient stay | 0% | 0% | 0.2% | 0.3% | 1% | 1% |
| *Any criteria* | *15%* | *14%* | *––* | *––* | *52%* | *52%* |

[†]Only includes clients with confirmed SSNs

As with upstate overall, the percentage meeting the inpatient criteria was similar between the two data sources when the SPARCS number was calculated using the full denominator, but the estimate was higher for the SPARCS data when the number was calculated using only those with a confirmed valid SSN as a denominator. The difference between the MDW and SPARCS estimates would be even larger if the Article 32 hospitals stays were removed from the MDW estimate (as they are in the SPARCS data).

## HUDSON VALLEY

There were 1,244 clients in the HMIS from shelters in the Hudson Valley. The largest group (55%) had full, continuous coverage, but there was also a large portion (35%) who had gaps in coverage. Smaller percentages didn't match on SSN (9%) or had no coverage[22] or less than full coverage in 2016 (1%).

554 IDs from the Hudson Valley were sent to the SPARCS team for matching, including 107 with possibly invalid SSNs. Of these 554, 50 had more than 1 inpatient stay; 75 had more than 4 ED visits; and 4 had a combination of 1 inpatient and 4 ED episodes.

Again, there is a consistent pattern of less inpatient and ED eligibility for those without continuous coverage, regardless of what metric is used, compared to those with continuous coverage. Also consistent with other findings, eligibility based on ED visits is clearly underestimated in the MDW for the population without continuous coverage (although the difference in inpatient eligibility is more modest – 11% in SPARCS (excluding clients without a confirmed SSN) versus 7% in the MDW (excluding Article 32).

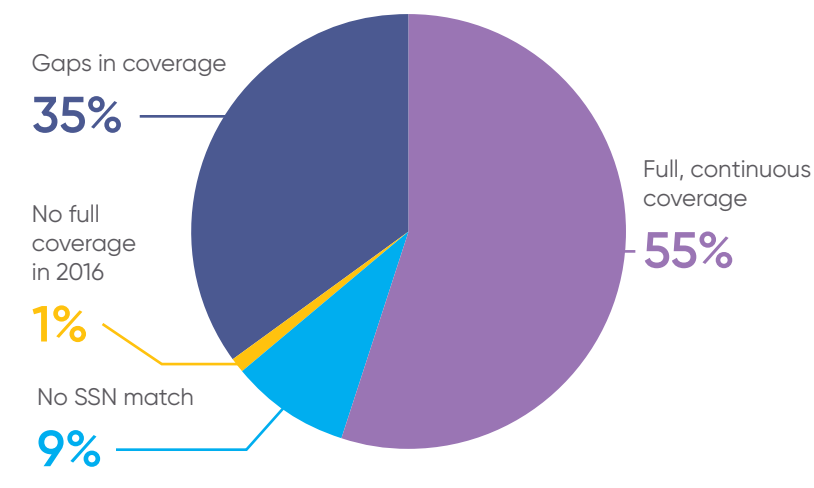**Figure 10.** *Medicaid coverage status of Hudson Valley sample*



Gaps in coverage
**35%**

No full coverage in 2016
**1%**

No SSN match
**9%**

Full, continuous coverage
**55%**

**Table 34.** *Eligibility criteria for MRT–SH Programs Hudson Valley clients with and without full, continuous Medicaid coverage*

| | Without 12 months of full, continuous Medicaid coverage | | | | Full, continuous coverage, in MDW claims (n=690) | |
| | MDW Claims[†] (n=447) | | SPARCS | | | |
| | Incl. all claims | Excl. Article 32 | Full denominator (n=554) | Denominator excludes clients without confirmed SSN (n=447) | Incl. all claims | Excl. Article 32 |
|---|---|---|---|---|---|---|
| Health Home enrolled | 12% | 12% | -- | -- | 45% | 45% |
| HARP or SNP enrolled | 0% | 0% | -- | -- | 2% | 2% |
| High Medicaid spender (top 20%) | 8% | 8% | -- | -- | 19% | 19% |
| High Utilizer (any of below): | 16% | 15% | -- | -- | 32% | 33% |
| 2+ inpatient stays | 9% | 7% | 9% | 11% | 17% | 18% |
| 5+ ED visits | 10% | 10% | 14% | 17% | 21% | 21% |
| 4+ ED visits & 1+ inpatient stay | 0.4% | 0.4% | 0.7% | 0.9% | 2% | 2% |
| *Any criteria* | *27%* | *26%* | *--* | *--* | *59%* | *59%* |

[†]Only includes clients with confirmed SSNs

[22] This includes people who have a MDW match, but not in the 2016 calendar year.

## THE ADIRONDACKS

There were 424 clients in the HMIS from shelters in the Adirondacks. The largest percentage (54%) had full, continuous coverage, but there was also a large percentage (31%) who had gaps in coverage. Smaller percentages didn't match on SSN (15%) or had no or less than full coverage in 2016 (less than 1%).

197 IDs from the Adirondacks were sent to the SPARCS team for matching, including 63 with possibly invalid SSNs. Of these 197 clients, 9 had more than 1 inpatient stay and 19 had more than 4 ED visits; none had a combination of 1 inpatient and 4 ED episodes.

**Figure 11.** *Medicaid coverage status of Adirondacks sample*



Gaps in coverage
**31%**

No full coverage in 2016
**0.7%**

No SSN match
**15%**

Full, continuous coverage
**54%**

The essential takeaway from the data shown below is the same as for the other analyses – clients without full, continuous Medicaid coverage are less likely to meet the inpatient and ED utilization criterion compared to those who had full, continuous Medicaid coverage.

When Article 32 stays are excluded from the MDW data, the percentage of clients who are eligible under the inpatient criterion is 4% - lower than the SPARCS estimate of 7% when the denominator does not include unconfirmed SSNs. The results for ED eligibility are largely the same as for all other analyses – the MDW data provides a sharp underestimate (likely due to self-pay visits not captured in Medicaid claims).
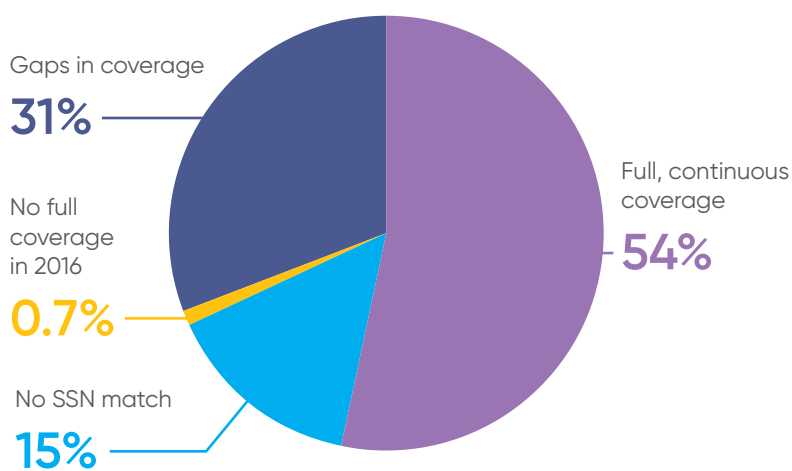
**Table 35.** *Eligibility criteria for MRT-SH Programs Adirondack clients with and without full, continuous Medicaid coverage*

| | Without 12 months of full, continuous Medicaid coverage | | | | Full, continuous coverage, in MDW claims (n=227) | |
| | In MDW Claims[†] (n=134) | | SPARCS | | | |
| | Incl. all claims | Excl. Article 32 | Full denominator (n=197) | Denominator excludes clients without confirmed SSN (n=134) | Incl. all claims | Excl. Article 32 |
|---|---|---|---|---|---|---|
| Health Home enrolled | 13% | 13% | -- | -- | 44% | 44% |
| HARP or SNP enrolled | 0% | 0% | -- | -- | 3% | 3% |
| High Medicaid spender (top 20%) | 5% | 5% | -- | -- | 19% | 19% |
| High Utilizer (any of below): | 14% | 10% | -- | -- | 28% | 27% |
| 2+ inpatient stays | 9% | 4% | 5% | 7% | 18% | 16% |
| 5+ ED visits | 6% | 6% | 10% | 14% | 19% | 19% |
| 4+ ED visits & 1+ inpatient stay | 0.7% | 0.7% | 0% | 0% | 2% | 2% |
| *Any criteria* | *26%* | *23%* | *--* | *--* | *60%* | *60%* |

[†]Only includes clients with confirmed SSNs

## CONCLUSIONS REGARDING CLIENTS WITHOUT FULL, CONTINUOUS MEDICAID COVERAGE.

The primary question addressed in Section 3 is whether inpatient and ED utilization for clients without continuous Medicaid coverage is higher than, lower than, or similar to utilization for clients with continuous coverage in 2016. The estimates derived from both the MDW and SPARCS data consistently indicate that these clients in fact have substantially lower utilization.

A secondary question is whether MDW data for these clients provides an underestimate of their eligibility – in other words, whether they have meaningful amounts of utilization "missed" by Medicaid claims because it did not occur during Medicaid enrollment. The SPARCS data does show some important, though limited, differences from the MDW data. Except in the Capital Region, any underestimation of inpatient utilization using the MDW is minor (within 3 or 4 percentage points) if MDW data without Article 32 stays is compared to SPARCS data including only confirmed SSNs. However, substantial numbers of ED visits not billed to Medicaid occur among this population. Data provided by the SPARCS team indicate that 20% of ED visits for this group of shelter clients are self-pay, and another 4% are paid by private insurance. Therefore, while MDW data may provide a reasonable proxy for eligibility based on inpatient stays, it is not a reliable source of data for eligibility based on ED visits. However, the impact of these missing ED visits on eligibility is likely to be limited. Among continuously enrolled clients in NYC, the combination of Health Home enrollment, HARP/SNP enrollment, high Medicaid spending, and inpatient utilization identifies 91% of eligible clients, without the inclusion of the ED criteria. Upstate, these criteria identified 90% of eligible clients. Furthermore, the majority of clients who qualified under the ED criteria also qualified under other criteria as well (73% of those in NYC and 78% of those upstate). Thus, while ED visits may be substantially underestimated in the MDW data (by as much as 44% in New York City and 50% upstate), the effect of this underestimate on overall eligibility estimates is substantially attenuated.

Both of these questions lead into a more important consideration: how should the estimates of MRT-eligible shelter clients in Section 2 should be understood in the context of the Section 3 findings? It is not recommended to explicitly revise the Section 2 estimates based on Section 3 due to the many unknowns inherent in the Section 3 data. The best data on utilization (especially ED utilization) appear to come from SPARCS, but it is not clear whether the percentages should be calculated to include clients with unmatched SSNs in the denominator or not. The better metric depends on whether most unmatched SSNs are incorrect (and therefore could not produce a SPARCS match and should be excluded) or whether most unmatched SSNs reflect people who have never received Medicaid (but who could have matched to SPARCS and therefore should be included). There is no way to determine this answer – the clients with unmatched SSNs were included in the IDs sent to the SPARCS team, and if they produced a match that data is included in the SPARCS data, but there is no information available on how many of those clients had a SPARCS match.

Even if this question could be resolved, other eligibility criteria (most notably Health Home enrollment) can only be obtained from the MDW, not from SPARCS. As noted previously, only about half of the MRT-SH eligibility estimated in Section 2 was derived from inpatient and ED utilization. But the MDW estimates and SPARCS estimates cannot be easily combined into a single estimate of eligibility, since individual-level data is not available from SPARCS. Even within the SPARCS data, a single estimate of utilization-based eligibility cannot be derived because it is not known how many clients met both the inpatient and the ED criteria; to add the two without accounting for the potential overlap would almost certainly produce an overestimate of eligibility.

For this reason, the best possible estimates of overall eligibility are probably the "Any criteria" percentages derived from the MDW, which allows us to estimate global eligibility without double-counting specific eligibility criteria. The estimates for Health Home and HARP/SNP enrollment should be correct based on the MDW, because these are Medicaid programs that by definition would be captured in Medicaid claims, and the analyses above suggest that the inpatient estimates should be reasonably close to what would be found in SPARCS. But this total will incorporate estimates of ED eligibility that are likely to be substantial underestimates. Medicaid spending per se will be correctly reflected, but will be an underestimate of all-payer health care spending (which in any case cannot be meaningfully related to Medicaid-based spending percentiles). However, when MRT-SH programs are assessing the health care spending of prospective clients, they are likely to use only Medicaid spending in their computation, so this difference may not be a significant liability.

Given this information, the MDW claims are likely to remain the best source of estimates of MRT-SH eligibility, even for clients who do not have full, continuous coverage. However, fewer of these clients met the MRT-SH eligibility criteria, so for that population of clients (who are 34% of the New York City shelter users and 45% of the upstate shelter users), the

eligibility rates estimated in Section 2 are a substantial overestimate.

To understand the potential impact on the statewide results, we can apply the estimated Section 2 eligibility rates to those clients with full, continuous coverage and the estimated Section 3 eligibility rates to those clients without. Of the HUD-estimated New York City shelter population of 50,671, an estimated 33,443 clients (66%) would have full, continuous coverage and 17,228 (34%) would not. For those 33,443 clients with continuous coverage we would estimate 48% eligibility, or 16,053. For those 17,228 clients without continuous coverage we would estimate 24% eligibility, or 4,135. This would produce a total estimate of 20,188 MRT-SH eligible clients in New York City, compared to the 24,332 estimated in Section 2.

Of the HUD-estimated upstate shelter population of 6,633, an estimated 3,648 (55%) clients would have full, continuous coverage and 2,985 (45%) would not. For those 3,648 clients with continuous coverage we would estimate 57% eligibility, or 2,079. For those 2,985 clients without continuous coverage we would estimate 22% eligibility, or 657. This would produce a total estimate of 2,736 MRT-SH eligible clients upstate, compared to the 3,786 estimated in Section 2.

There are also some differences in the percent of MRT-SH eligible shelter users who are chronically homeless between the continuously covered and non-continuously covered population. While an estimated 45% of the continuously covered eligible shelter users in New York City met the criteria for chronic homelessness (based on shelter days), only an estimated 28% of those without continuous coverage users met this criterion. Upstate, the percent for continuously covered clients was 7.5%, while the number for those without continuous coverage was 2.4%.

Applying these rates of chronic homelessness to the estimates of MRT-eligible shelter users, we would project that 8,382 shelter clients in NYC are both MRT-eligible and chronically homeless (compared to the 10,945 estimated in Section 2 – a reduction of 23% from the earlier estimate). We would project that 172 shelter clients upstate are both MRT-eligible and chronically homeless (compared to the 284 estimated in Section 2 – a reduction of 39% from the earlier estimate).

**Table 36.** *Estimates of MRT-SH Eligibility and Chronic Homelessness with and without Adjusting for Lack of Continuous Coverage*

| | HUD PIT-Identified homeless adults, January 2017 | MRT-SH Eligible | | MRT-SH Eligible + Chronically Homeless | |
|---|---|---|---|---|---|
| | | Adjusted for lack of continuous coverage | *Not adjusted for lack of continuous coverage* | Adjusted for lack of continuous coverage | *Not adjusted for lack of continuous coverage* |
| NYC | 50,671 | 20,188 | *24,332* | 8,382 | *10,945* |
| Upstate | 6,633 | 2,736 | *3,786* | 172 | *284* |

Note: Long Island is not included in these data.

In sum, these numbers are not presented to replace those in Section 2, but to illustrate the potential for overestimation inherent in estimates that assume the same rate of eligibility for clients who do not have continuous Medicaid coverage. These clients are a substantially different population than those who are continuously covered, with different patterns of health care utilization and therefore different rates of eligibility. At the same time, they constitute a large enough percentage of the shelter population that MRT-SH programs should give some thought as to how to establish eligibility parameters for clients who may have incomplete data if Medicaid claims are the only source of information about their health care use. All signs point, however, to these clients being a less acute population who may have less need for supportive housing overall.

# Conclusion

Homelessness continues to be a significant social issue across New York State, both in the Upstate regions and in New York City. Based on the 2016 HUD Point-in-Time (PIT) counts, which are believed to underestimate the scope of homelessness, about 0.10% of the population in Upstate New York and 0.70% of the population in New York City may be in need of housing at any given point in time. In terms of demographics, the analysis indicated that clients in HMIS-reporting shelters in New York City and Upstate New York are similar in age and gender. Upstate clients are more likely to be white and are more likely to report being disabled.

Several differences between homeless populations in Upstate New York and New York City were noteworthy. The scope of chronic homelessness differed substantially between Upstate New York and New York City. Under the length of stay criteria used in the study, about 6% of Upstate HMIS-reporting shelter users are likely to be chronically homeless. In contrast, the rate of chronic homelessness in New York City is 40%. Upstate New York HMIS-reporting shelters show less seasonal variation in shelter utilization compared with New York City HMIS-reporting shelters.

The vast majority of the homeless population in New York State is located in New York City (85%). This is especially true of the chronic homeless population. Further, the homeless population in New York State has high rates of severe mental illness, substance use disorders, HIV, and other chronic medical conditions. Three-quarters of homeless individuals upstate (75%) and more than two-thirds of those in New York City (68%) are estimated to have a diagnosis in at least one of these categories.

Of the homeless individuals in New York City with full, continuous Medicaid coverage, an estimated one-half (48%) meet at least one of the eligibility criteria used for the MRT-SH programs. Of the homeless individuals upstate with full, continuous Medicaid coverage, 57% meet at least one of the MRT-SH eligibility criteria. In New York City, 45% of MRT-SH eligible homeless individuals were chronically homeless, while 7.5% of MRT-SH eligible homeless individuals upstate were chronically homeless. Overall, it is estimated that roughly 22,924 homeless individuals in New York are MRT-SH eligible, and 11,537 of these are also chronically homeless.

In contrast, basing eligibility estimates for all clients on the data for those clients with full, continuous Medicaid coverage is known to seriously overestimate the percent eligible for MRT-SH programs, particularly upstate. The data for continuously covered clients also overstate the percentage of MRT-SH eligible shelter users who are chronically homeless. After adjusting for clients without full, continuous Medicaid coverage, we estimate that 22,924 homeless individuals statewide may be eligible for MRT-SH, with 8,554 being both chronically homeless and eligible for MRT-SH.

In sum, our best estimates - constructed around the 2016 HUD PIT counts - are that there are between 20,188 and 24,332 MRT-SH eligible homeless individuals in New York City and another 2,736-3,786 upstate. It is important to note, however, that these numbers are only as accuate as the HUD Point-in-Time count data on which they are based. While it is known that the HUD PIT counts underestimate the scope of homelessness, potentially by a significant margin (Metraux & Culhane, 2001; Schneider, Brisson, & Burnes, 2016), they are what federal agencies rely on as the best available estimates of homelessness at the national scale. While it should be recognized that PIT counts underestimate homelessness to some unknown magnitude, our final estimates of 22,924-28,118 eligible homeless individuals statewide are consistent with the same base numbers that are used by policymakers nationwide.

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# Appendix

## HOMELESS MANAGEMENT INFORMATION SYSTEM

Nationwide, all CoCs are required to compile information into a homeless management information system (HMIS) that complies with HUD's standards. All programs receiving federal HUD funds for homelessness and homelessness prevention services are required to submit information to an HMIS, though other programs serving homeless individuals are strongly encouraged to submit to allow a more comprehensive view of homelessness. These data are used to produce counts of persons using homeless services, and to capture client-level information relevant to the characteristics and service needs of homeless individuals and families, as well as those at risk of experiencing homelessness. This reporting thus provides national data on the extent and nature of homelessness over time.

In New York State, two major HMISs are the CARES Regional HMIS (CRHMIS) and the NYC Coalition on the Continuum of Care (CCOC) HMIS. CRHMIS is administered by CARES, Inc. and includes 13 CoCs in Upstate New York (or 52% of the geographic area of New York). The dataset obtained for this report contained information on over 126,000 shelter stays beginning between 2009 and 2016. NYC CCOC's HMIS is administered by the New York City Department of Homeless Services and consists of reportees from CoC NY-600. The dataset obtained for this report contained information on over 2.46 million shelter stays from the five boroughs of New York City for the same period.

**Table A1.** *Comparison of Selected and Unselected Subsamples from identified NYC PIT clients*

| Variable | Original Levels & Proportions | Selected Subsample | Unselected Sample | p-value |
|---|---|---|---|---|
| All Clients | 45,756 (100%) | 27,430 (60%) | 18,326 (40%) | -- |
| PIT Counts | January: 28,532 | January: 17,093 | January: 11,439 | -- |
| | April: 25,911 | April: 11,907 | April: 10,388 | -- |
| | July: 21,587 | July: 14,476 | July: 8,633 | -- |
| | October: 14,846 | October: 8,887 | October: 5,959 | -- |
| Gender | Male (53%) | Male (53%) | Male (53%) | p>0.7 |
| | Female (46.5%) | Not Male (47%) | Not Male (47%) | |
| | Transgender, male to female (N=83) | -- | -- | |
| | Transgender, female to male (N=9) | -- | -- | |
| | Does not identify as M/F/T (N=1) | -- | -- | |
| | DKR (N=10) | -- | -- | |
| Race | Black (65%) | Black (65%) | Black (65%) | p>0.1 |
| | White (18%) | White (18%) | White (18%) | |
| | American Indian/Alaskan Native (0.5%) | Other/DKR (17%) | Other/DKR (17%) | |
| | Asian (0.8%) | -- | -- | |
| | Native Hawaiian/Pacific Islander (1.5%) | -- | -- | |
| | Multiracial (0.1%) | -- | -- | |
| | DKR (14%) | -- | -- | |
| Ethnicity | Hispanic/Latino (31%) | Hispanic/Latino (31%) | Hispanic/Latino (31%) | p>0.6 |
| | Not Hispanic/Latino (63.5%) | Not Hispanic/Latino (63%) | Not Hispanic/Latino (63.5%) | |
| | DKR (5.5%) | DKR (6%) | DKR (5.5%) | |
| Age, as of shelter entry | 18–30 (36%) | 18–30 (36%) | 18–30 (36%) | p>0.7 |
| | 31–50 (41%) | 31–50 (41%) | 31–50 (41%) | |
| | 51 or older (23%) | 51 or older (23%) | 51 or older (23%) | |
| Relationship to Head of Household | Self/Client is HoH (76%) | Self/Client (76%) | Self/Client (76%) | p>0.6 |
| | (Adult) Child (3%) | (Adult) Child (3%) | (Adult) Child (3%) | |
| | Spouse/Partner (6%) | Spouse/Partner (6%) | Spouse/Partner (6%) | |
| | Other relative (0) | Other relative (0) | Other relative (0) | |
| | Other unrelated household member (4%) | Other unrelated household member (4%) | Other unrelated household member (4%) | |
| | DKR (11%) | DKR (11%) | DKR (11%) | |
| Accompanying Children | Yes (24%) | Yes (23.5%) | Yes (24%) | p>0.9 |
| | No/Unknown (76%) | No/Unknown (76.5%) | No/Unknown (76%) | |
| Chronically homeless | Chronically homeless (38%) | Chronically homeless (39%) | Chronically homeless (37%) | p>0.9 |
| | Not chronically homeless (62%) | Not chronically homeless (61%) | Not chronically homeless (63%) | |
| Disabling condition[23] | Has disabling condition (17.5%) | Has disabling condition (17.5%) | Has disabling condition (17.5%) | p>0.9 |
| | Does not have disabling condition (82%) | Does not have/DKR (82.5%) | Does not have/DKR (82.5%) | |
| | DKR (0.1%) | -- | -- | |
| Veteran | Veteran (2%) | Veteran (2%) | Veteran (2%) | p>0.8 |
| | Not veteran (95%) | Not veteran/DKR (98%) | Not veteran/DKR (98%) | |
| | DKR (3%) | -- | -- | |

[23]Numbers may not sum to 100% due to rounding.

# Medicaid Redesign Team
# Supportive Housing Evaluation
# Access Report 2

## June 2019

NEW YORK STATE | Department of Health

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