

PILOTING SUBSTANCE USE DISORDER LEVEL OF CARE ASSESSMENT DATA AS A CAPACITY PLANNING TOOL

KEY POINTS

- This brief describes a pilot project with four states--California, Iowa, New York, and Washington--that evaluated whether data generated from specialty substance use disorder (SUD) treatment level of care (LOC) assessments linked to *treatment* admission data could help inform capacity planning for SUD treatment.
- The analyses indicate that linked data hold promise for identifying capacity gaps at the state and county level, such as areas that need more residential and inpatient beds.
However, the data are complex to interpret in cross-state comparisons because of the differences in how states define LOCs, and the variations in how they implement their LOC assessments and LOC criteria. Even within a single state, interpretation is complicated by the role of clinical judgment also in influencing LOC recommendations.
- LOC assessment data may be most useful to state SUD treatment program and policy directors, who have a solid understanding of these issues and can marry the data with their knowledge of the treatment landscape in their respective states.

BACKGROUND

Determining whether there is adequate substance use disorder (SUD) treatment capacity to meet the population needs is critical but challenging. One common approach is to use epidemiologic household surveys, such as the National Survey on Drug Use and Health, to calculate the percentage of people with a SUD and to determine what proportion of those individuals received treatment [1]. This method generally finds that close to 90% of people identified with a SUD in a year never receive any treatment during that period. While this number is informative, these data also indicate that most the individuals who did not receive SUD treatment did not think they needed treatment and did not want treatment.

Another common needs assessment approach is to examine the use of SUD treatment services. For example, states can use their specialty SUD treatment admissions data to gauge how many people will use outpatient SUD services in the future. An obvious limitation of this approach is that it misses individuals who sought SUD treatment but were unable to access it [1].

Other approaches that are used to evaluate whether there is adequate capacity to meet treatment need include analyzing wait-time data, conducting simulated shopper studies to determine appointment availability, and calculating the time and distance for individuals to reach a SUD treatment provider. These approaches also have limitations, such as the lack of validated wait-time data and the cost of conducting studies. More recently, some states and regions are using real-time “bed boards” to help monitor and understand treatment capacity.

A potentially untapped source of information for capacity planning are patient level of care (LOC) assessments. Patients entering specialty SUD treatment typically undergo an assessment to determine the most appropriate LOC given their substance use, psychiatric conditions, medical conditions, and other social and environmental contexts. Organizations such as the American Society for Addiction Medicine (ASAM) and New York State's Office of Addiction Services and Supports have developed standardized rubrics for determining the most appropriate LOC given patients' biopsychosocial needs. For example, a patient who is severely medically unstable would be recommended to a LOC that can provide 24-hour medical monitoring, such as a hospital with nurses and physicians on staff. Alternatively, a patient who is medically stable but at high risk of overdosing because of an unstable living environment and inability to reduce substance use in an intensive outpatient setting would be recommended for treatment in a residential setting.

The use of a standard assessment to determine the appropriate LOC for SUD treatment gained traction under the Centers for Medicare & Medicaid Services (CMS) Medicaid Section 1115 Substance Use Disorder Demonstration. The demonstration offers states flexibility in paying for longer lengths of stay in larger residential and inpatient SUD settings than would typically be allowed under Medicaid's Institute of Mental Disease exclusion. To ensure cost-effective and appropriate use of residential and inpatient SUD settings, CMS also requires, as part of the demonstration, that states use a nationally recognized LOC assessment tool, such as ASAM's LOC assessment criteria. As of 2023, 33 states were participating in the demonstration.

A study conducted for the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE), by RTI International concluded that patient assessment data might be a rich but untapped source of information for SUD capacity planning [2]. States that store LOC recommendations in databases might be able to link those data with SUD utilization data to determine how many patients need each LOC, whether those patients are receiving that LOC, or whether there are gaps between assessed need and received care, which might point to capacity gaps. In October 2022, ASPE contracted with RTI to test this idea. Specifically, this project aimed to answer the following questions:

- What is the distribution of SUD treatment need by LOC among patients who undergo an intake assessment at a specialty SUD program?
- How does the distribution of SUD treatment need by LOC correspond to treatment receipt by LOC?
- Can this information be used to identify gaps in care and to plan for treatment and workforce capacity needs?

METHODS

Building on the data collected in the prior ASPE project that queried states about their collection of LOC needs assessment data, RTI recruited four states to participate in the study: California, Iowa, New York, and Washington. California, Iowa, and Washington used an ASAM criteria-based assessment and LOC criteria.

Exhibit 1 describes the LOCs in the ASAM criteria.

Exhibit 1. American Society of Addiction Medicine Levels of Care

ASAM Level	Description
Level 0.5	Early intervention
Level 1	Outpatient services
Level 1-WM	Ambulatory withdrawal management without extended onsite monitoring (outpatient)
Level 1-OTP	Opioid treatment program
Level 2-WM	Ambulatory withdrawal management with extended monitoring (outpatient)
Level 2.1	Intensive outpatient services
Level 2.5	Partial hospitalization services
Level 3.1	Clinically managed low-intensity residential services
Level 3.2-WM	Clinically managed residential withdrawal management
Level 3.3	Clinically managed population-specific high-intensity residential services
Level 3.5	Clinically managed high-intensity residential services
Level 3.7	Medically monitored intensive inpatient services
Level 3.7-WM	Medically monitored inpatient withdrawal management
Level 4	Medically managed intensive inpatient services
Level 4-WM	Medically managed intensive inpatient withdrawal management

Source: Mee-Lee, D. (Ed.). (2013). *The ASAM Criteria: Treatment for Addictive, Substance-Related, and Co-occurring Conditions* (3rd ed.). American Society of Addiction Medicine. [3]

In contrast, New York used its own SUD LOC assessment and LOC care tool called the Level of Care for Alcohol and Drug Treatment Referral (LOCADTR; **Exhibit 2**). **Exhibit 2** also shows how the LOCADTR tool LOC crosswalks to the ASAM LOC. To be able to compare across the states that used different LOC criteria, in some of the analyses, RTI collapsed the more detailed LOC categories into the broad categories of either residential/inpatient LOC or outpatient LOC.

Exhibit 2. New York State’s LOCADTR Tool and Equivalent ASAM LOC

NY LOC	Equivalent ASAM LOC
Brief intervention	Level 0.5
Ancillary withdrawal service	Level 1-WM
Opioid treatment program	Level 1
Outpatient clinic	Level 1
Intensive outpatient service	Level 2.1
Individualized care plan, consideration of supportive housing	None
Supportive living	None
Outpatient rehabilitation	Level 2.5
Reintegration services in a residential setting	Level 3.1
Recovery support	None
Rehabilitative services in a residential setting	Level 3.3
Stabilization services in a residential setting	Level 3.5

Exhibit 2 (continued)	
NY LOC	Equivalent ASAM LOC
Inpatient rehabilitation	Level 3.7
Medically supervised inpatient detoxification	Level 3.7-WM
Secure psychiatric facility	Level 4
Hospital based inpatient detoxification	Level 4-WM
Sources:	
Mee-Lee, D. (Ed.). (2013). <i>The ASAM Criteria: Treatment for Addictive, Substance-Related, and Co-occurring Conditions</i> (3rd ed.). American Society of Addiction Medicine. [3]	
New York State Office of Alcoholism and Substance Abuse Services. (n.d.) <i>Level of Care for Alcohol and Drug Treatment Referral 3.0: A Client Placement Criteria System for Use in New York State</i> . [4]	

There was some variation across the states in how the LOC assessment criteria were implemented. California, Iowa, and New York required that all SUD-licensed providers in their states implement the assessment and report the results to the state. In contrast, Washington required collection of assessment data only by SUD-licensed providers with a contract with the state to deliver SUD services. New York began collecting LOC assessments in 2015, Washington in 2016, California in 2017, and Iowa in 2021.

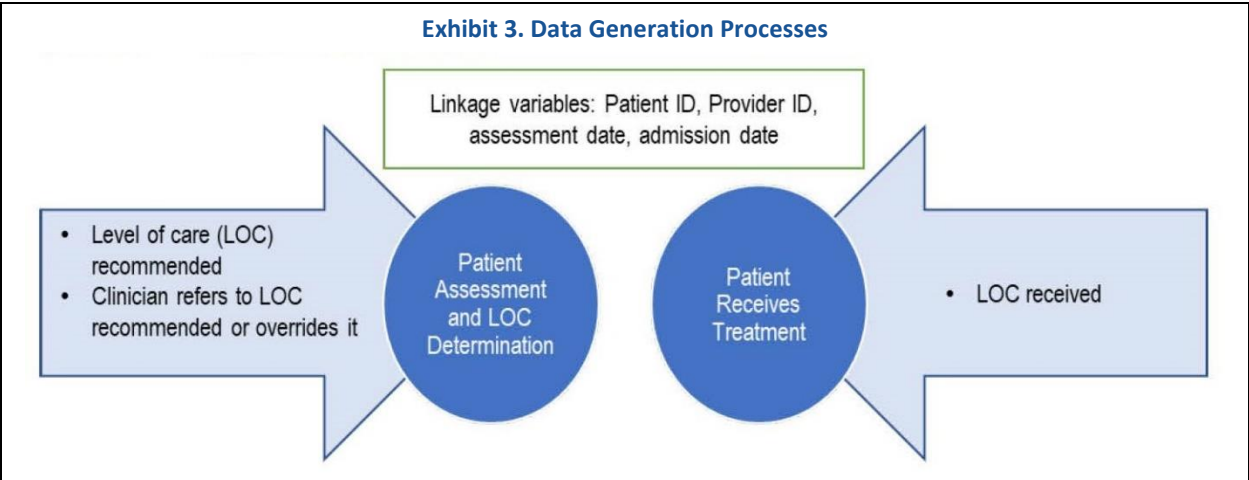
California and New York also allowed an option for clinicians conducting the LOC assessment to indicate that they did not agree with the recommended LOC and to override it. In California, override reasons could include clinician judgment, patient preference, LOC not available, or other. In New York, the LOC override reasons could include clinician judgment, LOC not available, or court mandated to another LOC.

SUD Treatment Utilization Data. As part of the requirements of receiving federal SUD treatment block grants, SUD facilities must collect information on each patient treated in any specialty SUD facilities that accept federal or state funding (e.g., Medicaid, Medicare, state funding, federal block grants) under the direction of each state’s behavioral health agency [5]. States have different names for these data sets. The federal government requires the collection of some data elements, and states have leeway to collect additional data elements. The data are provided to the Substance Abuse and Mental Health Services Administration and aggregated into de-identified admission and discharge data sets called the Treatment Episode Data Set.

Data Linkage. *Exhibit 3* describes conceptually the processes that are captured in the LOC and utilization data. Patients entering SUD treatment undergo a biopsychosocial assessment to determine the most appropriate LOC given their substance use, psychiatric conditions, medical conditions, and other social and environmental contexts. The clinician enters a recommended LOC based on predetermined criteria. The recommended LOC for the patient’s treatment episode is stored in a database at the state or county SUD department.

In some states’ systems, the clinician may also indicate they overrode the initial recommendation and referred the patient to a different LOC—for example, because the patient preferred a lower LOC or because the recommended LOC was not available. In this case, the fact that there was an override and the reason may also be recorded in the state database. The patient then begins treatment either at the recommended LOC or another LOC. The initiation of treatment and the LOC are recorded in the state’s SUD utilization database.

The LOC data and the admission data are linked using a patient identifier, a provider identifier, the date of the assessment, and the admission date.



Using pre-specified analysis plans and table shells, RTI worked with states to link and analyze their assessment and SUD treatment utilization data. **Exhibit 4** summarizes the years of data that states linked, along with the number and percentage of treatment episodes that they were able to link.

Exhibit 4. Summary of Linked Data					
State	Years of Data	Number of Assessments	Number of Admissions	Assessment/ Admission Pairs Linked	Percentage of Assessments Linked
California	2018-2020	214,465	317,633	125,449	58.5
Iowa	2019-2021	Not provided	Not provided	83,270	N/A
New York	Oct 2015-Dec 2019	1,277,271	1,414,245	794,522	62.2
Washington	2020-2021	81,440	Not provided	23,430	28.8

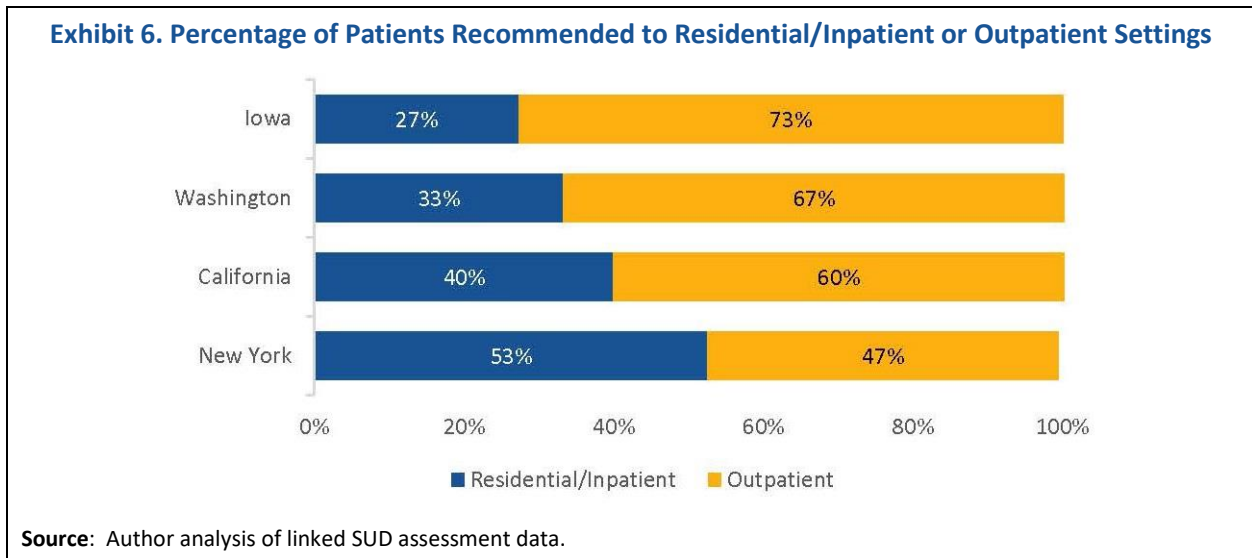
Note: ASAM Levels 0 and 0.5 are not included in assessment and utilization episode numbers for California, Iowa, and Washington.

FINDINGS

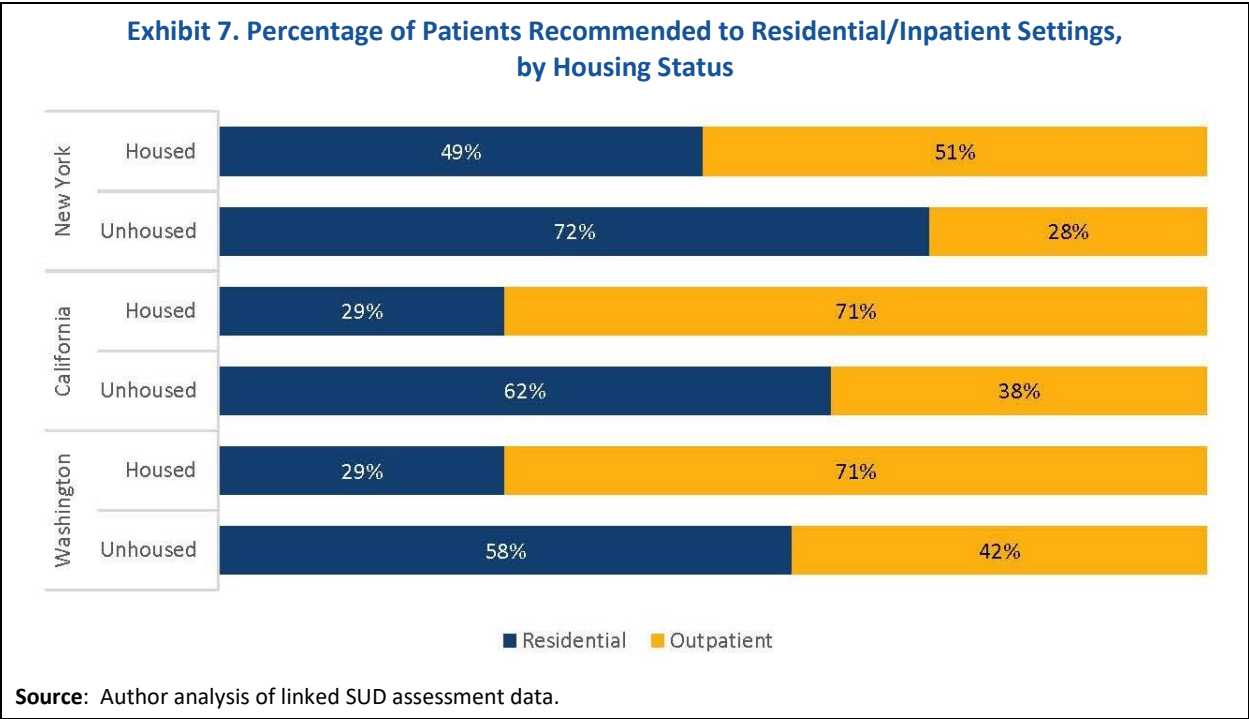
Overall Findings. **Exhibit 5** describes the distribution of LOCs recommended among the four states. It is important to understand that the distribution among the states may vary because states differ in the LOCs that they capture in their ASAM and LOCADTR criteria. For example, Iowa does not have an opioid treatment program LOC; thus, its percentage of patients referred to outpatient is higher than in the other states. California does not have a Level 3.7-WM. New York cannot distinguish opioid treatment programs from other outpatient programs that deliver medications to treat opioid use disorders (MOUDs).

Exhibit 5. Recommended LOC					
State	N Assessment-Admission Pairs	Outpatient	Residential/Inpatient	Withdrawal Management	Opioid Treatment Program or Outpatient With MOUD
New York	794,522 (100.0%)	282,805 (35.6%)	202,338 (25.5%)	216,487 (27.2%)	92,892 (11.7%)
California	125,426 (100.0%)	55,410 (44.2%)	48,569 (38.7%)	1,873 (1.5%)	19,574 (15.6%)
Iowa	83,270 (100.0%)	60,616 (72.8%)	19,361 (23.3%)	3,293 (4.0%)	---
Washington	23,430 (100.0%)	14,054 (60.0%)	7,333 (31.3%)	437 (1.9%)	1,591 (6.8%)

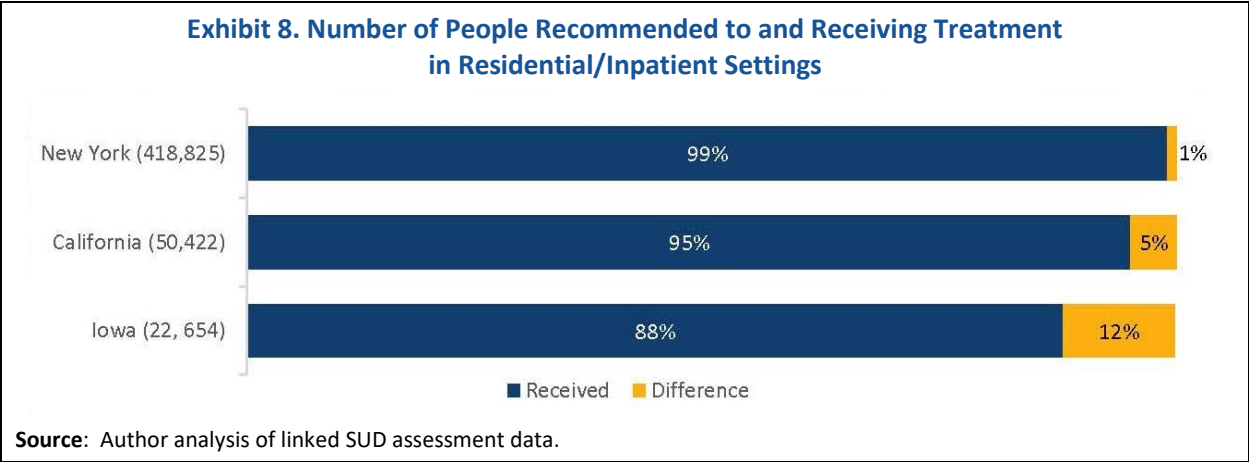
Residential/Inpatient LOC Recommendations. Residential and inpatient settings range from those that treat individuals who need a structured living arrangement but do not need medical or psychiatric 24-hour monitoring to settings that provide continuous high-intensity medical monitoring and services. As shown in *Exhibit 6*, the percentage of patients recommended to inpatient or residential settings (including withdrawal management) as opposed to outpatient settings (including opioid treatment programs) was 27% in Iowa, 33% in Washington, 40% in California, and 53% in New York. The variation among the states needs further exploration. It may reflect different statewide treatment approaches. Alternatively, it may reflect state variations in housing available to people with SUD.



As shown in *Exhibit 7*, among all three states for which housing status was available, a much greater percentage of individuals who were unhoused were referred to residential/inpatient settings than individuals who were housed. However, even controlling for housing status, in New York, both housed and unhoused individuals were more likely to be recommended to residential/inpatient settings than in California and Washington. In California and Washington, the same proportion of individuals who were housed were recommended to residential/inpatient settings, but in California a greater percentage of unhoused individuals were recommended to residential/inpatient settings. These data raise the question of how housing alternatives, among other factors may differ between these states.



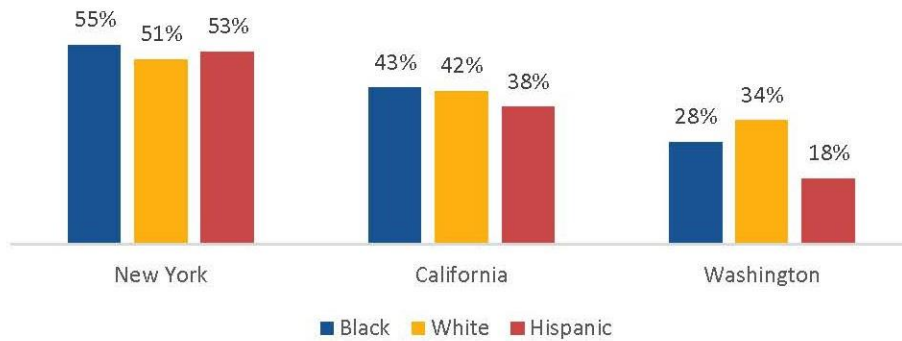
The difference between the number of people recommended to residential/inpatient settings and the number who receive treatment in that setting, as opposed to a different setting, may reflect gaps in the availability of residential/inpatient settings. As shown in **Exhibit 8**, in Iowa, 12% fewer than the 22,654 recommended to residential/inpatient settings, or about 2,781 individuals, received residential/inpatient treatment. In California, 5% fewer individuals received residential/inpatient treatment than was recommended (2,423 individuals), whereas in New York, the percentages recommended and received were essentially equal.



Racial and Ethnic Disparities. LOC assessment and recommendation data may also be helpful in identifying racial and ethnic disparities in need for services and capacity constraints. As shown in **Exhibit 9**, the percentage of patients recommended to residential/inpatient settings in New York is similar by race/ethnicity (ranging from 55% for Black individuals to 51% for White individuals). In California, Hispanic individuals were 4 and 5 percentage points less likely to be recommended to residential/inpatient settings than White or Black individuals, respectively. In Washington, there were relatively large differences by race and ethnicity. White individuals were 6 percentage points more likely than Black individuals to be recommended to residential/inpatient treatment, and Hispanic individuals were 16 percentage points less likely to be

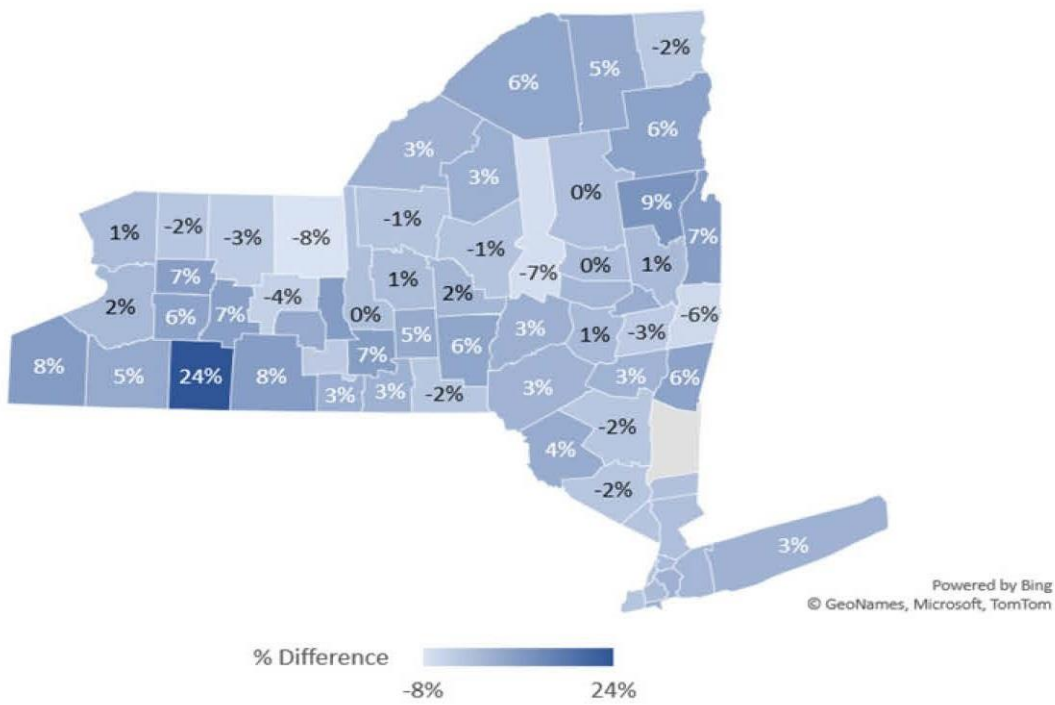
recommended to residential/inpatient settings than White individuals. These differences may require further exploration to be understood.

Exhibit 9. Percentage of Patients Recommended to Residential/Inpatient Settings, by Race/Ethnicity



Source: Author analysis of linked SUD assessment data.

Exhibit 10. Differences in Recommended and Received LOCs for Residential and Inpatient Treatment, New York State, by County

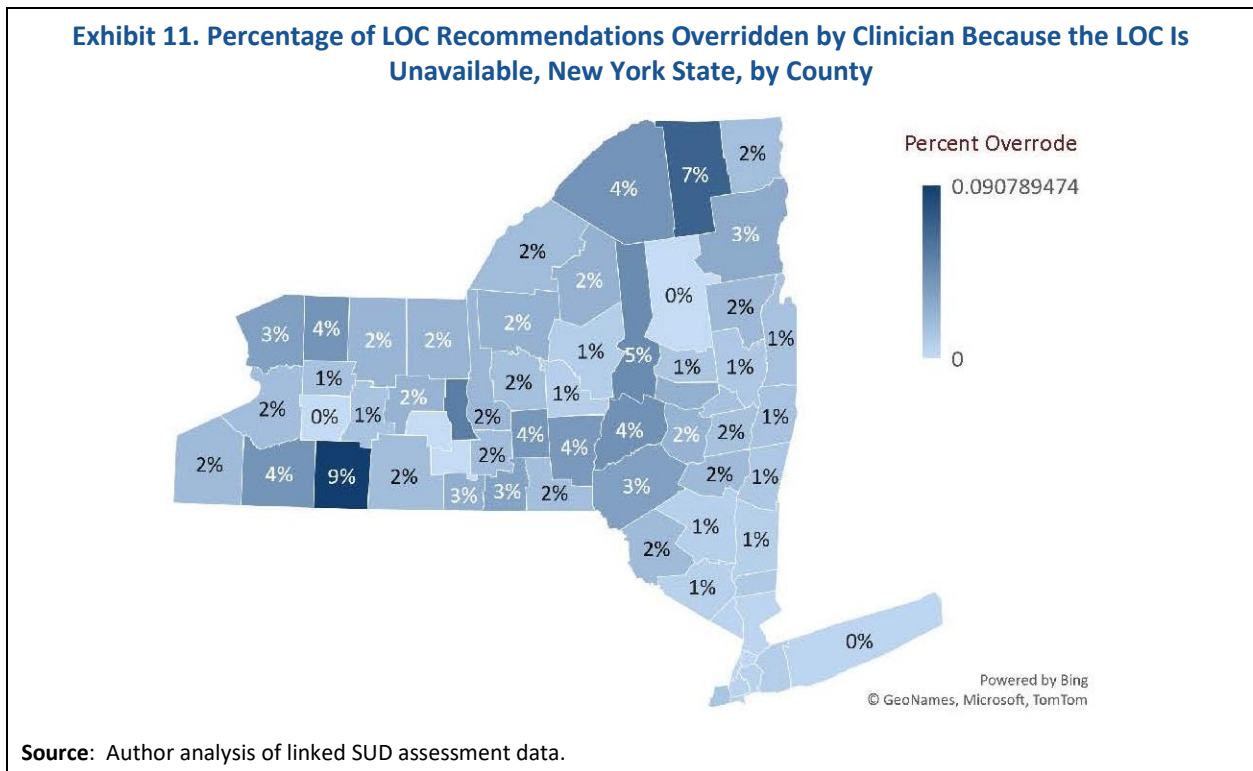


Source: Author analysis of linked SUD assessment data.

Within-State Differences Between Recommended and Received. Similar statistics regarding the difference between the percentage recommended and the percentage receiving a given LOC can be calculated within states to help identify regions that may not have enough residential/inpatient beds. For example, the map in **Exhibit 10** displays greater differences between recommended and received levels in darker shades of blue for New York. One of the darkest counties is Allegany County in the southwest of the state, representing the county where a large percentage of people recommended to residential/inpatient care did not receive it. From 2015 through 2019, 457 patients in Allegany County were recommended for residential/inpatient treatment,

and 335 received care in that setting. The counties surrounding Allegany County--Cattaraugus, Steuben, Wyoming, and Livingston--also show that fewer patients recommended to residential/inpatient settings received such treatment.

Another potential way to understand gaps in care is to examine the percentage of recommended LOCs that were overridden because the LOC was not available. As shown in **Exhibit 11**, Allegany County has the highest level of overrides (inclusive of all levels of care) because the LOC was not available (9%), and the counties surrounding Allegany also have a relatively high rate of overrides due to the LOC not being available. The counties that have a relatively high rate of overrides due to the LOC not being available overlap with the counties shown in **Exhibit 10** that have a relatively large gap between those recommended to and those receiving residential/inpatient treatment.



LIMITATIONS

Although a promising source for understanding SUD treatment capacity, LOC assessment and recommendation data have important limitations. First, states differ in what LOCs they provide and how they identify LOCs in their data systems. For example, New York and Iowa did not identify opioid treatment programs as a LOC, and California did not identify ASAM LOC 3.7-WM. Cross-state comparisons thus need to be done with care. To address this issue in this report, we collapsed LOCs into two large categories: residential/inpatient or outpatient.

A second limitation is that LOC assessments and recommendations involve clinician judgment. Clinicians may vary in how they interpret the ASAM or LOCADTR criteria, and these interpretations may influence their recommendations. For example, some clinicians may determine that anyone without housing should receive care in residential settings. ASAM has developed software that standardizes patient assessment and LOC recommendations, which may reduce variation in recommendations among clinicians; however, most states are not yet employing it for LOC determinations.

A third limitation is that treatment capacity gaps can be understood in the context how LOCs are defined. For example, the ASAM criteria do not include a description of whether MOUDs can be prescribed at a given LOC. Therefore, capacity analyses using ASAM-based LOC assessments may not be helpful in understanding a state's gaps in its ability to deliver MOUDs. A final limitation is that as of 2022, most states were not systematically collecting LOC recommendation data in a manner that would allow them to be linked to state SUD utilization data. However, this situation may have since changed.

CONCLUSIONS

Determining whether there is adequate SUD treatment capacity to meet the need is a complex but essential task. LOC assessment and recommendation data may offer another tool in federal, state, and local governments' tool kits to understand what their SUD system treatment capacity is and where there are gaps. The data may be most useful when they are combined with other data points and used by individuals who have a nuanced understanding of the treatment landscapes in their regions.

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SUGGESTED CITATION

Mark, T.L., Henretty, K., Jacobus-Kantor, L., & Dey, J.G. Piloting Substance Use Disorder Level of Care Assessment Data as a Capacity Planning Tool (Issue Brief). Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. August 1, 2024.

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