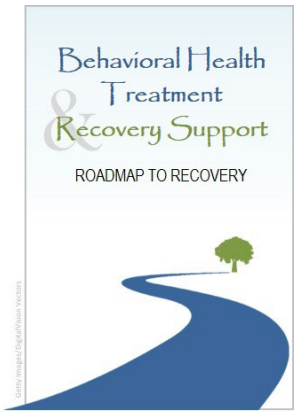

Emergency Department and Substance Use Disorder Service Use After SUD-Related Acute Events

SUPPORT ACT §1003 Roadmap to Recovery Planning Grant

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IN SUPPORT OF WASHINGTON STATE'S HEALTH CARE AUTHORITY (HCA) STRATEGY for improving treatment and recovery services under the SUPPORT ACT[1] grant awarded by the Centers for Medicare and Medicaid Services (CMS), we examined the SUD service utilization by Medicaid beneficiaries with a SUD who had an acute event during calendar year (CY) 2018. As part of a three-report series, this report follows Part 1 (Lopez et al., 2023a) which provides data on the rates of SUD-related acute events and a demographic profile of those Medicaid beneficiaries who experienced these events.

This report (Part 2) focuses on rates of subsequent SUD-related acute events, emergency department and hospital utilization, and receipt of SUD services within 3 and 12 months of an initial SUD-related acute event. The final report (Part 3) examines receipt of mental health services, support services, deaths, and arrests within 3 and 12 months of an initial SUD-related acute event (Lopez et al., 2023b).

Key Findings

1. **Outpatient emergency department visits were the most common type of hospital event experienced after the initial SUD-related acute event.** Those with any SUD-related acute events at index who had outpatient emergency department encounters increased from 40 percent to 68.8 percent between 3 and 12 months after index and from 44 percent to 71 percent for those with multiple SUD-related acute index events.
2. **The high utilization of inpatient hospitalizations and emergency department outpatient visits point to hospitals as key service settings for connecting individuals with a SUD diagnosis to SUD treatment and other needed services.** SUD-related outpatient emergency department visits and inpatient hospitalizations were common in the 12 months following an acute SUD-related event.
3. **The highest rates of use of Medication for Opioid Use Disorder (MOUD) after an acute SUD-related event were for those who received withdrawal management (WM) services.** Following a WM acute event, 31.1 percent and 45.6 percent received MOUD services within 3 and 12 months, respectively.

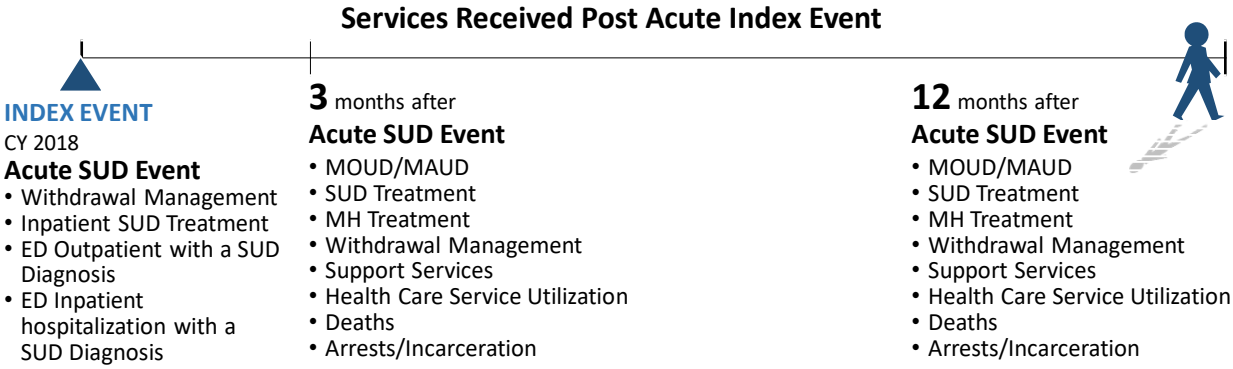
[1] More information about the SUPPORT ACT implementation in Washington can be found at: https://www.hca.wa.gov/about-hca/apple-health-medicaid/support-act.

Services Received After the Acute Index Event

We identified services received and other outcomes within 3 and 12 months of the initial (index) acute SUD event in CY 2018 (see Figure 1 below). These services and outcomes were divided into six broad categories: post-index SUD-related acute events, emergency department and hospital utilization, SUD services, mental health services, support services, and other outcomes.

FIGURE 1.

Acute Events at Index and Post-Index SUD Services/Other Outcomes



The categories of services and outcomes discussed in this report include:

- **Post-Index SUD-related Acute Events.** Withdrawal management, inpatient or residential SUD treatment, outpatient emergency department visits, inpatient hospitalization.
- **Emergency Department and Hospital Utilization.** Outpatient ED encounters and ED-related inpatient hospitalizations in the following categories: All-cause, SUD-related, and psychiatric.
- **SUD Services.** Receipt of medication for opioid use disorder (MOUD) or medication for alcohol use disorder (MAUD), outpatient SUD treatment, and inpatient or residential SUD treatment (any and new).

As shown in a prior report (Lopez et al. 2023a), of the total number of Medicaid beneficiaries with a SUD diagnosis, nearly a quarter (22.5 percent) had at least one (Any) SUD-related acute event within CY 2018. Of those with a SUD-related acute event, 12.0 percent had multiple acute events within the index month (see Table 1 on next page).

TABLE 1.

Summary of Acute Event Types

CY 2018, By Type of Acute Event in Index Month

	Medicaid Beneficiaries with a SUD-related Acute Event	
	NUMBER	PERCENT
Any Acute SUD Event (Any)	39,356	100%
Multiple Types of Acute SUD Events (Multiple)	4,718	12.0%
Type of SUD-related Acute Event in Index Month*		
Withdrawal Management (WM)	4,130	10.5%
Inpatient or Residential SUD Treatment (IP SUD)	5,311	13.5%
SUD-related ED Visit – Outpatient (SUD ED-OP)	23,535	59.8%
SUD-related Inpatient Hospitalization (SUD IP-HOSP)	11,849	30.1%

*Type of acute event categories are not mutually exclusive.

In the following tables, percentages are the number of those who received or experienced post-index services/outcomes within the specified timeframe (rows) out of those who experienced the indicated type of acute index event (columns). For example, in Table 2 below, of those Medicaid beneficiaries with a SUD diagnosis who experienced a withdrawal management (WM) acute index event, 23.6 and 38.8 percent received additional WM encounters within 3 and 12 months of the index event, respectively.

Post-Index SUD-related Acute Events

Many Medicaid beneficiaries with an acute index event had additional SUD-related acute events within 3 and 12 months of the index event (Table 2).

TABLE 2.

Additional SUD-related Acute Events after Index Event

Within 3 months and 12 months of the CY 2018 Index Event

	Types of Acute Index Events for Medicaid Beneficiaries with a SUD Diagnosis					
	Any (n=39,356)	**Multiple** (n=4,718)	**WM** (n=4,130)	**IP SUD** (n=5,311)	**SUD ED-OP** (n=23,535)	**SUD IP-HOSP** (n=11,849)
	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Type of SUD-related Additional Acute Event Within 3 Months of Index Event						
Withdrawal Management	5.1%	13.6%	23.6%	7.0%	5.0%	2.3%
Inpatient or Residential SUD Treatment	11.4%	29.2%	31.5%	55.7%	6.4%	3.8%
SUD Emergency Department - Outpatient	18.4%	25.3%	20.9%	13.8%	22.2%	14.7%
SUD Inpatient Hospitalization	9.6%	13.2%	6.7%	5.2%	8.6%	16.5%
Type of SUD-related Additional Acute Event Within 12 Months of Index Event						
Withdrawal Management	10.8%	25.5%	38.8%	17.8%	10.4%	6.1%
Inpatient or Residential SUD Treatment	17.8%	39.5%	43.1%	63.5%	13.3%	8.7%
SUD Emergency Department - Outpatient	36.9%	46.0%	39.9%	30.9%	42.8%	31.8%
SUD Inpatient Hospitalization	22.3%	27.8%	17.9%	14.1%	20.8%	33.7%

Withdrawal Management. Withdrawal management encounters were the least common additional acute event; of those with Any SUD-related index event, 5.1 percent had withdrawal management encounters within 3 months and 10.8 percent within 12 months of index.

Inpatient or Residential SUD Treatment. Of those with Any SUD-related index event, 11.4 percent had inpatient or residential SUD treatment encounters within 3 months and 17.8 percent within 12 months of index. It is important to note that IP SUD treatment events observed after the index IP SUD month could be a continuation of the same treatment episode which may partially explain why Medicaid beneficiaries with IP SUD at index had the highest rates of IP SUD, at 55.7 and 63.5 percent within 3 and 12 months of index, respectively. Relatively high rates of IP SUD treatment encounters were also observed among those with WM index events within 3 and 12 months of index (31.5 and 43.1 percent, respectively), whereas those with SUD IP-HOSP index events had the lowest rates (3.8 and 8.7 percent, respectively).

SUD-related Emergency Department – Outpatient. SUD ED-OP encounters were the most common additional acute event post index; of those with Any SUD-related index event, 18.4 percent had SUD ED-OP encounters within 3 months and 36.9 percent within 12 months of index. Those with IP SUD index events had the lowest rates of SUD ED-OP encounters (13.8 and 30.9 percent, respectively).

SUD-related Inpatient Hospitalization. Of those with Any SUD-related index event, 9.6 percent had SUD IP-HOSP encounters within 3 months and 22.3 percent within 12 months. Of those with Multiple

index events, 13.2 percent had SUD IP-HOSP encounters within 3 months and 27.8 percent within 12 months of index. The highest rates of SUD IP-HOSP encounters were observed among those with SUD IP-HOSP index events, whereas those with IP SUD index events had the lowest rates across both timeframes.

Emergency Department and Hospital Utilization

Table 3 focuses on outpatient ED and inpatient ED-related hospital visits in the following categories: All-cause (includes medical, SUD, or psychiatric related diagnoses), SUD-related (includes only SUD-related diagnoses), and psychiatric-related (includes only psychiatric-related diagnoses). Visits with multiple types of diagnoses are included in all relevant categories. For example, if a visit had both a SUD-related diagnosis and a psychiatric-related diagnosis, it would be included in both the SUD-related ED visits category and psychiatric-related ED visits category.

TABLE 3.

Emergency Department and Inpatient Hospital Utilization after Acute Index Event

Within 3 months and 12 months of the CY 2018 Index Event

	Types of Acute Index Events for Medicaid Beneficiaries with a SUD Diagnosis					
	Any (n=39,356)	**Multiple** (n=4,718)	**WM** (n=4,130)	**IP SUD** (n=5,311)	**SUD ED-OP** (n=23,535)	**SUD IP-HOSP** (n=11,849)
	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Within 3 Months of Index Event						
All-cause ED Visits (Outpatient)	40.0%	43.7%	38.4%	31.7%	44.1%	38.2%
SUD-related ED Visits (Outpatient)	18.4%	25.3%	20.9%	13.8%	22.2%	14.7%
Psychiatric-related ED Visits (Outpatient)	12.0%	16.1%	10.7%	9.0%	14.3%	11.2%
All-cause Inpatient Hospitalizations	12.2%	14.9%	7.8%	6.1%	10.7%	20.9%
SUD-related Inpatient Hospitalizations	9.6%	13.2%	6.7%	5.2%	8.6%	16.5%
Psychiatric-related Inpatient Hospitalizations	6.9%	9.1%	4.2%	4.1%	6.5%	11.0%
Within 12 Months of Index Event						
All-cause ED Visits (Outpatient)	68.8%	70.7%	67.2%	62.0%	72.7%	65.9%
SUD-related ED Visits (Outpatient)	36.9%	46.0%	39.9%	30.9%	42.8%	31.8%
Psychiatric-related ED Visits (Outpatient)	24.5%	29.4%	21.5%	19.8%	28.0%	23.5%
All-cause Inpatient Hospitalizations	27.2%	30.9%	20.1%	16.5%	24.8%	41.6%
SUD-related Inpatient Hospitalizations	22.3%	27.8%	17.9%	14.1%	20.8%	33.7%
Psychiatric-related Inpatient Hospitalizations	16.3%	19.3%	11.3%	10.5%	15.3%	24.3%

All-cause ED Visits (Outpatient). Of those with Any SUD-related index event**,** All-cause outpatient ED visits were the most common type of hospital event within 3 months (40.0 percent) and 12 months (68.8 percent). Of those with Multiple index events, 43.7 percent had All-cause outpatient ED visits within 3 months and 70.7 percent within 12 months of index. All-cause outpatient ED visits were highest within 3 and 12 months of index among those with SUD ED-OP index events (44.1 and 72.7 percent, respectively) and lowest among those with IP SUD index events (31.7 and 62.0 percent, respectively).

SUD-related ED Visits (Outpatient). As previously noted (see discussion after Table 2), of those with Any SUD-related index event, SUD-related outpatient ED visits were the second most common type of hospital utilization within 3 months (18.4 percent) and 12 months (36.9 percent) of the index event. This trend held across the categories of index events within both timeframes except for those with an SUD IP-HOSP index event, where all-cause inpatient hospitalizations and SUD-related IP hospitalizations were more frequently observed than SUD-related outpatient ED visits.

Psychiatric-related ED Visits (Outpatient). Of those with Any SUD-related index event, 12.0 percent had psychiatric-related outpatient ED visits within 3 months and 24.5 percent within 12 months. Of those with Multiple index events, 16.1 percent had psychiatric-related outpatient ED visits within 3 months and 29.4 percent within 12 months of index. Rates of psychiatric-related outpatient ED visits were relatively high within 3 and 12 months of index among those with SUD ED-OP index events (14.3 and 28.0 percent, respectively) and lowest among those with IP SUD index events (9.0 and 19.8 percent, respectively).

All-cause Inpatient Hospitalizations. Of those with Any SUD-related index event, 12.2 percent had All-cause inpatient hospitalizations within 3 months and 27.2 percent within 12 months. Of those with multiple index events, 14.9 percent had All-cause inpatient hospitalizations within 3 months and 30.9 percent within 12 months of index. Rates of All-cause inpatient hospitalizations were highest within 3 and 12 months of index among those with SUD IP-HOSP index events (20.9 and 41.6 percent, respectively) and lowest among those with IP SUD index events (6.1 and 16.5 percent, respectively).

SUD-related Inpatient Hospitalizations. As previously noted (see discussion after Table 2), of those with Any SUD-related index event, 9.6 percent had SUD-related inpatient hospitalizations within 3 months and 22.3 percent within 12 months. Of those with Multiple index events, 13.2 percent had SUD-related inpatient hospitalizations within 3 months and 27.8 percent within 12 months of index. Rates of SUD-related inpatient hospitalizations were highest within 3 and 12 months of index among those with SUD IP-HOSP index events (16.5 and 33.7 percent, respectively) and lowest among those with IP SUD index events (5.2 and 14.1 percent, respectively).

Psychiatric-related Inpatient Hospitalizations. Of those with Any SUD-related index event, 6.9 percent had psychiatric-related inpatient hospitalizations within 3 months and 16.3 percent within 12 months. Of those with Multiple index events, 9.1 percent had psychiatric-related inpatient hospitalizations within 3 months and 19.3 percent within 12 months of index. Rates of psychiatric-related inpatient hospitalizations were highest within 3 and 12 months of index among those with SUD IP-HOSP index events (11.0 and 24.3 percent, respectively) and lowest among those with IP SUD index events (4.1 and 10.5 percent, respectively).

SUD Services

We examined the use of six types of SUD-related services: medication for alcohol use disorder (MAUD), medication for opioid use disorder (MOUD), outpatient SUD treatment, inpatient or residential SUD treatment, SUD assessment, and Naloxone. Inpatient or residential SUD treatment is divided into two subcategories: "new" for those without an index event of IP SUD treatment and "any" for those with an index event of IP SUD treatment. It is important to note that for those with an index event of IP SUD, the appearance of an inpatient or residential SUD Treatment encounter at 3 or 12 months of index event may be either a continuation of treatment from the index event or a new treatment encounter.

Medication for Alcohol Use Disorder (MAUD). MAUD services were the least common[2] SUD-related service within 3 months (0.5 percent) and 12 months (0.9 percent) of those with Any SUD-related index event. MAUD service rates were high within 3 and 12 months of index for individuals with IP SUD index events (0.9 and 1.9 percent, respectively) and lowest for individuals who had SUD IP-HOSP index events (0.4 and 0.8 percent, respectively).

Medication for Opioid Use Disorder (MOUD). MOUD services were the second most common SUD-related service within 3 months (17.1 percent) and 12 months (25.6 percent) of those with Any SUD-related index event. Of those with Multiple SUD-related index events, 23.3 percent had MOUD

[2] Since this analysis was conducted, naltrexone-related medications were reclassified to primarily be a Medication for Alcohol Use Disorder. As such, the proportion of individuals receiving MAUD is likely to be somewhat higher than reported here.

services within 3 months and 34.4 percent within 12 months of index. Rates of MOUD services were highest within 3 and 12 months for individuals with WM index events (31.1 and 45.6 percent, respectively) and lowest for individuals who had SUD IP-HOSP index events (14.3 and 20.4 percent, respectively).

TABLE 4.

SUD-related Services after Acute Index Event

Within 3 months and 12 months of the CY 2018 Index Event

	Types of Acute Index Events for Medicaid Beneficiaries with a SUD Diagnosis					
	Any (n=39,356)	**Multiple** (n=4,718)	**WM** (n=4,130)	**IP SUD** (n=5,311)	**SUD ED-OP** (n=23,535)	**SUD IP-HOSP** (n=11,849)
	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Within 3 Months of Index Event						
MAUD	0.5%	1.1%	0.8%	0.9%	0.5%	0.4%
MOUD	17.1%	23.3%	31.1%	26.5%	15.5%	14.3%
Outpatient SUD Treatment	18.1%	27.1%	32.7%	49.9%	14.0%	11.6%
Inpatient or Residential SUD Treatment (New)	3.9%	6.2%	12.7%	N/A	4.4%	2.4%
Inpatient or Residential SUD Treatment (Any)	11.4%	29.2%	31.5%	55.7%	6.4%	3.8%
SUD Assessment	9.1%	16.0%	20.7%	17.5%	8.5%	5.9%
Naloxone	2.2%	3.1%	4.6%	1.9%	2.0%	2.3%
Within 12 Months of Index Event						
MAUD	0.9%	2.1%	1.7%	1.8%	1.0%	0.8%
MOUD	25.6%	34.4%	45.6%	36.7%	24.4%	20.4%
Outpatient SUD Treatment	29.7%	42.4%	51.4%	64.0%	26.3%	20.2%
Inpatient or Residential SUD Treatment (New)	9.2%	11.4%	21.2%	N/A	10.8%	6.5%
Inpatient or Residential SUD Treatment (Any)	17.8%	39.5%	43.1%	63.5%	13.3%	8.7%
SUD Assessment	19.0%	29.7%	37.7%	35.1%	18.3%	12.0%
Naloxone	7.0%	8.6%	11.6%	6.7%	6.7%	6.8%

Outpatient SUD Treatment. Outpatient SUD treatment services were the most common SUD-related service within 3 months (18.1 percent) and 12 months (29.7 percent) of those with Any SUD-related index event. Of those with Multiple SUD-related index events, outpatient SUD treatment services were the second most common within 3 months and the most common within 12 months of index (27.1 and 42.4 percent, respectively). Rates of outpatient SUD treatment services were highest within 3 and 12 months for individuals with IP SUD index events (49.9 and 64.0 percent, respectively) and lowest for individuals who had SUD IP-HOSP index events (11.6 and 20.2 percent, respectively).

Inpatient or Residential SUD Treatment (New). Of those with Any SUD-related index event, 3.9 percent had new inpatient or residential SUD treatment services within 3 months and 9.2 percent within 12 months. Of those with Multiple SUD-related index events, 6.2 percent had new inpatient or residential SUD treatment services within 3 months and 11.4 percent within 12 months of index. Rates of new inpatient or residential SUD treatment services were highest within 3 and 12 months for individuals with WM index events (12.7 and 21.2 percent, respectively) and lowest for individuals who had SUD IP-HOSP index events (2.4 and 6.5 percent, respectively).

Inpatient or Residential SUD Treatment (Any). Of those with Any SUD-related index event, 11.4 percent had any inpatient or residential SUD treatment services within 3 months and 17.8 percent within 12 months. Of those with Multiple SUD-related index events, any inpatient or residential SUD treatment services were the most common within 3 months and second most common within 12 months of index (29.2 and 39.5 percent, respectively). Rates of any inpatient or residential SUD treatment services were highest within 3 and 12 months for individuals with IP SUD index events

(55.7 and 63.5 percent, respectively) and lowest for individuals who had SUD IP-HOSP index events (3.8 and 8.7 percent, respectively).

SUD Assessment. Of those with Any SUD-related index event, 9.1 percent had SUD assessment services within 3 months and 19.0 percent within 12 months. Of those with Multiple SUD-related index events, 16.0 percent had SUD assessment services within 3 months and 29.7 percent within 12 months of index. Rates of SUD assessment services were highest within 3 and 12 months for individuals with WM index events (20.7 and 37.7 percent, respectively) and lowest for individuals who had SUD IP-HOSP index events (5.9 and 12.0 percent, respectively).

Naloxone. Naloxone services were the second least common SUD-related service within 3 months (2.2 percent) and 12 months (7.0 percent) of those with Any SUD-related index event. Of those with Multiple SUD-related index events, Naloxone services were also the second least common within 3 and 12 months of index (3.1 and 8.6 percent, respectively). Rates of Naloxone services were the highest within 3 and 12 months (4.6 and 11.6 percent, respectively) for individuals with WM index events and lowest for those who had IP SUD and SUD ED-OP index events. However, it is important to note that only Medicaid-paid Naloxone services are included in this analysis. It is likely that this significantly underrepresents Naloxone use as there are multiple non-Medicaid funded sources of Naloxone.[3]

Summary

The analyses contained in this report identify and describe post-index acute event services and other outcomes for adult Medicaid beneficiaries with a substance use disorder (SUD) diagnosis who had a SUD-related acute event in calendar year (CY) 2018. We identified services received as well as other client-level outcomes within 3 months and within 12 months of the initial SUD-related acute event by different index acute SUD-related event categories. The post-index acute services and outcomes examined in this report were categorized as post-initial SUD-related acute events, emergency department and hospital utilization, and SUD services.

Though utilization of post-acute services and other outcomes by Medicaid beneficiaries with SUD diagnoses after having an acute SUD-related index event varied by type of index event, several key patterns in the service utilization and outcomes were evident. SUD-related emergency department outpatient encounters were the most common additional acute event within 12 months after Any SUD-related index event, followed by SUD-related inpatient hospitalizations. This pattern holds true for individuals with Multiple SUD-related index events. The high utilization of inpatient hospitalizations and emergency department outpatient events point to hospitals as being a key service setting for connecting individuals with SUD to services (SUD-related and otherwise). In addition, these analyses highlight a potential need for a more integrated approach to SUD treatment, given the strong associations between SUD and health service utilization (Bahorik et al., 2017; Wu et al., 2018).

This report describes utilization of acute SUD-related services and how Medicaid beneficiaries interact with the broader behavioral health and physical health systems. To further our understanding of the acute care and behavioral health services utilization of Medicaid beneficiaries with SUD, post-index acute services and outcomes for the categories of mental health services, support services, and other outcomes (deaths and arrests) are examined in Part 3 of the report series (Lopez et al., 2023b).

[3] See https://doh.wa.gov/you-and-your-family/drug-user-health/overdose-education-naloxone-distribution for more information about Naloxone distribution in Washington State.

TECHNICAL NOTES

STUDY FUNDING

This study is funded under Health Care Authority (HCA) Contract #K4249-01, Department of Social and Health Services/Research and Data Analysis. Contract Description: Roadmap to Recovery: Substance Use and Opioid Use Recovery Planning Grant: A Pilot Study Funded Under Section 1003 of the SUPPORT Act by Centers for Medicare & Medicaid Services with Washington State Health Care Authority. Dates of service: 2/15/2020-9/30/2021.

STUDY POPULATION

Adult (ages 18+) individuals enrolled in Title XIX Medicaid at the start of the intake year (CY 2018), who have been diagnosed with substance use disorder (SUD) and/or opioid use disorder (OUD), are the focus of these analyses (N=174,805). Medicaid beneficiaries with non-Medicaid primary health care coverage (also referred to as third-party liability) were excluded from the analyses, as complete health care information may not be available for these individuals. Analyses were further restricted to individuals who were continuously enrolled in Medicaid in CY 2018 and CY 2019. Definitions of SUD and OUD diagnoses are as follows:

- **Substance Use Disorder diagnosis** is defined as the presence of a substance use disorder (SUD) diagnosis 24 months prior to the start of the intake year. Example SUD diagnoses include diagnoses related to alcohol, amphetamines (including methamphetamine), cocaine and other stimulants, heroin, and other opioids (including synthetic opioids), and cannabis. It does not include diagnoses related to tobacco use disorder.
- **Opioid Use Disorder diagnosis** is defined as the presence of an Opioid Use Disorder (OUD) diagnosis 24 months prior to the start of the intake year. Example OUD diagnoses include diagnoses related to synthetic and non-synthetic opioids, such as heroin and fentanyl. OUD diagnoses are a subset of SUD diagnoses (all individuals with an OUD diagnosis will also be identified as having a SUD diagnosis).

ACUTE EVENTS

Within the population of Medicaid beneficiaries with a SUD diagnosis, the first month with an eligible acute event (described below) within the intake year (CY 2018) was classified as the index month and the event, an index event. Four types of acute index events were identified. These categories are not mutually exclusive. Medicaid beneficiaries with a SUD diagnosis who had more than one type of acute index event in the index month are included in each type/category of acute event.

- **Withdrawal management.** Medicaid beneficiaries with a SUD diagnosis who had a SUD withdrawal management service in the index month.
- **Inpatient/residential SUD treatment.** Medicaid beneficiaries with a SUD diagnosis who had an inpatient SUD treatment service in the index month.
- **Emergency department visit – outpatient.** Medicaid beneficiaries with a SUD diagnosis who had an outpatient ED visit with any SUD-related diagnosis (the visit did not result in a transfer to a general medical inpatient hospitalization) in the index month. A SUD diagnosis in any diagnosis field (primary and other) qualifies the ED visit as SUD-related.
- **Inpatient SUD-related hospitalization.** Medicaid beneficiaries with a SUD diagnosis who had an ED visit with any SUD-related diagnosis that resulted in a transfer to a general medical inpatient hospitalization (not inpatient SUD treatment) in the index month. A SUD diagnosis in any diagnosis field (primary and other) qualifies the ED visit as SUD-related.

Two additional summary categories are included in the report:

- **Any acute SUD event.** Medicaid beneficiaries with a SUD diagnosis who had any relevant SUD-related acute event in the index month.
- **Multiple types of acute SUD events**. Medicaid beneficiaries with a SUD diagnosis who had more than one type of acute event in the index month. Individuals with multiple acute events of only one type (e.g., multiple outpatient ED visits) are not included in this category.

SERVICES AFTER ACUTE INDEX EVENT

After identifying the index month, we looked for receipt of post-index services within 0-3 months and within 0-12 months of the index month.

- **Post-index Acute SUD-Related Events**.
  - **Withdrawal management**. Receipt of a SUD withdrawal management service.
  - **Inpatient/residential SUD treatment**. Receipt of an inpatient/residential SUD treatment service.
  - **Emergency department visit – Outpatient**. An outpatient ED visit with any SUD-related diagnosis (the visit did not result in a transfer to a general medical inpatient hospitalization). A SUD diagnosis in any diagnosis field (primary and other) qualifies the ED visit as SUD-related.
  - **Emergency department visit – Inpatient**. ED visit with any SUD-related diagnosis that results in a transfer to a general medical inpatient hospitalization (not inpatient SUD treatment). A SUD diagnosis in any diagnosis field (primary and other) qualifies the ED visit as SUD-related.
- **Health Care Service Utilization.**
  - **All-cause ED visits (outpatient)**. An outpatient emergency department visit for any reason (medical, SUD-related, psychiatric-related) where the visit did not result in a transfer to a general medical inpatient hospitalization.
  - **SUD-related ED visits (outpatient).** An outpatient ED visit with any SUD-related diagnosis where the visit did not result in a transfer to a general medical inpatient hospitalization. A SUD diagnosis in any diagnosis field (primary and other) qualifies the ED visit as SUD-related.
  - **Psychiatric-related ED visits (outpatient).** An outpatient ED visit with any psychiatric-related diagnosis where the visit did not result in a transfer to a general medical inpatient hospitalization. A psychiatric diagnosis in any diagnosis field (primary and other) qualifies the ED visit as psychiatric-related.
  - **All-cause inpatient hospitalizations**. ED visit for any reason (medical, SUD-related, psychiatric-related) that results in a transfer to a general medical inpatient hospitalization (not inpatient SUD treatment).
  - **SUD-related inpatient hospitalizations.** ED visit with any SUD-related diagnosis that results in a transfer to a general medical inpatient hospitalization (not inpatient SUD treatment). A SUD diagnosis in any diagnosis field (primary and other) qualifies the ED visit as SUD-related.
  - **Psychiatric-related inpatient hospitalizations.** ED visit with any psychiatric-related diagnosis that results in a transfer to a general medical inpatient hospitalization (not inpatient SUD treatment). A psychiatric diagnosis in any diagnosis field (primary and other) qualifies the ED visit as psychiatric-related.
- **SUD-related Services**. Detailed information about service modalities are available in the Service Encounter Reporting Instructions.
  - **Medication for alcohol use disorder (MAUD).** Receipt of a medication for alcohol use disorder.
  - **Medication for opioid use disorder (MOUD).** Receipt of a medication for opioid use disorder.
  - **Outpatient treatment.** Receipt of an outpatient SUD treatment service, including case management and Screening, Brief Intervention, and Referral to Treatment (SBIRT). Excludes opiate substitution treatment (OST), also known as methadone treatment.
  - **New inpatient/residential SUD treatment.** Receipt of inpatient/residential SUD treatment service among those with no inpatient/residential SUD treatment acute index event.
  - **Inpatient/residential SUD treatment.** Continued or re-utilization of inpatient/residential SUD treatment service among those with an index event of inpatient/residential SUD treatment.
  - **SUD assessment.** Services conducted to determine if an individual has a SUD.
  - **Naloxone.** Receipt of Medicaid funded Naloxone (opioid overdose reversal agent).

DATA SOURCES

Data used in this report came from the integrated administrative data maintained in the Department of Social and Health Services Integrated Client Databases (ICDB). The ICDB contains data from several state administrative data systems, including the state's ProviderOne MMIS data system that contains Medicaid claims and encounter data. The ICDB allows for the examination of a broad set of measures for Medicaid beneficiaries.

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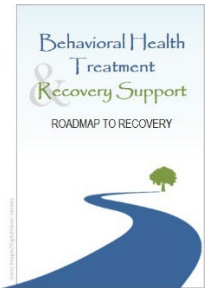

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