

**Report to Congress**  
**T-MSIS Substance Use Disorder (SUD) Data Book**  
**Treatment of SUD in Medicaid, 2018**

**As Required by the**  
**Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for**  
**Patients and Communities Act (P.L. 115-271)**

**Alex Azar II, Secretary**  
**U.S. Department of Health and Human Services**  
**January 19, 2021**

**This page left blank for double-sided printing.**

---

**CONTENTS**


---

EXECUTIVE SUMMARY .....	viii
I. INTRODUCTION.....	1
II. BACKGROUND .....	5
III. DATA.....	7
IV. METHODS .....	9
V. KEY FINDINGS.....	11
VI. RESULTS.....	13
A. The number and percentage of individuals enrolled in Medicaid who were treated for a SUD .....	13
B. SUD services provided by state Medicaid programs .....	40
C. SUD services provided by state Medicaid programs, by service type and setting.....	42
D. Number of SUD services provided by state Medicaid programs.....	52
E. Delivery system for SUD services provided by state Medicaid programs.....	60
F. Progression of care for Medicaid beneficiaries treated for a SUD .....	63
REFERENCES.....	67
APPENDIX A: SUPPORT ACT, SECTION 1015 OPIOID ADDICTION TREATMENT PROGRAMS ENHANCEMENT .....	A.1
APPENDIX B: SUPPLEMENTARY TECHNICAL INFORMATION.....	B.1
APPENDIX C: COMPARISON OF KEY FINDINGS TO OTHER DATA SOURCES.....	C.1
APPENDIX D: OPIOID USE DISORDER TABLES .....	D.1
APPENDIX E: COMPOSITION OF ENROLLMENT CATEGORIES .....	E.1
APPENDIX F: MEDICAID AND CHIP PAYMENT AND ACCESS COMMISSION (MACPAC) PUBLIC LETTER ON ENROLLMENT CATEGORIES FOR THE SUPPORT FOR PATIENTS AND COMMUNITY ACT T-MSIS SUD DATA BOOK.....	F.1
APPENDIX G: STATUTE-TO-TABLES CROSSWALK .....	G.1

**This page left blank for double-sided printing.**

---

**TABLES**


---

Table A.1.i. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by disorder .....	17
Table A.1.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by disorder .....	19
Table A.2.i. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by disorder .....	21
Table A.2.ii. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by disorder .....	23
Table A.3.i. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category.....	25
Table A.3.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category.....	27
Table A.4. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category .....	29
Table A.5.i Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status .....	31
Table A.5.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status .....	33
Table A.6. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status.....	35
Table A.7. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018 who were dually eligible, and beneficiaries who were dually eligible and treated for a SUD.....	38
Table B.1. SUD treatment services used by Medicaid beneficiaries .....	40
Table B.2. SUD treatment service types <i>not</i> billed, by state.....	41
Table C.1.i. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type .....	44
Table C.1.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type .....	46
Table C.1.iii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type .....	48
Table C.2. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service setting .....	50
Table D.1.i. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type .....	53
Table D.1.ii. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type .....	55
Table D.1.iii. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type .....	57

---

Table E.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by delivery system .....	61
Table F.1. Progression of care for Medicaid beneficiaries treated for a SUD who received services in an inpatient or a residential setting in 2018 .....	64
Appendix Table B.1. Severe and other data quality issues by state.....	B.5
Appendix Table C.1. Comparison of SUD treatment rates in the US in the Medicaid, Medicare, and commercially/privately insured population .....	C.4
Appendix Table D.1. Number and percentage of Medicaid beneficiaries treated for an OUD and another SUD in 2018, by disorder.....	D.6
Appendix Table D.2. Distribution of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category.....	D.8
Appendix Table D.3.i. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category.....	D.10
Appendix Table D.3.ii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category.....	D.12
Appendix Table D.4.i. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status.....	D.14
Appendix Table D.4.ii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status.....	D.16
Appendix Table D.5. Distribution of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status .....	D.19
Appendix Table D.6. SUD treatment service types <i>not</i> billed for Medicaid beneficiaries with an OUD, by state.....	D.22
Appendix Table D.7.i. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type .....	D.23
Appendix Table D.7.ii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type .....	D.25
Appendix Table D.7.iii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type .....	D.27
Appendix Table D.8. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service setting .....	D.29
Appendix Table D.9.i. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type .....	D.31
Appendix Table D.9.ii. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type .....	D.33
Appendix Table D.9.iii. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type .....	D.35
Appendix Table D.10. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by delivery system.....	D.38

Appendix Table D.11. Progression of care for Medicaid beneficiaries treated for an OUD who received services in 2018 in an inpatient or a residential setting .....	D.40
Appendix Table E.1. Composition of enrollment categories .....	E.3
Appendix Table G.1. Crosswalk between statutory language in the SUPPORT for Patients and Communities Act and the SUD Data Book contents.....	G.3

---

## EXECUTIVE SUMMARY

---

On October 24, 2018, President Trump signed into law the Substance Use–Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act (P.L. 115-271) (hereafter, the SUPPORT Act) to address, among other issues, the pressing need for substance use disorder (SUD) treatment and prevention services, with a focus on opioid use. In 2018, approximately 20.3 million Americans ages 12 and older met the screening criteria for a SUD, but only about 3.7 million (or 18 percent) received treatment (Substance Abuse and Mental Health Services Administration [SAMHSA] 2019).<sup>1</sup> For the Medicaid population, section 1015(a)(1) of the SUPPORT Act directs the U.S. Department of Health and Human Services (HHS) to publish a report, the Transformed Medicaid Statistical Information System (T-MSIS) Substance Use Disorder Data Book (hereafter, SUD Data Book) no later than October 24, 2019; the first SUD Data Book was released on that date. Section 1015(a)(3) of the SUPPORT Act also requires HHS to issue an updated version of the SUD Data Book no later than January 1 of each calendar year thereafter through 2024 (see Appendix A for the full text of section 1015). This second annual SUD Data Book reports the number of Medicaid beneficiaries with a SUD and the services they received during calendar year 2018, which was the most recent complete year of T-MSIS enrollment and claims data available when the analysis was conducted. The findings from this report should not be compared with the findings from the first annual SUD Data Book, which reports the number of Medicaid beneficiaries with a SUD and the services they received during calendar year 2017, due to the use of a new version of the T-MSIS Analytic Files (TAF) with large improvements in the completeness and quality of the data, and a small number of minor methodological updates.<sup>2</sup>

Of almost 55.9 million Medicaid beneficiaries ages 12 and older with full or comprehensive benefits identified in the states and territories included in this analysis, 4.6 million (8 percent) were treated for a SUD in 2018. Approximately 1.4 million of these beneficiaries were treated for opioid use disorder (OUD). Among the five enrollment categories assessed, the highest proportion (40 percent) of beneficiaries who were treated for a SUD were enrolled in the VIII Group (adult expansion group<sup>3</sup>). The lowest proportion treated (excluding the group for which enrollment category is unknown) were eligible for Medicaid on the basis of being pregnant (less than 3 percent). Among all states that did not expand Medicaid (with the exception of Wisconsin), the largest share of beneficiaries treated for a SUD were eligible for Medicaid because they were aged, blind, or disabled.

About three-quarters of the Medicaid beneficiaries treated for a SUD in 2018 received at least one service in an outpatient setting, and 43 percent received at least one service in an inpatient setting during the year. Slightly less than half of the Medicaid beneficiaries treated for a

---

<sup>1</sup> These counts exclude individuals with a tobacco use disorder, which is included in this SUD Data Book.

<sup>2</sup> Changes between the 2017 and 2018 SUD Data Books include adding the Virgin Islands; revising Tables A.5 and A.6 to focus on individuals eligible for Medicaid due to disability rather than the larger aged, blind, or disabled group; combining Tables A.7 and A.8; updating National Drug codes and other code lists required to identify beneficiaries with a SUD; and using two T-MSIS fields rather than one for identifying Medicaid beneficiaries with comprehensive benefits.

<sup>3</sup> The Group VIII adult expansion group refers to all individuals described in section 1902(a)(10)(A)(i)(VIII) of the Social Security Act and 42 C.F.R. §435.119.



SUD (46 percent) in 2018 received emergency services, which was the most common SUD service provided during the year. About a quarter (26 percent) of the beneficiaries treated for a SUD who received care in an inpatient or residential setting in 2018 also received at least one outpatient or home- or community-based SUD service within 30 days of being discharged.

The information in the SUD Data Book is derived from a research-ready version of the T-MSIS data, the T-MSIS Analytic Files (TAF). The T-MSIS and the TAF data represent a new generation of national data on Medicaid and the Children's Health Insurance Program (CHIP), and states continue to improve the quality and completeness of their T-MSIS submissions. This SUD Data Book is based on the 2018 TAF release 1 (the most recent version of 2018 data when the analysis was conducted), in which the data from some states had severe quality issues. One state (Rhode Island) was not included in the analysis.<sup>4,5,6</sup> Other states and territories (particularly Puerto Rico and the Virgin Islands) included in the analysis had less severe but still problematic data issues. For example, in some states, the reporting of Medicaid enrollment data, eligibility for benefits, or age may be incomplete, inconsistent, or inaccurate. As a result, the estimates in this SUD Data Book of the number of Medicaid beneficiaries who were eligible for SUD services in 2018 may not be correct. Other data quality issues include an unexpectedly low or high volume of claims and claims that are missing essential information regarding services rendered, among other issues. The 2018 TAF release 1 is nearly identical to the publicly available TAF Research Identifiable Files (RIFs), which became available in September 2020.<sup>7</sup>

The results reported in this SUD Data Book are based on beneficiaries ages 12 and older<sup>8</sup> who were enrolled in Medicaid for at least one day in 2018 and had full or comprehensive benefits. We excluded beneficiaries who were enrolled only in CHIP throughout 2018. Because the TAF data provide information on the services that Medicaid beneficiaries receive, we identified beneficiaries as having a SUD based on Medicaid claims and encounter records. It is not possible with these data to identify beneficiaries with a SUD who did not receive Medicaid-covered services for their condition, including, for dually eligible individuals, Medicare-covered services.

---

<sup>4</sup> Rhode Island had a very low number of Medicaid claims in the inpatient claim file, suggesting that these data were incomplete, which made it difficult to correctly identify not only beneficiaries who were treated for a SUD but also the services they received. Rhode Island will be included in future versions of the SUD Data Book if their data are of sufficient completeness and quality. More information on TAF data quality is available in Appendix B.

<sup>5</sup> The SUPPORT Act also requires that the report include, to the extent available, data for Puerto Rico, the Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa. At the time of the analysis, Guam, the Northern Mariana Islands, and American Samoa were not submitting T-MSIS data and are therefore not included in this SUD Data Book. Puerto Rico and the Virgin Islands are submitting T-MSIS data and are included in this SUD Data Book.

<sup>6</sup> Due to the improvement in state data quality since the initial submission of these data, CMS plans to rerun the 2018 TAF in February 2021 and will release updated data later that year.

<sup>7</sup> <https://www.cms.gov/newsroom/press-releases/cms-releases-medicare-and-chip-t-msis-data-provide-public-access-and-transparency-program>

<sup>8</sup> The SUD Data Book excludes Medicaid beneficiaries age 11 and younger on December 31, 2018, and newborns with fetal alcohol syndrome and neonatal abstinence syndrome, neither of which, by definition, would qualify as a SUD per the *Diagnostic Statistical Manual of Mental Disorders-V*.

## I. INTRODUCTION

---

On October 24, 2018, President Trump signed into law the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act (P.L. 115-271) (hereafter, the SUPPORT Act) to address, among other issues, the pressing need for substance use disorder (SUD) treatment and prevention services, with a focus on opioid use.

Section 1015(a) of the SUPPORT Act directs the U.S. Department of Health and Human Services (HHS) to publish the Transformed Medicaid Statistical Information System (T-MSIS) SUD Data Book,<sup>9</sup> a publicly available compendium of the number of Medicaid beneficiaries with a SUD and the services they received. This document is the second annual SUD Data Book, and it includes, to the extent possible, the required content as set forth in Section 1015(a)(2):

(A) The number and percentage of individuals enrolled in the State Medicaid plan or waiver of such plan in each of the major enrollment categories (as defined in a public letter from the Medicaid and CHIP Payment and Access Commission to the Secretary) who have been diagnosed with a substance use disorder and whether such individuals are enrolled under the State Medicaid plan or a waiver of such plan, including the specific waiver authority under which they are enrolled, to the extent available.<sup>10</sup>

- Of the approximately 55.9 million Medicaid beneficiaries ages 12 and older with full or comprehensive benefits in the states included in this analysis, 4.6 million, or 8 percent, were treated for a SUD in 2018.
- Adult beneficiaries in the VIII Group (adult expansion group) accounted for the largest share of beneficiaries treated for a SUD (40 percent) in 2018, followed by those in the aged, blind, or disabled enrollment category (32 percent) and the adult group (22 percent). In almost all states that did not expand Medicaid, the largest share of beneficiaries treated for a SUD were in the aged, blind, or disabled enrollment category. For full results, see Section A.

(B) A list of the substance use disorder treatment services by each major type of service, such as counseling, medication-assisted treatment, peer support, residential treatment, and inpatient care, for which beneficiaries in each State received at least 1 service under the State Medicaid plan or a waiver of such plan.

- Most states have at least one Medicaid beneficiary who received the following services: case management, community support, consultation, counseling, detoxification, emergency

---

<sup>9</sup> Appendix A includes a copy of the sections of the law that correspond to the SUD Data Book.

<sup>10</sup> In a letter to the HHS secretary, dated March 21, 2019, MACPAC defined several enrollment categories for stratifying the data, including some special populations that cannot currently be supported by the data because the number of beneficiaries in the enrollment categories is too small or there are data quality issues. The special populations not included in this SUD Data Book are children who qualify for Medicaid on the basis of child welfare assistance, dual (Medicare and Medicaid) eligibles younger than 65, and older adolescents. In addition, the quality of the 2018 TAF data are not good enough to support the reporting of beneficiaries by state Medicaid plan or waiver authority. See Appendix B for TAF data quality issues, by state.

services, inpatient care, intervention services, medication-assisted treatment (MAT), medication management, observation care, partial hospitalization, peer supports, physician services, pharmacotherapy, screening and assessment, or services from a treatment program. For full results, see Section B.

(C) The number and percentage of individuals with a substance use disorder diagnosis enrolled in the State Medicaid plan or waiver of such plan who received substance use disorder treatment services under such plan or waiver by each major type of service under subparagraph (B) within each major setting type, such as outpatient, inpatient, residential, and other home-based and community-based settings.<sup>11</sup>

- Acute care services were the most common SUD treatment services received by Medicaid beneficiaries. Nearly half of beneficiaries (46 percent) received emergency services (the most common SUD treatment service), followed by inpatient care (42 percent).
- Approximately three-quarters (77 percent) of the Medicaid beneficiaries treated for a SUD received at least one SUD service in an outpatient setting in 2018, and 43 percent received at least one service in an inpatient setting. A much smaller percentage of the beneficiaries treated for a SUD received services in a residential setting (6 percent) or in a home- or community-based setting (2 percent each). For full results, see Section C.

(D) The number of services provided under the State Medicaid plan or waiver of such plan per individual with a substance use disorder diagnosis enrolled in such plan or waiver for each major type of service under subparagraph (B).

- Beneficiaries treated for a SUD and who received counseling services attended an average of almost 10 sessions in 2018. Beneficiaries who received inpatient care for a SUD spent an average of 10 days in the inpatient facility over the course of the year. Beneficiaries who received MAT for a SUD received an average of 130 days worth of medication, or more than 4 months. Beneficiaries who received observation care for a SUD received this type of care for an average of 4 days during 2018, and beneficiaries who received partial hospitalization services for a SUD received an average of 16 days of these services. For full results, see Section D.

(E) The number and percentage of individuals enrolled in the State Medicaid plan or waiver, by major enrollment category, who received substance use disorder treatment through a Medicaid managed care entity, a fee-for-service payment model, or an alternative payment model, to the extent available.<sup>12</sup>

- Approximately 72 percent of the Medicaid beneficiaries treated for a SUD received at least one SUD service through a managed care organization in 2018, and about 45 percent of the

---

<sup>11</sup> We presented tabulations by service setting and type separately to avoid data quality issues related to examining cross-tabulations of multiple variables simultaneously.

<sup>12</sup> We did not present results for alternative payment models because it was not possible to identify alternative payment models in the TAF data.

Medicaid beneficiaries treated for a SUD received at least one service through a state's fee-for-service (FFS) system in 2018. For full results, see Section E.

(F) The number and percentage of individuals with a substance use disorder who receive substance use disorder treatment services in an outpatient or home-based and community-based setting after receiving treatment in an inpatient or residential setting, and the number of services received by such individuals in the outpatient or home-based and community-based setting.<sup>13</sup>

- Among the Medicaid beneficiaries treated for a SUD and who received SUD services in an inpatient or a residential setting during 2018, 26 percent received at least one service in an outpatient or home- or community-based setting within 30 days of discharge, and 18 percent received two services or more in these settings. For full results, see Section F.

---

<sup>13</sup> Due to variation in service types and timing and patterns of care, we could not consistently count the number of outpatient or home- or community-based services. We therefore present the number and percentage of Medicaid beneficiaries who received at least one, or two or more outpatient or home- or community-based services after receiving services in an inpatient or a residential setting during 2018.

---

**This page left blank for double-sided printing.**

## II. BACKGROUND

Substance use disorders (SUDs) are characterized by a problematic pattern of alcohol and/or drug use leading to clinically significant impairment or distress as manifested by more than one symptom such as difficulty controlling use, risk of self-harm, withdrawal, social or interpersonal problems, or failure to meet major responsibilities at work, school, or home (American Psychiatric Association 2013). In 2018, approximately 20.3 million Americans ages 12 and older met the screening criteria for a SUD, but only about 3.7 million (or 18 percent) received treatment (SAMHSA 2019).<sup>14</sup> The mortality associated with SUD has become a major public health concern as the number of deaths nationwide from a drug overdose increased from 2016 to 2017, from 63,632 to 70,237, although deaths declined to 67,367 in 2018 (Centers for Disease Control and Prevention 2019; Hedegaard et al. 2020).

The SUPPORT Act supplements efforts already underway to provide services to Medicaid beneficiaries with a SUD. As of the end of 2018, 16 states had active section 1115 Medicaid demonstration projects to help improve access to, and the quality of, SUD treatment along the continuum of care (Centers for Medicare & Medicaid Services [CMS], 2019).<sup>15</sup> As of the writing of this report, CMS had approved 28 SUD demonstrations.<sup>16</sup> Through these demonstrations, CMS authorizes states under section 1115(a)(2) of the Social Security Act to receive federal financial participation (FFP) in state expenditures for which FFP would otherwise not be available, specifically for services subject to the statutory Institution for Mental Diseases (IMD)<sup>17</sup> exclusion.<sup>18</sup> The IMD exclusion ordinarily prohibits FFP from being provided for expenditures associated with residential treatment in IMDs for individuals ages 21 to 64.<sup>19</sup> In

<sup>14</sup> These counts reported by SAMSHA exclude individuals with tobacco use disorder diagnoses. Medicaid enrollees with these diagnoses are included in this SUD Data Book.

<sup>15</sup> The 16 states were California, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, New Hampshire, New Jersey, Pennsylvania, Utah, Vermont, Virginia, Wisconsin, Washington, and West Virginia.

<sup>16</sup> In addition to the states with active section 1115 SUD demonstrations, the additional states with approved demonstrations are Alaska, Delaware, District of Columbia, Idaho, Kansas, Michigan, Minnesota, New Mexico, Nebraska, North Carolina, Ohio, and Rhode Island.

<sup>17</sup> An IMD is a hospital, nursing facility, or other institution with more than 16 beds that primarily engaged in providing diagnoses, treatment, or care of persons with mental diseases, including medical attention, nursing care, and related services (section 1905(i) of the Social Security Act [the Act]). Medicaid coverage of services provided in IMDs is governed by specific rules for federal funding under section 1905(a) of the Act. The facilities cannot receive federal funding for services provided to anyone ages 21 to 64 (subdivision B following section 1905(a)(30) of the Act). States have the option to cover IMD services for people ages 21 and younger (section 1905(a)(16) of the Act, 42 C.F.R. §440.160), and ages 65 and older (section 1905(a)(14) of the Act, 42 C.F.R. §440.140). According to the President's Commission on Combating Drug Addiction and the Opioid Crisis (2017), removing the federal IMD exclusion could eliminate critical barriers to SUD treatment and expand treatment capacity.

<sup>18</sup> <https://www.medicaid.gov/sites/default/files/federal-policy-guidance/downloads/smd17003.pdf>

<sup>19</sup> Section 5052 of the SUPPORT Act creates a new limited exception to the IMD exclusion for individuals ages 21 to 64 with at least one SUD. Section 5052 amended the Act and added new subsection (1) to section 1915, which permits states to provide medical assistance for up to 30 days annually per qualifying beneficiary beginning on October 1, 2019, and ending on September 30, 2023. Starting on October 1, 2019, states can amend their Medicaid state plans to include coverage provided to Medicaid beneficiaries residing in IMD facilities for up to 30 days annually. Section 1012 of the SUPPORT Act creates a new limited exception to the IMD exclusion, too. Specifically, section 1012(a) states that for a woman who is eligible on the basis of being pregnant (and up to 60-

addition to waiving the IMD exclusion through 1115 demonstrations, according to the Medicaid and CHIP Managed Care Final Rule (42 C.F.R. §438.6(e)), states may use federal Medicaid funds for capitation payments to managed care plans that cover IMD services in lieu of other services covered under the state plan for up to 15 days per month.<sup>20</sup> The section 1115 SUD demonstrations also encourage states to increase SUD provider capacity;<sup>21</sup> use evidence-based, SUD specific patient placement criteria; improve access to SUD care; implement evidence-nationally recognized program standards to establish provider qualifications in residential settings; and improve care coordination between levels of care (CMS 2017).

In 2018, CMS also announced the Maternal Opioid Misuse (MOM) Model, which provides resources to states to support delivery system transformation for pregnant and postpartum Medicaid beneficiaries with OUD.<sup>22</sup> Other federal and state initiatives under Medicaid in 2018 to support the development of effective SUD treatment focus on integrating physical and behavioral health care as a way to improve care for beneficiaries with a SUD, and dozens of states are implementing innovative approaches to improving service delivery and reforming payment models through accountable care organizations (ACOs), certified community behavioral health clinics, delivery system reform incentive payment programs, Health Homes, and patient-centered medical homes, among others. CMS has also worked with states through the Medicaid Innovation Accelerator Program, an initiative designed to address health care costs and quality in Medicaid for certain target populations, such as beneficiaries with SUD.

---

days postpartum), who is a patient in an IMD for purposes of receiving treatment for a SUD, who is either enrolled under the state plan immediately before becoming a patient in the IMD, or who becomes eligible to enroll while a patient in an IMD, the IMD exclusion shall not be construed to prohibit federal financial participation for medical assistance for items and services provided outside of the IMD to such women.

<sup>20</sup> <https://www.govinfo.gov/content/pkg/FR-2016-05-06/pdf/2016-09581.pdf>

<sup>21</sup> In 2018, there were providers of MAT services in 40 percent of counties across the U.S. (HHS 2020).

<sup>22</sup> <https://innovation.cms.gov/innovation-models/maternal-opioid-misuse-model>

---

### III. DATA

---

Each state reports data on Medicaid and CHIP enrollment, service utilization, payment, providers, and other information on a monthly basis through T-MSIS. The size, complexity, and frequency of updates to T-MSIS data make the files very challenging to use for analytic purposes. As a result, CMS creates a series of data sets optimized for analytics and basic research known as the T-MSIS Analytic Files, or TAF. The information in this SUD Data Book is derived from the five research-ready files in the 2018 TAF release 1: Annual Demographic and Eligibility (DE), Inpatient (IP), Long-Term Care (LT), Other Services (OT), and Pharmacy (RX) files. Release 1 data are nearly identical to the publicly available TAF Research Identifiable Files (RIFs), which became available in 2020.<sup>23</sup>

T-MSIS and the research optimized version of the data (the TAF) represent a new national data set for Medicaid and CHIP. Because T-MSIS is a new reporting system, the data from this system was continually improving in completeness and quality in all states when the analytic work presented in this report was conducted. These data are continually updated as data quality issues emerge and are communicated back to states who respond by making corrections and improvements in their reporting and refining their files. However, Rhode Island had severe data quality issues in May 2020, when this SUD Data Book was compiled. The state had a very low number of Medicaid claims in the IP file, suggesting that these data were incomplete, which made it difficult to correctly identify not only beneficiaries who were treated for a SUD but also the services they received. For this reason, Rhode Island is not included in the analyses presented in this SUD Data Book. In addition to these severe data quality issues, there are numerous, less severe issues related to enrollment, claims volume, and diagnosis code that did not exclude other states from the analysis but that might affect the validity of the results. These issues include the following, and they are organized by state in Appendix Table B.1:

- Missing information about Medicaid enrollment or eligibility for full or comprehensive Medicaid benefits may result in inaccurate estimates of the number of Medicaid beneficiaries eligible for SUD services.
- Some states had an unexpectedly low or high volume of claims in 2018 compared with other states. A low volume of claims may result in an underestimate of the number of beneficiaries treated for a SUD and the services they received. The implications of a high volume of claims are less clear due to the various methods by which this may occur, including the submission of duplicate claims, the placement of claims in the incorrect file, or claim lines submitted as claim headers, among other possibilities.
- Claims that are missing information can result in an underestimate of the number of Medicaid beneficiaries who were treated for a SUD and the services they received, particularly when the information is missing for key variables such as diagnosis code, an essential component for identifying beneficiaries with a SUD.

---

<sup>23</sup> Due to the improvement in state data quality since the initial submission of these data, CMS plans to rerun the 2018 TAF in February 2021 and will release updated data later that year.



Additional information on the completeness and quality of TAF data is available online in *DQ Atlas* (CMS 2020).<sup>24</sup> CMS continues to work with states to improve the quality of the underlying T-MSIS data. States have access to data quality tools that identify, track, and prioritize potential T-MSIS data quality issues. CMS is also providing one-on-one technical assistance to each state to improve states' T-MSIS data submissions. Through this ongoing technical assistance, states and CMS are working to resolve priority issues.<sup>25</sup> CMS also releases guidance documents to clarify reporting requirements where states have identified challenges in reporting information.<sup>26</sup> We expect future annual SUD Data Books to include more complete and accurate results as states' T-MSIS submissions improve and they continue to address data quality issues.

---

<sup>24</sup> <https://www.medicaid.gov/dq-atlas/>

<sup>25</sup> CMS tracks and publishes state data quality issues related to a set of T-MSIS Priority Items. This information is available at <https://www.medicaid.gov/medicaid/data-systems/macbis/transformed-medicaid-statistical-information-system-t-msis/index.html>.

<sup>26</sup> T-MSIS coding guidance is available at <https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/tmsis-blog/index.html>.

---

## IV. METHODS

---

The results reported in this SUD Data Book are based on beneficiaries ages 12 and older enrolled in Medicaid for at least one day in 2018 and receiving full or comprehensive benefits. The SUPPORT Act focuses on “individuals enrolled under the State Medicaid plan or waiver of such plan,” so the SUD Data Book excludes Medicaid-Expansion CHIP and separate CHIP beneficiaries enrolled in these programs only throughout 2018. In general, we identified a beneficiary as having a SUD if he or she had in 2018 at least one qualifying inpatient claim for a SUD, two outpatient or long-term care claims for SUD treatment on different dates, or one pharmacy claim for MAT for a SUD (see Appendix B for details).<sup>27</sup> The substance use categories include: alcohol; caffeine; cannabis; hallucinogens, hypnotics and anxiolytics; inhalants; opioids; sedatives; stimulants; tobacco; and other unspecified or unknown substances. These categories are consistent with the 10 classes of drugs encompassed by SUD in the Diagnostic and Statistical Manual of Mental Disorders (5<sup>th</sup> ed.; DSM-5; American Psychiatric Association 2013). Once we identified beneficiaries who received treatment for a SUD, we grouped them into five eligibility categories (adults; children; pregnant women; aged, blind, disabled; VIII Group adults). We also provide a breakdown of beneficiaries who qualified on the basis of disability, by age group. We then examined the settings in which they received SUD services, the types and volume of services they received, and whether the services were delivered through a managed care entity or a state’s fee-for-service (FFS) system.

This SUD Data Book does not identify all Medicaid beneficiaries who had a SUD in 2018 because the algorithm used to identify beneficiaries treated for a SUD is based on claims data. It can therefore identify only the beneficiaries who were treated for a SUD as part of a Medicaid- or CHIP-funded service.<sup>28</sup> Beneficiaries with a SUD often do not seek treatment because of factors such as the stigma associated with having a SUD and the difficulty of locating a treatment provider (Medicaid and CHIP Payment and Access Commission [MACPAC] 2017). The research literature indicates that fewer than one in five individuals with a SUD received treatment (SAMHSA 2019 and National Survey on Drug Use and Health detailed Tables 5.18A and 5.18B). Because this SUD Data Book reflects information provided by states for Medicaid beneficiaries who were treated for a SUD, our methods are therefore likely to underestimate the overall number of Medicaid beneficiaries with a SUD.

---

<sup>27</sup> This approach uses SUD Tool 1, Identifying Beneficiaries with a SUD (identification tool), developed for CMS’s Innovation Accelerator Program.

<sup>28</sup> Beneficiaries enrolled in Medicaid for at least one day in 2018 could have had a CHIP-funded SUD service during the year.

**This page left blank for double-sided printing.**

---

## V. KEY FINDINGS

---

- Of the approximately 55.9 million Medicaid beneficiaries with full or comprehensive benefits ages 12 and older who could be identified in the states included in this analysis,<sup>29</sup> 4.6 million, or 8 percent, were treated for a SUD in 2018 (see Appendix C for a comparison between these estimates and publicly available estimates for Medicare beneficiaries and commercially insured individuals).
- Approximately 1.4 million of these beneficiaries were treated for an OUD. OUD-specific tables are in Appendix D.
- Among the five eligibility categories assessed,<sup>30</sup> the highest proportion (40 percent) of beneficiaries treated for a SUD were covered by Medicaid though the expansion of benefits to adults under the authority of the Patient Protection and Affordable Care Act (P.L. 111-148 [ACA]), which requires coverage of SUD treatment services. The lowest proportion treated (excluding the group for which the enrollment category is unknown) were eligible for Medicaid on the basis of being pregnant (less than 3 percent).<sup>31</sup> In almost all states that did not expand Medicaid through the ACA, the largest share of beneficiaries treated for a SUD were eligible for Medicaid because they were aged, blind, or disabled.
- Almost half of the Medicaid beneficiaries treated for a SUD (46 percent) in 2018 received emergency services—the most common SUD service provided during that year. About one in four beneficiaries treated for a SUD who received care in an inpatient or residential setting in 2018 received at least one outpatient home- or community-based SUD service within 30 days of discharge.
- Approximately three-quarters of the Medicaid beneficiaries treated for a SUD received at least one service in an outpatient setting in 2018, and 43 percent received at least one service in an inpatient setting during that year.

---

<sup>29</sup> Rhode Island was not included in these analyses because of a severe data quality issue. All numbers and percentages for the U.S. overall exclude Rhode Island.

<sup>30</sup> These enrollment categories are adults; children; pregnant women; beneficiaries eligible on the basis of being aged, blind, or disabled; and VIII Group adults (the adult expansion group). More information about these groups is available in Section A of Chapter VI: Results.

<sup>31</sup> Slightly different U.S. totals across the tables are a function of differences in the need to suppress data because of small cell sizes from one table to the next.

---

**This page left blank for double-sided printing.**

## VI. RESULTS

### A. The number and percentage of individuals enrolled in Medicaid who were treated for a SUD

Section 1015(a)(2)(A) of the SUPPORT Act requires the SUD Data Book to provide information on the number and percentage of individuals enrolled in Medicaid who have been diagnosed with a SUD by major enrollment category. The data in Tables A.1 through A.7 address this section of the law. As required by the law, the reporting of these enrollment categories is largely consistent with those identified by MACPAC in its letter to HHS (see Appendix E for the composition of enrollment categories and Appendix F for a copy of the letter).<sup>32</sup>

This section presents the results of our analysis of the five major enrollment categories in Medicaid: adults; children; pregnant women; beneficiaries who are eligible on the basis of being aged, blind, or disabled; and VIII Group adults (the adult expansion group). We examined these enrollment categories in two ways: First, we looked at the number and percentage of Medicaid beneficiaries in each major enrollment category treated for a SUD (the denominator for these analyses being the number of Medicaid beneficiaries in each enrollment category; Table A.3). Next, we examined the number and percentage of Medicaid beneficiaries treated for a SUD who fell into each enrollment category (the denominator for these analyses being the number of Medicaid beneficiaries with a SUD; Table A.4). Using a similar table structure, we further disaggregated beneficiaries treated for a SUD by age group and then by whether they were eligible for Medicaid on the basis of a disability (Tables A.5 and A.6). Separately, we examined individuals dually eligible for Medicaid and Medicare who received Medicaid-financed treatment for a SUD (Tables A.7).

#### Table A.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by disorder

- Of the approximately 55.9 million Medicaid beneficiaries ages 12 and older with full or comprehensive benefits in the states included in this analysis, 4.6 million, or 8 percent, were treated for a SUD in 2018.<sup>33</sup>
- Tobacco use disorder was the most commonly treated SUD in Medicaid beneficiaries; 2.6 million, or nearly 5 percent, of Medicaid beneficiaries were treated for this condition. Tobacco use disorder was followed by opioid use disorder (OUD) (approximately 1.4

<sup>32</sup> MACPAC suggests including a number of special populations, including children who qualify for Medicaid on the basis of child welfare; full-benefit, dually eligible beneficiaries younger than 65; and older adolescents. These populations are either not identifiable in the data or are too small to report separately. Additionally, MACPAC suggests including infants with neonatal abstinence syndrome. However, this Data Book follows the research literature and focuses only on Medicaid beneficiaries who have been treated for a SUD and are at least 12 years of age. This age group is consistent with the age range used in the National Survey of Drug Use and Health (<https://nsduhweb.rti.org/respweb/homepage.cfm>).

<sup>33</sup> Prevalence estimates based on these data should be considered lower-bound estimates that may underestimate the proportion of Medicaid beneficiaries with a SUD. These estimates do not include beneficiaries who had a SUD but did not seek treatment for the condition. Only those treated for a SUD and who were older than 12 in 2018 are included in our analyses.

million, or 3 percent), polysubstance use disorder<sup>34</sup> (also approximately 1.4 million, or 3 percent), and alcohol use disorder (approximately 1 million, or 2 percent). Although the SUPPORT Act does not specifically request data on OUD, this SUD Data Book includes a series of OUD-specific data tables in Appendix D, given the importance of the opioid epidemic.

- The proportion of Medicaid beneficiaries treated for a SUD varied considerably across states, although some of this variation may be a result of differences in the quality of state T-MSIS submissions. Ohio and Vermont had the highest proportion of Medicaid beneficiaries with a SUD (16 percent and 14 percent, respectively), and Puerto Rico and the Virgin Islands had the lowest proportion (about 1 percent).<sup>35</sup>

**Table A.2. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by disorder**

- Of the more than 4.6 million Medicaid beneficiaries treated for a SUD in 2018, almost 57 percent were treated for a tobacco use disorder, and almost 31 percent were treated for an OUD.<sup>36</sup>
- The other common disorders were polysubstance (use of multiple substances), at 30 percent of Medicaid beneficiaries treated for a SUD in 2018; alcohol use disorder, at 22 percent; cannabis, at 14 percent; stimulants, at 13 percent; and all other SUDs, at 10 percent.
- In several states, 50 percent or more of the beneficiaries treated for a SUD were treated for an OUD (Delaware, Maryland, New Hampshire, and Vermont).

**Table A.3. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category**

Table A.3 presents the percentage of beneficiaries within each enrollment category who were treated for a SUD.<sup>37</sup> Table A.4 presents the distribution of beneficiaries treated for a SUD across the major Medicaid enrollment categories.

- Of the five major enrollment categories that we examined, beneficiaries who were eligible on the basis of being aged, blind, or disabled had the highest prevalence of treatment for a SUD (11 percent). At least 17 percent of the beneficiaries in Maine, Massachusetts, Ohio, and Vermont who were eligible for Medicaid on the basis of being aged, blind, or disabled were treated for a SUD.

---

<sup>34</sup> A polysubstance use disorder involves a diagnosis in which there are two or more SUD or a polysubstance diagnosis code.

<sup>35</sup> Data quality issues, particularly a low volume of (and therefore potentially missing) claims, may partly explain the low proportion of Medicaid beneficiaries with a SUD in Puerto Rico and the Virgin Islands. The territories may also have different coverage policies for SUD than states.

<sup>36</sup> Beneficiaries can be treated for more than one SUD.

<sup>37</sup> Slightly different totals across the tables are a function of differences in the need to suppress data because of small cell sizes from one table to the next.

- The next-highest group was the VIII Group, in which approximately 10 percent of the beneficiaries were treated for a SUD,<sup>38</sup> followed by the adult group (9 percent) and beneficiaries eligible on the basis of being pregnant (9 percent).

**Table A.4. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category**

- Adult beneficiaries in the VIII Group accounted for the largest share of beneficiaries treated for a SUD (40 percent) in 2018, followed by those in the aged, blind, or disabled enrollment category (32 percent) and the adult group (22 percent).<sup>39</sup> Of the states that did not expand Medicaid, the largest share of beneficiaries treated for a SUD were in the aged, blind, or disabled enrollment category, with the exception of Wisconsin.
- The states whose VIII Group represented the largest share of beneficiaries treated for a SUD were Washington (76 percent), Puerto Rico (68 percent) and Montana (67 percent).
- In seven states and territories, more than 10 percent of the beneficiaries treated for a SUD were eligible for Medicaid on the basis of being pregnant (from the highest share to the lowest: the Virgin Islands, Texas, Wyoming, North Dakota, Tennessee, Oklahoma, and Missouri).
- In two states, more than 10 percent of the beneficiaries treated for a SUD were eligible for Medicaid on the basis of a child-related enrollment category (South Dakota and Nebraska).

**Table A.5. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status**

Table A.5 presents the percentage of beneficiaries within each age group and disability status who were treated for a SUD. Table A.6 presents the distribution of beneficiaries treated for a SUD by age and disability status. For both tables, the number and percentage of beneficiaries older than 65 is not broken out by disability status because most beneficiaries older than 65 are dually eligible.

- Seventeen percent of Medicaid beneficiaries ages 19 to 64 who were eligible on the basis of disability in 2018 were treated for a SUD, compared with 10 percent of the same age group who were not eligible on the basis of disability.
- The percentage of Medicaid beneficiaries treated for a SUD was lower among beneficiaries who were ages 65 and older (5 percent) than among beneficiaries ages 19 to 64. This may be an underestimate because Medicare financed the services for some of these beneficiaries.

<sup>38</sup> Virginia and Maine appear to have VIII Group beneficiaries even though the states did not expand Medicaid until 2019. Virginia expanded Medicaid in November 2018, but coverage was not effective until January 1, 2019. Maine implemented a Medicaid expansion for adults in 2019 in which coverage was retroactive to July 2, 2018. Vermont expanded Medicaid in 2014 but did not report any beneficiaries in the VIII Group.

<sup>39</sup> Eligibility group is missing for more than 10 percent of the beneficiaries with a SUD in Kansas, Oregon, and Utah, which may affect the results for these states.



- Nearly two percent of children ages 12 to 18 who were eligible for Medicaid on the basis of disability were treated for a SUD in 2018, compared with 1 percent of all other children covered by Medicaid during the year.

**Table A.6. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status**

- Adults ages 19 to 64 accounted for nearly all beneficiaries treated for a SUD in 2018. Adults who were eligible on the basis of something other than disability accounted for 65 percent of Medicaid beneficiaries treated for a SUD, and adults eligible on the basis of disability accounted for 26 percent of Medicaid beneficiaries treated for a SUD.
- In 12 states, the percentage of adults ages 19 to 64 and eligible for Medicaid on the basis of disability accounted for a larger share of beneficiaries treated for a SUD compared with adults who were not eligible on the basis of disability (Alabama, Florida, Georgia, Idaho, Mississippi, Missouri, North Carolina, Oklahoma, South Dakota, Texas, Vermont, and Virginia).
- Six percent of beneficiaries treated for a SUD in 2018 were adults older than 65, and 3 percent were children not eligible on the basis of disability.

**Table A.7. Number and percentage of full-benefit, dually eligible Medicaid beneficiaries treated for a SUD in 2018, and beneficiaries who were dually eligible and treated for a SUD**

- Almost 15 percent of Medicaid beneficiaries treated for a SUD in 2018 were dually eligible.
- Eight percent of the full-benefit, dually eligible Medicaid beneficiaries were treated for a SUD in 2018. The highest rate was 16 percent in Massachusetts, and the lowest was in Puerto Rico and the Virgin Islands (less than 1 percent).
- At 34 percent, Massachusetts had the highest proportion of dually eligible Medicaid beneficiaries among those treated for a SUD in 2018, followed by Oklahoma (31 percent). Arkansas, Idaho, and Mississippi did not report any dually eligible beneficiaries, which is the result of a data quality issue.

**Table A.1.i. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by disorder<sup>40</sup>**

State	Total number of Medicaid beneficiaries	Any SUD		Alcohol		Cannabis		Opioids	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>55,887,507</b>	<b>4,604,297</b>	<b>8.2</b>	<b>1,017,308</b>	<b>1.8</b>	<b>643,737</b>	<b>1.2</b>	<b>1,406,455</b>	<b>2.5</b>
Alabama	485,531	44,897	9.2	6,243	1.3	5,130	1.1	9,001	1.9
Alaska*	169,556	19,115	11.3	7,581	4.5	2,656	1.6	6,231	3.7
Arizona*	1,519,362	139,778	9.2	38,733	2.5	22,426	1.5	45,540	3.0
Arkansas*	699,618	34,218	4.9	4,423	0.6	4,132	0.6	3,706	0.5
California*	9,883,471	458,854	4.6	105,665	1.1	60,114	0.6	120,938	1.2
Colorado*	1,095,450	78,233	7.1	21,285	1.9	6,495	0.6	23,132	2.1
Connecticut*	715,912	90,962	12.7	23,861	3.3	14,743	2.1	38,364	5.4
Delaware*	181,135	22,623	12.5	4,700	2.6	2,649	1.5	11,624	6.4
District of Columbia*	198,082	12,887	6.5	2,949	1.5	1,879	0.9	3,460	1.7
Florida	2,448,041	132,689	5.4	22,109	0.9	17,908	0.7	31,099	1.3
Georgia	1,120,989	66,184	5.9	10,059	0.9	7,699	0.7	11,298	1.0
Hawaii*	297,355	18,204	6.1	3,268	1.1	1,742	0.6	4,000	1.3
Idaho	158,946	13,034	8.2	2,302	1.4	1,457	0.9	3,356	2.1
Illinois*	2,365,929	168,468	7.1	43,485	1.8	28,961	1.2	40,077	1.7
Indiana*	1,105,260	104,554	9.5	21,841	2.0	12,847	1.2	37,359	3.4
Iowa*	493,576	55,187	11.2	13,199	2.7	10,084	2.0	7,431	1.5
Kansas	236,878	20,580	8.7	3,580	1.5	3,638	1.5	3,098	1.3
Kentucky*	1,110,467	145,810	13.1	19,439	1.8	13,860	1.2	53,471	4.8
Louisiana*	1,121,670	111,220	9.9	19,569	1.7	17,160	1.5	23,630	2.1
Maine	166,901	19,658	11.8	3,398	2.0	1,054	0.6	9,581	5.7
Maryland*	996,324	114,620	11.5	23,414	2.4	11,015	1.1	65,778	6.6
Massachusetts*	1,409,587	172,494	12.2	48,407	3.4	18,578	1.3	78,367	5.6
Michigan*	2,050,614	200,025	9.8	45,875	2.2	25,092	1.2	49,293	2.4
Minnesota*	893,109	107,635	12.1	30,675	3.4	16,219	1.8	26,289	2.9
Mississippi	289,666	18,411	6.4	2,817	1.0	2,969	1.0	2,925	1.0
Missouri	697,180	67,867	9.7	12,393	1.8	9,801	1.4	15,164	2.2
Montana*	208,459	26,463	12.7	7,470	3.6	3,790	1.8	6,359	3.1
Nebraska	148,250	8,498	5.7	1,886	1.3	1,206	0.8	1,395	0.9
Nevada*	540,863	47,974	8.9	10,413	1.9	7,076	1.3	12,677	2.3
New Hampshire*	159,531	13,591	8.5	3,260	2.0	949	0.6	7,789	4.9

<sup>40</sup> Tables split across multiple pages are given lower-case Roman numerals at the end of the table number to indicate whether the “component table” is the first (i), second (ii), and so on. The source and notes for each table are located after the final component table.

Table A.1.i. (continued)

State	Total number of Medicaid beneficiaries	Any SUD		Alcohol		Cannabis		Opioids	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	1,310,876	81,845	6.2	17,936	1.4	9,188	0.7	28,575	2.2
New Mexico*	560,025	55,511	9.9	17,849	3.2	6,632	1.2	21,698	3.9
New York*	4,889,974	411,974	8.4	109,996	2.2	80,245	1.6	124,703	2.6
North Carolina	1,081,753	106,926	9.9	16,399	1.5	13,346	1.2	26,473	2.4
North Dakota*	75,840	4,416	5.8	1,041	1.4	739	1.0	636	0.8
Ohio*	2,255,004	358,066	15.9	76,535	3.4	62,674	2.8	109,726	4.9
Oklahoma	454,890	44,503	9.8	5,463	1.2	4,131	0.9	10,486	2.3
Oregon*	798,447	99,912	12.5	25,752	3.2	14,160	1.8	28,724	3.6
Pennsylvania*	2,354,799	286,789	12.2	61,352	2.6	38,322	1.6	118,829	5.0
Puerto Rico*	1,231,194	10,459	0.8	2,032	0.2	1,524	0.1	3,839	0.3
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	43,026	6.5	6,820	1.0	6,060	0.9	7,677	1.2
South Dakota	67,380	5,333	7.9	1,595	2.4	1,043	1.5	555	0.8
Tennessee	1,049,258	84,818	8.1	12,852	1.2	12,720	1.2	18,499	1.8
Texas	2,498,968	117,410	4.7	19,257	0.8	18,263	0.7	17,812	0.7
Utah	196,679	15,679	8.0	3,031	1.5	1,587	0.8	6,152	3.1
Vermont*	137,840	19,845	14.4	4,699	3.4	2,391	1.7	10,256	7.4
Virginia	597,364	43,361	7.3	6,663	1.1	3,595	0.6	15,612	2.6
Virgin Islands*	16,961	177	1.0	76	0.4	49	0.3	14	0.1
Washington*	1,352,481	138,154	10.2	32,176	2.4	20,106	1.5	51,226	3.8
West Virginia*	467,770	52,791	11.3	8,558	1.8	3,646	0.8	26,103	5.6
Wisconsin	809,887	84,612	10.4	22,011	2.7	9,460	1.2	25,771	3.2
Wyoming	46,101	3,957	8.6	916	2.0	527	1.1	657	1.4

**Table A.1.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by disorder**

State	Total number of Medicaid beneficiaries	Polysubstance		Stimulants		Tobacco		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>55,887,507</b>	<b>1,386,580</b>	<b>2.5</b>	<b>610,858</b>	<b>1.1</b>	<b>2,617,535</b>	<b>4.7</b>	<b>450,400</b>	<b>0.8</b>
Alabama	485,531	11,658	2.4	4,248	0.9	34,076	7.0	4,284	0.9
Alaska*	169,556	6,809	4.0	2,571	1.5	8,504	5.0	1,867	1.1
Arizona*	1,519,362	46,297	3.0	32,515	2.1	59,927	3.9	13,603	0.9
Arkansas*	699,618	7,814	1.1	3,513	0.5	26,968	3.9	3,204	0.5
California*	9,883,471	128,055	1.3	86,731	0.9	229,633	2.3	38,286	0.4
Colorado*	1,095,450	21,208	1.9	7,940	0.7	43,729	4.0	5,102	0.5
Connecticut*	715,912	31,417	4.4	10,774	1.5	43,384	6.1	8,402	1.2
Delaware*	181,135	8,488	4.7	2,940	1.6	11,812	6.5	1,874	1.0
District of Columbia*	198,082	4,318	2.2	1,356	0.7	7,991	4.0	1,795	0.9
Florida	2,448,041	35,313	1.4	11,896	0.5	86,955	3.6	16,803	0.7
Georgia	1,120,989	15,372	1.4	7,203	0.6	46,407	4.1	6,332	0.6
Hawaii*	297,355	4,813	1.6	4,581	1.5	9,847	3.3	1,504	0.5
Idaho	158,946	3,216	2.0	1,546	1.0	8,060	5.1	834	0.5
Illinois*	2,365,929	52,755	2.2	19,589	0.8	104,146	4.4	16,645	0.7
Indiana*	1,105,260	30,144	2.7	12,140	1.1	56,848	5.1	10,422	0.9
Iowa*	493,576	16,508	3.3	10,433	2.1	35,158	7.1	4,170	0.8
Kansas	236,878	5,469	2.3	3,504	1.5	12,981	5.5	1,679	0.7
Kentucky*	1,110,467	41,618	3.7	18,799	1.7	87,818	7.9	16,780	1.5
Louisiana*	1,121,670	33,547	3.0	17,153	1.5	75,640	6.7	14,208	1.3
Maine	166,901	4,384	2.6	626	0.4	8,901	5.3	1,600	1.0
Maryland*	996,324	32,409	3.3	8,783	0.9	42,531	4.3	10,098	1.0
Massachusetts*	1,409,587	62,003	4.4	18,874	1.3	92,135	6.5	21,620	1.5
Michigan*	2,050,614	51,159	2.5	17,056	0.8	120,062	5.9	13,967	0.7
Minnesota*	893,109	35,740	4.0	19,293	2.2	61,280	6.9	10,596	1.2
Mississippi	289,666	4,890	1.7	1,988	0.7	13,165	4.5	2,133	0.7
Missouri	697,180	18,798	2.7	10,052	1.4	40,457	5.8	7,992	1.1
Montana*	208,459	9,215	4.4	4,784	2.3	16,253	7.8	2,158	1.0
Nebraska	148,250	1,700	1.1	984	0.7	4,638	3.1	603	0.4
Nevada*	540,863	15,193	2.8	9,541	1.8	26,442	4.9	5,598	1.0
New Hampshire*	159,531	4,063	2.5	1,006	0.6	4,987	3.1	1,322	0.8
New Jersey*	1,310,876	21,230	1.6	5,024	0.4	45,454	3.5	7,423	0.6
New Mexico*	560,025	17,572	3.1	8,702	1.6	20,731	3.7	5,160	0.9
New York*	4,889,974	143,215	2.9	54,089	1.1	244,390	5.0	45,317	0.9
North Carolina	1,081,753	26,886	2.5	10,333	1.0	69,927	6.5	9,982	0.9
North Dakota*	75,840	1,377	1.8	675	0.9	2,867	3.8	485	0.6

Table A.1.ii. (continued)

State	Total number of Medicaid beneficiaries	Polysubstance		Stimulants		Tobacco		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Ohio*	2,255,004	121,901	5.4	43,120	1.9	232,508	10.3	35,510	1.6
Oklahoma	454,890	10,190	2.2	4,652	1.0	30,040	6.6	3,861	0.8
Oregon*	798,447	33,265	4.2	19,759	2.5	51,027	6.4	6,194	0.8
Pennsylvania*	2,354,799	91,443	3.9	33,629	1.4	147,080	6.2	29,562	1.3
Puerto Rico*	1,231,194	2,454	0.2	1,674	0.1	3,906	0.3	1,168	0.1
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	10,809	1.6	4,358	0.7	29,072	4.4	3,570	0.5
South Dakota	67,380	1,544	2.3	477	0.7	3,297	4.9	405	0.6
Tennessee	1,049,258	22,991	2.2	9,739	0.9	56,647	5.4	10,870	1.0
Texas	2,498,968	28,177	1.1	13,302	0.5	77,247	3.1	13,615	0.5
Utah	196,679	4,495	2.3	2,936	1.5	7,255	3.7	1,407	0.7
Vermont*	137,840	6,372	4.6	1,372	1.0	8,840	6.4	1,359	1.0
Virginia	597,364	9,617	1.6	2,759	0.5	25,272	4.2	3,337	0.6
Virgin Islands*	16,961	40	0.2	14	0.1	52	0.3	19	0.1
Washington*	1,352,481	49,142	3.6	27,994	2.1	64,650	4.8	12,226	0.9
West Virginia*	467,770	15,468	3.3	4,774	1.0	26,842	5.7	5,942	1.3
Wisconsin	809,887	23,149	2.9	8,698	1.1	47,296	5.8	7,287	0.9
Wyoming	46,101	870	1.9	359	0.8	2,400	5.2	220	0.5

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. A polysubstance use disorder involves a diagnosis in which there are two or more SUD or a polysubstance diagnosis code. Appendix B includes detailed information on how we identified SUD treatment.

The "Other" category includes treatment for caffeine; hallucinogens; sedatives, hypnotics, and anxiolytics; inhalants; and unspecified or unknown SUD.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table A.2.i. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by disorder**

State	Total number of Medicaid beneficiaries with a SUD	Alcohol		Cannabis		Opioids	
		Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>1,017,308</b>	<b>22.1</b>	<b>643,737</b>	<b>14.0</b>	<b>1,406,455</b>	<b>30.5</b>
Alabama	44,897	6,243	13.9	5,130	11.4	9,001	20.0
Alaska*	19,115	7,581	39.7	2,656	13.9	6,231	32.6
Arizona*	139,778	38,733	27.7	22,426	16.0	45,540	32.6
Arkansas*	34,218	4,423	12.9	4,132	12.1	3,706	10.8
California*	458,854	105,665	23.0	60,114	13.1	120,938	26.4
Colorado*	78,233	21,285	27.2	6,495	8.3	23,132	29.6
Connecticut*	90,962	23,861	26.2	14,743	16.2	38,364	42.2
Delaware*	22,623	4,700	20.8	2,649	11.7	11,624	51.4
District of Columbia*	12,887	2,949	22.9	1,879	14.6	3,460	26.8
Florida	132,689	22,109	16.7	17,908	13.5	31,099	23.4
Georgia	66,184	10,059	15.2	7,699	11.6	11,298	17.1
Hawaii*	18,204	3,268	18.0	1,742	9.6	4,000	22.0
Idaho	13,034	2,302	17.7	1,457	11.2	3,356	25.7
Illinois*	168,468	43,485	25.8	28,961	17.2	40,077	23.8
Indiana*	104,554	21,841	20.9	12,847	12.3	37,359	35.7
Iowa*	55,187	13,199	23.9	10,084	18.3	7,431	13.5
Kansas	20,580	3,580	17.4	3,638	17.7	3,098	15.1
Kentucky*	145,810	19,439	13.3	13,860	9.5	53,471	36.7
Louisiana*	111,220	19,569	17.6	17,160	15.4	23,630	21.2
Maine	19,658	3,398	17.3	1,054	5.4	9,581	48.7
Maryland*	114,620	23,414	20.4	11,015	9.6	65,778	57.4
Massachusetts*	172,494	48,407	28.1	18,578	10.8	78,367	45.4
Michigan*	200,025	45,875	22.9	25,092	12.5	49,293	24.6
Minnesota*	107,635	30,675	28.5	16,219	15.1	26,289	24.4
Mississippi	18,411	2,817	15.3	2,969	16.1	2,925	15.9
Missouri	67,867	12,393	18.3	9,801	14.4	15,164	22.3
Montana*	26,463	7,470	28.2	3,790	14.3	6,359	24.0
Nebraska	8,498	1,886	22.2	1,206	14.2	1,395	16.4
Nevada*	47,974	10,413	21.7	7,076	14.7	12,677	26.4
New Hampshire*	13,591	3,260	24.0	949	7.0	7,789	57.3
New Jersey*	81,845	17,936	21.9	9,188	11.2	28,575	34.9
New Mexico*	55,511	17,849	32.2	6,632	11.9	21,698	39.1
New York*	411,974	109,996	26.7	80,245	19.5	124,703	30.3
North Carolina	106,926	16,399	15.3	13,346	12.5	26,473	24.8
North Dakota*	4,416	1,041	23.6	739	16.7	636	14.4

Table A.2.i. (continued)

State	Total number of Medicaid beneficiaries with a SUD	Alcohol		Cannabis		Opioids	
		Number	Percent	Number	Percent	Number	Percent
Ohio*	358,066	76,535	21.4	62,674	17.5	109,726	30.6
Oklahoma	44,503	5,463	12.3	4,131	9.3	10,486	23.6
Oregon*	99,912	25,752	25.8	14,160	14.2	28,724	28.7
Pennsylvania*	286,789	61,352	21.4	38,322	13.4	118,829	41.4
Puerto Rico*	10,459	2,032	19.4	1,524	14.6	3,839	36.7
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	6,820	15.9	6,060	14.1	7,677	17.8
South Dakota	5,333	1,595	29.9	1,043	19.6	555	10.4
Tennessee	84,818	12,852	15.2	12,720	15.0	18,499	21.8
Texas	117,410	19,257	16.4	18,263	15.6	17,812	15.2
Utah	15,679	3,031	19.3	1,587	10.1	6,152	39.2
Vermont*	19,845	4,699	23.7	2,391	12.0	10,256	51.7
Virginia	43,361	6,663	15.4	3,595	8.3	15,612	36.0
Virgin Islands*	177	76	42.9	49	27.7	14	7.9
Washington*	138,154	32,176	23.3	20,106	14.6	51,226	37.1
West Virginia*	52,791	8,558	16.2	3,646	6.9	26,103	49.4
Wisconsin	84,612	22,011	26.0	9,460	11.2	25,771	30.5
Wyoming	3,957	916	23.1	527	13.3	657	16.6

**Table A.2.ii. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by disorder**

State	Total number of Medicaid beneficiaries with a SUD	Polysubstance		Stimulants		Tobacco		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>1,386,580</b>	<b>30.1</b>	<b>610,858</b>	<b>13.3</b>	<b>2,617,535</b>	<b>56.8</b>	<b>450,400</b>	<b>9.8</b>
Alabama	44,897	11,658	26.0	4,248	9.5	34,076	75.9	4,284	9.5
Alaska*	19,115	6,809	35.6	2,571	13.5	8,504	44.5	1,867	9.8
Arizona*	139,778	46,297	33.1	32,515	23.3	59,927	42.9	13,603	9.7
Arkansas*	34,218	7,814	22.8	3,513	10.3	26,968	78.8	3,204	9.4
California*	458,854	128,055	27.9	86,731	18.9	229,633	50.0	38,286	8.3
Colorado*	78,233	21,208	27.1	7,940	10.1	43,729	55.9	5,102	6.5
Connecticut*	90,962	31,417	34.5	10,774	11.8	43,384	47.7	8,402	9.2
Delaware*	22,623	8,488	37.5	2,940	13.0	11,812	52.2	1,874	8.3
District of Columbia*	12,887	4,318	33.5	1,356	10.5	7,991	62.0	1,795	13.9
Florida	132,689	35,313	26.6	11,896	9.0	86,955	65.5	16,803	12.7
Georgia	66,184	15,372	23.2	7,203	10.9	46,407	70.1	6,332	9.6
Hawaii*	18,204	4,813	26.4	4,581	25.2	9,847	54.1	1,504	8.3
Idaho	13,034	3,216	24.7	1,546	11.9	8,060	61.8	834	6.4
Illinois*	168,468	52,755	31.3	19,589	11.6	104,146	61.8	16,645	9.9
Indiana*	104,554	30,144	28.8	12,140	11.6	56,848	54.4	10,422	10.0
Iowa*	55,187	16,508	29.9	10,433	18.9	35,158	63.7	4,170	7.6
Kansas	20,580	5,469	26.6	3,504	17.0	12,981	63.1	1,679	8.2
Kentucky*	145,810	41,618	28.5	18,799	12.9	87,818	60.2	16,780	11.5
Louisiana*	111,220	33,547	30.2	17,153	15.4	75,640	68.0	14,208	12.8
Maine	19,658	4,384	22.3	626	3.2	8,901	45.3	1,600	8.1
Maryland*	114,620	32,409	28.3	8,783	7.7	42,531	37.1	10,098	8.8
Massachusetts*	172,494	62,003	35.9	18,874	10.9	92,135	53.4	21,620	12.5
Michigan*	200,025	51,159	25.6	17,056	8.5	120,062	60.0	13,967	7.0
Minnesota*	107,635	35,740	33.2	19,293	17.9	61,280	56.9	10,596	9.8
Mississippi	18,411	4,890	26.6	1,988	10.8	13,165	71.5	2,133	11.6
Missouri	67,867	18,798	27.7	10,052	14.8	40,457	59.6	7,992	11.8
Montana*	26,463	9,215	34.8	4,784	18.1	16,253	61.4	2,158	8.2
Nebraska	8,498	1,700	20.0	984	11.6	4,638	54.6	603	7.1
Nevada*	47,974	15,193	31.7	9,541	19.9	26,442	55.1	5,598	11.7
New Hampshire*	13,591	4,063	29.9	1,006	7.4	4,987	36.7	1,322	9.7



Table A.2.ii. (continued)

State	Total number of Medicaid beneficiaries with a SUD	Polysubstance		Stimulants		Tobacco		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	81,845	21,230	25.9	5,024	6.1	45,454	55.5	7,423	9.1
New Mexico*	55,511	17,572	31.7	8,702	15.7	20,731	37.3	5,160	9.3
New York*	411,974	143,215	34.8	54,089	13.1	244,390	59.3	45,317	11.0
North Carolina	106,926	26,886	25.1	10,333	9.7	69,927	65.4	9,982	9.3
North Dakota*	4,416	1,377	31.2	675	15.3	2,867	64.9	485	11.0
Ohio*	358,066	121,901	34.0	43,120	12.0	232,508	64.9	35,510	9.9
Oklahoma	44,503	10,190	22.9	4,652	10.5	30,040	67.5	3,861	8.7
Oregon*	99,912	33,265	33.3	19,759	19.8	51,027	51.1	6,194	6.2
Pennsylvania*	286,789	91,443	31.9	33,629	11.7	147,080	51.3	29,562	10.3
Puerto Rico*	10,459	2,454	23.5	1,674	16.0	3,906	37.3	1,168	11.2
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	10,809	25.1	4,358	10.1	29,072	67.6	3,570	8.3
South Dakota	5,333	1,544	29.0	477	8.9	3,297	61.8	405	7.6
Tennessee	84,818	22,991	27.1	9,739	11.5	56,647	66.8	10,870	12.8
Texas	117,410	28,177	24.0	13,302	11.3	77,247	65.8	13,615	11.6
Utah	15,679	4,495	28.7	2,936	18.7	7,255	46.3	1,407	9.0
Vermont*	19,845	6,372	32.1	1,372	6.9	8,840	44.5	1,359	6.8
Virginia	43,361	9,617	22.2	2,759	6.4	25,272	58.3	3,337	7.7
Virgin Islands*	177	40	22.6	14	7.9	52	29.4	19	10.7
Washington*	138,154	49,142	35.6	27,994	20.3	64,650	46.8	12,226	8.8
West Virginia*	52,791	15,468	29.3	4,774	9.0	26,842	50.8	5,942	11.3
Wisconsin	84,612	23,149	27.4	8,698	10.3	47,296	55.9	7,287	8.6
Wyoming	3,957	870	22.0	359	9.1	2,400	60.7	220	5.6

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. A polysubstance use disorder involves a diagnosis in which there are two or more SUD or a polysubstance diagnosis code. Appendix B includes detailed information on how we identified SUD treatment.

The "Other" category includes treatment for caffeine; hallucinogens; sedatives, hypnotics, and anxiolytics; inhalants; and unspecified or unknown SUD.

The percentages in this table may not sum to 100 within a state because of the polysubstance category and because beneficiaries can be treated for more than one SUD.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table A.3.i. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category**

State	Total number of Medicaid beneficiaries	Adult			Children			Pregnant		
		Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>11,541,052</b>	<b>994,788</b>	<b>8.6</b>	<b>10,831,258</b>	<b>142,768</b>	<b>1.3</b>	<b>1,403,775</b>	<b>120,501</b>	<b>8.6</b>
Alabama	485,531	100,086	11,095	11.1	144,261	1,007	0.7	19,010	947	5.0
Alaska*	169,556	46,020	4,708	10.2	36,749	1,015	2.8	4,494	918	20.4
Arizona*	1,519,362	372,579	29,059	7.8	258,719	4,881	1.9	31,230	3,433	11.0
Arkansas*	699,618	66,159	6,252	9.4	128,412	1,570	1.2	2,401	266	11.1
California*	9,883,471	2,120,657	75,964	3.6	1,264,213	9,594	0.8	110,286	1,463	1.3
Colorado*	1,095,450	221,048	15,491	7.0	178,413	1,577	0.9	42,433	4,418	10.4
Connecticut*	715,912	184,884	19,410	10.5	133,157	1,907	1.4	12,911	1,341	10.4
Delaware*	181,135	40,242	5,302	13.2	34,114	358	1.0	4,845	773	16.0
District of Columbia*	198,082	54,889	2,195	4.0	26,411	227	0.9	DS	DS	DS
Florida	2,448,041	559,888	40,596	7.3	804,093	7,076	0.9	91,446	9,409	10.3
Georgia	1,120,989	411,308	19,570	4.8	294,457	2,256	0.8	73,555	4,716	6.4
Hawaii*	297,355	32,789	1,737	5.3	47,393	464	1.0	19,621	1,149	5.9
Idaho	158,946	43,283	4,335	10.0	55,739	775	1.4	0	.	.
Illinois*	2,365,929	1,081,234	99,641	9.2	521,062	7,401	1.4	21,652	2,134	9.9
Indiana*	1,105,260	88,520	5,218	5.9	185,406	1,779	1.0	55,930	8,109	14.5
Iowa*	493,576	97,731	11,710	12.0	67,469	1,194	1.8	25,391	2,174	8.6
Kansas	236,878	80,626	7,294	9.0	55,941	852	1.5	13,111	1,232	9.4
Kentucky*	1,110,467	128,160	22,436	17.5	130,938	1,912	1.5	18,006	2,127	11.8
Louisiana*	1,121,670	107,320	14,687	13.7	220,579	2,567	1.2	14,919	1,626	10.9
Maine	166,901	54,612	8,086	14.8	43,774	831	1.9	5,488	937	17.1
Maryland*	996,324	241,656	26,400	10.9	198,614	2,678	1.3	10,667	876	8.2
Massachusetts*	1,409,587	364,880	28,171	7.7	127,007	1,448	1.1	10,219	779	7.6
Michigan*	2,050,614	399,166	44,104	11.0	309,746	5,176	1.7	15,916	DS	DS
Minnesota*	893,109	201,108	22,941	11.4	221,758	5,597	2.5	23,906	3,111	13.0
Mississippi	289,666	65,375	6,082	9.3	136,402	1,291	0.9	16,128	1,240	7.7
Missouri	697,180	148,388	17,676	11.9	243,206	4,313	1.8	48,393	6,928	14.3
Montana*	208,459	19,822	2,814	14.2	36,274	1,107	3.1	1,823	256	14.0
Nebraska	148,250	38,524	2,994	7.8	45,608	864	1.9	9,513	DS	DS
Nevada*	540,863	66,684	5,691	8.5	107,236	1,185	1.1	13,868	1,734	12.5
New Hampshire*	159,531	13,891	2,274	16.4	33,155	226	0.7	3,748	351	9.4

Table A.3.i. (continued)

State	Total number of Medicaid beneficiaries	Adult			Children			Pregnant		
		Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent
New Jersey*	1,310,876	94,554	7,952	8.4	241,661	2,336	1.0	21,757	483	2.2
New Mexico*	560,025	80,922	9,816	12.1	121,404	2,529	2.1	5,411	524	9.7
New York*	4,889,974	631,693	55,291	8.8	643,588	8,269	1.3	65,219	DS	DS
North Carolina	1,081,753	407,684	36,192	8.9	178,624	3,088	1.7	26,646	3,027	11.4
North Dakota*	75,840	13,138	1,436	10.9	13,797	395	2.9	2,364	533	22.5
Ohio*	2,255,004	491,739	87,247	17.7	415,712	14,379	3.5	DS	DS	DS
Oklahoma	454,890	108,364	11,526	10.6	152,518	DS	DS	31,140	4,707	15.1
Oregon*	798,447	84,963	12,986	15.3	110,619	3,056	2.8	13,605	2,035	15.0
Pennsylvania*	2,354,799	314,140	46,024	14.7	341,003	6,346	1.9	30,899	4,580	14.8
Puerto Rico*	1,231,194	248,644	1,400	0.6	171,446	480	0.3	4,351	15	0.3
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	191,811	18,211	9.5	206,394	3,564	1.7	18,124	1,638	9.0
South Dakota	67,380	19,566	1,738	8.9	23,410	963	4.1	DS	DS	DS
Tennessee	1,049,258	435,890	34,383	7.9	254,780	5,492	2.2	83,462	10,190	12.2
Texas	2,498,968	259,231	17,611	6.8	1,040,429	7,496	0.7	280,412	18,146	6.5
Utah	196,679	46,136	4,266	9.2	66,368	642	1.0	16,097	1,501	9.3
Vermont*	137,840	34,340	6,033	17.6	26,297	592	2.3	DS	DS	DS
Virginia	597,364	125,085	14,517	11.6	188,984	1,475	0.8	30,220	3,448	11.4
Virgin Islands*	16,961	4,628	DS	DS	130	0	0.0	1,593	41	2.6
Washington*	1,352,481	26,475	2,336	8.8	303,707	5,817	1.9	15,039	1,296	8.6
West Virginia*	467,770	55,341	8,193	14.8	77,309	922	1.2	9,277	2,149	23.2
Wisconsin	809,887	404,768	52,405	12.9	148,000	1,799	1.2	23,729	3,224	13.6
Wyoming	46,101	10,411	1,292	12.4	14,772	DS	DS	3,520	517	14.7

**Table A.3.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category**

State	Total number of Medicaid beneficiaries	Aged, blind, disabled			VIII Group adult			Unknown		
		Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>13,492,062</b>	<b>1,466,609</b>	<b>10.9</b>	<b>17,948,975</b>	<b>1,833,154</b>	<b>10.2</b>	<b>545,731</b>	<b>31,544</b>	<b>5.8</b>
Alabama	485,531	221,083	31,726	14.4	0	.	.	1,091	122	11.2
Alaska*	169,556	27,491	3,477	12.6	54,802	8,997	16.4	0	.	.
Arizona*	1,519,362	265,845	27,714	10.4	519,409	74,691	14.4	71,580	0	0.0
Arkansas*	699,618	139,845	16,092	11.5	362,801	10,038	2.8	0	.	.
California*	9,883,471	2,192,491	137,653	6.3	4,176,521	234,109	5.6	19,303	71	0.4
Colorado*	1,095,450	140,478	14,757	10.5	512,965	41,990	8.2	113	0	0.0
Connecticut*	715,912	90,315	12,909	14.3	294,645	55,395	18.8	0	.	.
Delaware*	181,135	22,352	2,979	13.3	79,582	13,211	16.6	0	.	.
District of Columbia*	198,082	40,362	5,679	14.1	75,984	4,771	6.3	DS	DS	DS
Florida	2,448,041	842,763	75,551	9.0	0	.	.	149,851	57	0.0
Georgia	1,120,989	340,775	39,594	11.6	0	.	.	894	48	5.4
Hawaii*	297,355	51,281	4,743	9.2	136,443	10,046	7.4	9,828	65	0.7
Idaho	158,946	54,281	7,552	13.9	0	.	.	5,643	372	6.6
Illinois*	2,365,929	467,966	48,117	10.3	273,869	11,156	4.1	146	19	13.0
Indiana*	1,105,260	229,197	23,779	10.4	525,495	63,361	12.1	20,712	2,308	11.1
Iowa*	493,576	98,417	12,645	12.8	204,300	27,435	13.4	268	29	10.8
Kansas	236,878	53,088	7,657	14.4	0	.	.	34,112	3,545	10.4
Kentucky*	1,110,467	219,198	33,580	15.3	614,165	85,755	14.0	0	.	.
Louisiana*	1,121,670	219,464	26,922	12.3	559,388	65,418	11.7	0	.	.
Maine	166,901	50,978	9,149	17.9	6,797	574	8.4	5,252	81	1.5
Maryland*	996,324	167,390	24,664	14.7	377,997	60,002	15.9	0	.	.
Massachusetts*	1,409,587	491,510	83,313	17.0	406,858	58,559	14.4	9,113	224	2.5
Michigan*	2,050,614	453,095	48,789	10.8	872,601	100,360	11.5	90	DS	DS
Minnesota*	893,109	184,221	27,878	15.1	262,116	48,108	18.4	0	.	.
Mississippi	289,666	71,761	9,798	13.7	0	.	.	0	.	.
Missouri	697,180	257,193	38,950	15.1	0	.	.	0	.	.
Montana*	208,459	30,918	4,563	14.8	119,622	17,723	14.8	0	.	.
Nebraska	148,250	54,522	3,967	7.3	0	.	.	83	DS	DS
Nevada*	540,863	61,760	9,186	14.9	291,315	30,178	10.4	0	.	.
New Hampshire*	159,531	22,640	3,040	13.4	76,978	6,816	8.9	9,119	884	9.7

Table A.3.ii. (continued)

State	Total number of Medicaid beneficiaries	Aged, blind, disabled			VIII Group adult			Unknown		
		Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent	Total number	Number with a SUD	Percent
New Jersey*	1,310,876	287,589	27,058	9.4	628,354	39,831	6.3	36,961	4,185	11.3
New Mexico*	560,025	75,119	10,861	14.5	277,169	31,781	11.5	0	.	.
New York*	4,889,974	1,108,383	117,888	10.6	2,441,071	227,513	9.3	20	DS	DS
North Carolina	1,081,753	427,642	62,310	14.6	0	.	.	41,157	2,309	5.6
North Dakota*	75,840	15,585	1,728	11.1	30,541	267	0.9	415	57	13.7
Ohio*	2,255,004	470,058	89,111	19.0	844,619	160,983	19.1	DS	DS	DS
Oklahoma	454,890	162,851	26,479	16.3	0	.	.	17	DS	DS
Oregon*	798,447	37,016	4,076	11.0	449,388	63,288	14.1	102,856	14,471	14.1
Pennsylvania*	2,354,799	705,353	88,498	12.5	963,404	141,341	14.7	0	.	.
Puerto Rico*	1,231,194	370,117	1,479	0.4	436,636	7,085	1.6	0	.	.
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	246,249	19,613	8.0	0	.	.	3,726	0	0.0
South Dakota	67,380	23,877	2,559	10.7	0	.	.	DS	DS	DS
Tennessee	1,049,258	275,019	34,753	12.6	0	.	.	107	0	0.0
Texas	2,498,968	828,849	73,276	8.8	DS	DS	DS	DS	DS	DS
Utah	196,679	60,951	7,040	11.6	0	.	.	7,127	2,230	31.3
Vermont*	137,840	76,435	13,213	17.3	0	.	.	DS	DS	DS
Virginia	597,364	245,907	23,604	9.6	38	0	0.0	7,130	317	4.4
Virgin Islands*	16,961	3,296	25	0.8	7,227	89	1.2	87	DS	DS
Washington*	1,352,481	151,097	24,302	16.1	853,600	104,388	12.2	2,563	15	0.6
West Virginia*	467,770	111,662	13,497	12.1	212,275	27,895	13.1	1,906	135	7.1
Wisconsin	809,887	233,390	27,184	11.6	0	.	.	0	.	.
Wyoming	46,101	12,937	1,632	12.6	0	.	.	4,461	DS	DS

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. A polysubstance use disorder involves a diagnosis in which there are two or more SUD or a polysubstance diagnosis code. Appendix B includes detailed information on how we identified SUD treatment.

Virginia and Maine appear to have VIII Group beneficiaries even though the states did not expand Medicaid until 2019. Virginia expanded Medicaid in November 2018, but coverage was not effective until January 1, 2019. Maine implemented a Medicaid expansion for adults in 2019 with coverage that was retroactive to July 2, 2018. Vermont expanded Medicaid in 2014 but did not report any beneficiaries in the VIII Group.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table A.4. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category**

State	Total number of Medicaid beneficiaries with a SUD	Adult		Children		Pregnant		Aged, blind, disabled		VIII Group adult		Unknown	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>994,788</b>	<b>21.6</b>	<b>142,176</b>	<b>3.1</b>	<b>126,935</b>	<b>2.8</b>	<b>1,466,609</b>	<b>31.9</b>	<b>1,833,154</b>	<b>39.8</b>	<b>32,425</b>	<b>0.7</b>
Alabama	44,897	11,095	24.7	1,007	2.2	947	2.1	31,726	70.7	0	0.0	122	0.3
Alaska*	19,115	4,708	24.6	1,015	5.3	918	4.8	3,477	18.2	8,997	47.1	0	0.0
Arizona*	139,778	29,059	20.8	4,881	3.5	3,433	2.5	27,714	19.8	74,691	53.4	0	0.0
Arkansas*	34,218	6,252	18.3	1,570	4.6	266	0.8	16,092	47.0	10,038	29.3	0	0.0
California*	458,854	75,964	16.6	9,594	2.1	1,463	0.3	137,653	30.0	234,109	51.0	71	0.0
Colorado*	78,233	15,491	19.8	1,577	2.0	4,418	5.6	14,757	18.9	41,990	53.7	0	0.0
Connecticut*	90,962	19,410	21.3	1,907	2.1	1,341	1.5	12,909	14.2	55,395	60.9	0	0.0
Delaware*	22,623	5,302	23.4	358	1.6	773	3.4	2,979	13.2	13,211	58.4	0	0.0
District of Columbia*	12,887	2,195	17.0	227	1.8	15	0.1	5,679	44.1	4,771	37.0	0	0.0
Florida	132,689	40,596	30.6	7,076	5.3	9,409	7.1	75,551	56.9	0	0.0	57	0.0
Georgia	66,184	19,570	29.6	2,256	3.4	4,716	7.1	39,594	59.8	0	0.0	48	0.1
Hawaii*	18,204	1,737	9.5	464	2.5	1,149	6.3	4,743	26.1	10,046	55.2	65	0.4
Idaho	13,034	4,335	33.3	775	5.9	0	0.0	7,552	57.9	0	0.0	372	2.9
Illinois*	168,468	99,641	59.1	7,401	4.4	2,134	1.3	48,117	28.6	11,156	6.6	19	0.0
Indiana*	104,554	5,218	5.0	1,779	1.7	8,109	7.8	23,779	22.7	63,361	60.6	2,308	2.2
Iowa*	55,187	11,710	21.2	1,194	2.2	2,174	3.9	12,645	22.9	27,435	49.7	29	0.1
Kansas	20,580	7,294	35.4	852	4.1	1,232	6.0	7,657	37.2	0	0.0	3,545	17.2
Kentucky*	145,810	22,436	15.4	1,912	1.3	2,127	1.5	33,580	23.0	85,755	58.8	0	0.0
Louisiana*	111,220	14,687	13.2	2,567	2.3	1,626	1.5	26,922	24.2	65,418	58.8	0	0.0
Maine	19,658	8,086	41.1	831	4.2	937	4.8	9,149	46.5	574	2.9	81	0.4
Maryland*	114,620	26,400	23.0	2,678	2.3	876	0.8	24,664	21.5	60,002	52.3	0	0.0
Massachusetts*	172,494	28,171	16.3	1,448	0.8	779	0.5	83,313	48.3	58,559	33.9	224	0.1
Michigan*	200,025	44,104	22.0	5,176	2.6	DS	DS	48,789	24.4	100,360	50.2	DS	DS
Minnesota*	107,635	22,941	21.3	5,597	5.2	3,111	2.9	27,878	25.9	48,108	44.7	0	0.0
Mississippi	18,411	6,082	33.0	1,291	7.0	1,240	6.7	9,798	53.2	0	0.0	0	0.0
Missouri	67,867	17,676	26.0	4,313	6.4	6,928	10.2	38,950	57.4	0	0.0	0	0.0
Montana*	26,463	2,814	10.6	1,107	4.2	256	1.0	4,563	17.2	17,723	67.0	0	0.0
Nebraska	8,498	2,994	35.2	864	10.2	DS	DS	3,967	46.7	0	0.0	DS	DS
Nevada*	47,974	5,691	11.9	1,185	2.5	1,734	3.6	9,186	19.1	30,178	62.9	0	0.0
New Hampshire*	13,591	2,274	16.7	226	1.7	351	2.6	3,040	22.4	6,816	50.2	884	6.5

Table A.4. (continued)

State	Total number of Medicaid beneficiaries with a SUD	Adult		Children		Pregnant		Aged, blind, disabled		VIII Group adult		Unknown	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	81,845	7,952	9.7	2,336	2.9	483	0.6	27,058	33.1	39,831	48.7	4,185	5.1
New Mexico*	55,511	9,816	17.7	2,529	4.6	524	0.9	10,861	19.6	31,781	57.3	0	0.0
New York*	411,974	55,291	13.4	8,269	2.0	DS	DS	117,888	28.6	227,513	55.2	DS	DS
North Carolina	106,926	36,192	33.8	3,088	2.9	3,027	2.8	62,310	58.3	0	0.0	2,309	2.2
North Dakota*	4,416	1,436	32.5	395	8.9	533	12.1	1,728	39.1	267	6.0	57	1.3
Ohio*	358,066	87,247	24.4	14,379	4.0	6,346	1.8	89,111	24.9	160,983	45.0	0	0.0
Oklahoma	44,503	11,526	25.9	DS	DS	4,707	10.6	26,479	59.5	0	0.0	DS	DS
Oregon*	99,912	12,986	13.0	3,056	3.1	2,035	2.0	4,076	4.1	63,288	63.3	14,471	14.5
Pennsylvania*	286,789	46,024	16.0	6,346	2.2	4,580	1.6	88,498	30.9	141,341	49.3	0	0.0
Puerto Rico*	10,459	1,400	13.4	480	4.6	15	0.1	1,479	14.1	7,085	67.7	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	18,211	42.3	3,564	8.3	1,638	3.8	19,613	45.6	0	0.0	0	0.0
South Dakota	5,333	1,738	32.6	963	18.1	73	1.4	2,559	48.0	0	0.0	0	0.0
Tennessee	84,818	34,383	40.5	5,492	6.5	10,190	12.0	34,753	41.0	0	0.0	0	0.0
Texas	117,410	17,611	15.0	7,496	6.4	18,146	15.5	73,276	62.4	0	0.0	881	0.8
Utah	15,679	4,266	27.2	642	4.1	1,501	9.6	7,040	44.9	0	0.0	2,230	14.2
Vermont*	19,845	6,033	30.4	DS	DS	DS	DS	13,213	66.6	0	0.0	DS	DS
Virginia	43,361	14,517	33.5	1,475	3.4	3,448	8.0	23,604	54.4	0	0.0	317	0.7
Virgin Islands*	177	DS	DS	0	0.0	41	23.2	25	14.1	89	50.3	DS	DS
Washington*	138,154	2,336	1.7	5,817	4.2	1,296	0.9	24,302	17.6	104,388	75.6	15	0.0
West Virginia*	52,791	8,193	15.5	922	1.7	2,149	4.1	13,497	25.6	27,895	52.8	135	0.3
Wisconsin	84,612	52,405	61.9	1,799	2.1	3,224	3.8	27,184	32.1	0	0.0	0	0.0
Wyoming	3,957	1,292	32.7	DS	DS	517	13.1	1,632	41.2	0	0.0	DS	DS

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims.

Virginia and Maine appear to have VIII Group beneficiaries even though the states did not expand Medicaid until 2019. Virginia expanded Medicaid in November 2018, but coverage was not effective until January 1, 2019. Maine implemented a Medicaid expansion for adults in 2019 with retroactive coverage July 2, 2018. Vermont expanded Medicaid in 2014 but did not report any beneficiaries in the VIII Group.

The percentages in this table may not sum to 100 within a state because of the polysubstance category and because beneficiaries can be treated for more than one SUD.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table A.5.i Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status**

State	Total number of Medicaid beneficiaries	Children (ages 12-18)						Adults (ages 19-64)		
		Eligible for Medicaid due to reasons other than disability			Eligible for Medicaid on the basis of disability			Eligible for Medicaid due to reasons other than disability		
		Total number	Number treated for a SUD	Percent	Total number	Number treated for a SUD	Percent	Total number	Number treated for a SUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>10,691,908</b>	<b>119,684</b>	<b>1.1</b>	<b>738,193</b>	<b>13,290</b>	<b>1.8</b>	<b>31,351,489</b>	<b>3,001,192</b>	<b>9.6</b>
Alabama	485,531	134,856	790	0.6	12,981	296	2.3	129,484	12,368	9.6
Alaska*	169,556	27,834	661	2.4	1,274	20	1.6	113,454	14,919	13.1
Arizona*	1,519,362	266,950	4,486	1.7	15,082	248	1.6	977,936	107,287	11.0
Arkansas*	699,618	117,405	1,242	1.1	12,885	276	2.1	440,008	16,841	3.8
California*	9,883,471	1,416,307	10,216	0.7	66,621	708	1.1	6,204,827	308,576	5.0
Colorado*	1,095,450	175,564	1,322	0.8	6,779	87	1.3	773,901	61,927	8.0
Connecticut*	715,912	124,260	1,510	1.2	415	0	0.0	498,330	76,300	15.3
Delaware*	181,135	33,024	313	0.9	2,605	53	2.0	123,396	19,161	15.5
District of Columbia*	198,082	18,431	94	0.5	2,373	28	1.2	138,721	7,089	5.1
Florida	2,448,041	703,916	4,889	0.7	52,962	935	1.8	877,582	51,562	5.9
Georgia	1,120,989	393,279	2,477	0.6	25,033	288	1.2	386,723	24,096	6.2
Hawaii*	297,355	44,730	400	0.9	828	17	2.1	198,076	12,957	6.5
Idaho	158,946	57,143	884	1.5	3,961	62	1.6	47,412	4,581	9.7
Illinois*	2,365,929	438,510	4,704	1.1	14,585	339	2.3	1,450,870	115,231	7.9
Indiana*	1,105,260	193,248	1,816	0.9	14,028	155	1.1	660,421	77,710	11.8
Iowa*	493,576	88,923	1,963	2.2	6,440	203	3.2	304,039	40,523	13.3
Kansas	236,878	73,744	1,402	1.9	6,504	264	4.1	95,263	10,537	11.1
Kentucky*	1,110,467	151,290	2,825	1.9	15,505	402	2.6	737,391	109,266	14.8
Louisiana*	1,121,670	203,330	2,018	1.0	19,226	308	1.6	696,416	82,102	11.8
Maine	166,901	35,256	488	1.4	3,152	54	1.7	80,383	10,025	12.5
Maryland*	996,324	154,903	1,400	0.9	11,308	159	1.4	669,226	88,303	13.2
Massachusetts*	1,409,587	149,643	1,315	0.9	27,913	330	1.2	759,341	87,466	11.5
Michigan*	2,050,614	322,255	3,198	1.0	21,752	329	1.5	1,268,457	147,562	11.6
Minnesota*	893,109	177,010	3,014	1.7	8,187	163	2.0	528,373	76,506	14.5
Mississippi	289,666	124,324	1,123	0.9	11,937	260	2.2	93,628	7,490	8.0
Missouri	697,180	219,949	3,820	1.7	1,385	14	1.0	219,726	25,080	11.4
Montana*	208,459	33,549	979	2.9	1,405	31	2.2	143,102	20,848	14.6
Nebraska	148,250	44,084	779	1.8	1,937	29	1.5	49,609	3,752	7.6
Nevada*	540,863	100,897	966	1.0	5,328	71	1.3	376,798	37,728	10.0
New Hampshire*	159,531	31,987	186	0.6	385	DS	DS	101,944	10,265	10.1



Table A.5.i (continued)

State	Total number of Medicaid beneficiaries	Children (ages 12-18)						Adults (ages 19-64)		
		Eligible for Medicaid due to reasons other than disability			Eligible for Medicaid on the basis of disability			Eligible for Medicaid due to reasons other than disability		
		Total number	Number treated for a SUD	Percent	Total number	Number treated for a SUD	Percent	Total number	Number treated for a SUD	Percent
New Jersey*	1,310,876	205,842	1,574	0.8	13,818	232	1.7	806,769	52,730	6.5
New Mexico*	560,025	113,609	2,283	2.0	4,917	239	4.9	370,759	42,333	11.4
New York*	4,889,974	572,509	6,062	1.1	56,722	1,008	1.8	3,167,429	286,301	9.0
North Carolina	1,081,753	338,664	3,165	0.9	23,908	409	1.7	312,681	41,361	13.2
North Dakota*	75,840	13,142	360	2.7	405	DS	DS	46,918	2,323	5.0
Ohio*	2,255,004	335,579	8,345	2.5	26,563	842	3.2	1,439,812	259,637	18.0
Oklahoma	454,890	142,475	1,633	1.1	1,173	29	2.5	149,468	16,407	11.0
Oregon*	798,447	107,425	2,659	2.5	790	15	1.9	611,735	89,965	14.7
Pennsylvania*	2,354,799	338,153	5,482	1.6	75,298	1,437	1.9	1,307,551	192,529	14.7
Puerto Rico*	1,231,194	127,736	341	0.3	DS	0	.	718,136	8,515	1.2
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	192,492	3,054	1.6	11,768	220	1.9	224,711	20,345	9.1
South Dakota	67,380	22,927	936	4.1	1,584	45	2.8	20,540	1,835	8.9
Tennessee	1,049,258	266,897	3,807	1.4	14,859	262	1.8	504,876	46,115	9.1
Texas	2,498,968	1,075,471	8,230	0.8	82,206	1,509	1.8	594,589	35,894	6.0
Utah	196,679	66,914	665	1.0	3,720	205	5.5	68,782	7,971	11.6
Vermont*	137,840	23,475	440	1.9	787	20	2.5	37,843	6,188	16.4
Virginia	597,364	179,485	1,201	0.7	13,890	124	0.9	167,461	18,366	11.0
Virgin Islands*	16,961	307	0	0.0	0	.	.	13,194	152	1.2
Washington*	1,352,481	278,037	5,233	1.9	10,186	244	2.4	915,881	108,310	11.8
West Virginia*	467,770	71,064	808	1.1	4,674	55	1.2	282,875	38,346	13.6
Wisconsin	809,887	148,181	1,652	1.1	15,308	239	1.6	426,719	55,660	13.0
Wyoming	46,101	14,923	474	3.2	841	27	3.2	17,923	1,851	10.3

**Table A.5.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status**

State	Total number of Medicaid beneficiaries	Adults (ages 19-64)			Aged (ages 65+)		
		Eligible for Medicaid on the basis of disability			All aged beneficiaries, including the dually eligible		
		Total number	Number treated for a SUD	Percent	Total number	Number treated for a SUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>7,132,676</b>	<b>1,178,390</b>	<b>16.5</b>	<b>5,973,237</b>	<b>291,717</b>	<b>4.9</b>
Alabama	485,531	143,007	27,507	19.2	65,203	3,936	6.0
Alaska*	169,556	14,269	2,587	18.1	12,725	928	7.3
Arizona*	1,519,362	128,004	22,425	17.5	131,390	5,332	4.1
Arkansas*	699,618	82,214	12,160	14.8	47,106	3,699	7.9
California*	9,883,471	832,254	98,885	11.9	1,363,462	40,469	3.0
Colorado*	1,095,450	80,753	11,562	14.3	58,453	3,335	5.7
Connecticut*	715,912	40,295	9,182	22.8	52,612	3,970	7.5
Delaware*	181,135	13,124	2,553	19.5	8,986	543	6.0
District of Columbia*	198,082	24,515	4,455	18.2	14,042	1,221	8.7
Florida	2,448,041	402,145	60,855	15.1	411,436	14,448	3.5
Georgia	1,120,989	213,493	32,784	15.4	102,461	6,539	6.4
Hawaii*	297,355	20,256	3,087	15.2	33,465	1,743	5.2
Idaho	158,946	33,823	5,919	17.5	16,607	1,588	9.6
Illinois*	2,365,929	244,576	36,548	14.9	217,388	11,646	5.4
Indiana*	1,105,260	146,428	18,832	12.9	91,135	6,041	6.6
Iowa*	493,576	59,898	9,962	16.6	34,276	2,536	7.4
Kansas	236,878	35,204	6,404	18.2	26,163	1,973	7.5
Kentucky*	1,110,467	143,579	28,444	19.8	62,702	4,873	7.8
Louisiana*	1,121,670	135,829	21,809	16.1	66,869	4,983	7.5
Maine	166,901	36,730	8,293	22.6	11,380	798	7.0
Maryland*	996,324	98,169	21,395	21.8	62,718	3,363	5.4
Massachusetts*	1,409,587	290,028	66,537	22.9	182,662	16,846	9.2
Michigan*	2,050,614	285,125	43,558	15.3	153,025	5,378	3.5
Minnesota*	893,109	100,995	20,179	20.0	78,544	7,773	9.9
Mississippi	289,666	59,402	9,496	16.0	375	42	11.2
Missouri	697,180	174,741	35,120	20.1	81,379	3,833	4.7
Montana*	208,459	18,217	3,473	19.1	12,186	1,132	9.3
Nebraska	148,250	32,378	3,410	10.5	20,242	528	2.6
Nevada*	540,863	35,326	7,107	20.1	22,514	2,102	9.3
New Hampshire*	159,531	13,217	2,548	19.3	11,998	585	4.9
New Jersey*	1,310,876	121,006	19,747	16.3	163,441	7,562	4.6

Table A.5.ii (continued)

State	Total number of Medicaid beneficiaries	Adults (ages 19-64)			Aged (ages 65+)		
		Eligible for Medicaid on the basis of disability			All aged beneficiaries, including the dually eligible		
		Total number	Number treated for a SUD	Percent	Total number	Number treated for a SUD	Percent
New Mexico*	560,025	44,448	8,929	20.1	26,292	1,727	6.6
New York*	4,889,974	466,086	87,355	18.7	627,228	31,248	5.0
North Carolina	1,081,753	271,642	51,390	18.9	134,858	10,601	7.9
North Dakota*	75,840	8,425	1,305	15.5	6,950	420	6.0
Ohio*	2,255,004	283,948	71,791	25.3	169,102	17,451	10.3
Oklahoma	454,890	103,290	20,444	19.8	58,484	5,990	10.2
Oregon*	798,447	18,933	2,606	13.8	59,564	4,667	7.8
Pennsylvania*	2,354,799	406,611	74,188	18.2	227,186	13,153	5.8
Puerto Rico*	1,231,194	98,526	828	0.8	286,792	775	0.3
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	144,683	16,621	11.5	92,650	2,786	3.0
South Dakota	67,380	13,581	1,944	14.3	8,748	573	6.6
Tennessee	1,049,258	186,098	29,541	15.9	76,528	5,093	6.7
Texas	2,498,968	444,295	60,223	13.6	302,407	11,554	3.8
Utah	196,679	38,689	5,813	15.0	18,574	1,025	5.5
Vermont*	137,840	64,657	12,265	19.0	11,078	932	8.4
Virginia	597,364	148,593	20,029	13.5	87,935	3,641	4.1
Virgin Islands*	16,961	857	16	1.9	2,603	DS	DS
Washington*	1,352,481	105,151	21,510	20.5	43,226	2,857	6.6
West Virginia*	467,770	74,844	10,899	14.6	34,313	2,683	7.8
Wisconsin	809,887	142,239	22,623	15.9	77,440	4,438	5.7
Wyoming	46,101	8,080	1,247	15.4	4,334	358	8.3

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims.

We used eligibility group and age to identify beneficiaries who were eligible for Medicaid on the basis of disability. Beneficiaries whose eligibility was unknown were considered “not disabled” for this analysis.

Results for the aged group (65 and older) are not broken out by eligibility category because virtually all of these beneficiaries are dually eligible.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table A.6. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status**

State	Total number of Medicaid beneficiaries treated for a SUD	Children (ages 12-18)				Adults (ages 19-64)				Aged (ages 65+)	
		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		All aged beneficiaries treated for a SUD	
		Number treated for a SUD	Percent	Number treated for a SUD	Percent	Number treated for a SUD	Percent	Number treated for a SUD	Percent	Number treated for a SUD	Percent
<b>United States</b>	<b>4,604,297</b>	<b>119,684</b>	<b>2.6</b>	<b>13,290</b>	<b>0.3</b>	<b>3,001,192</b>	<b>65.2</b>	<b>1,178,390</b>	<b>25.6</b>	<b>291,717</b>	<b>6.3</b>
Alabama	44,897	790	1.8	296	0.7	12,368	27.5	27,507	61.3	3,936	8.8
Alaska*	19,115	661	3.5	20	0.1	14,919	78.0	2,587	13.5	928	4.9
Arizona*	139,778	4,486	3.2	248	0.2	107,287	76.8	22,425	16.0	5,332	3.8
Arkansas*	34,218	1,242	3.6	276	0.8	16,841	49.2	12,160	35.5	3,699	10.8
California*	458,854	10,216	2.2	708	0.2	308,576	67.2	98,885	21.6	40,469	8.8
Colorado*	78,233	1,322	1.7	87	0.1	61,927	79.2	11,562	14.8	3,335	4.3
Connecticut*	90,962	1,510	1.7	0	0.0	76,300	83.9	9,182	10.1	3,970	4.4
Delaware*	22,623	313	1.4	53	0.2	19,161	84.7	2,553	11.3	543	2.4
District of Columbia*	12,887	94	0.7	28	0.2	7,089	55.0	4,455	34.6	1,221	9.5
Florida	132,689	4,889	3.7	935	0.7	51,562	38.9	60,855	45.9	14,448	10.9
Georgia	66,184	2,477	3.7	288	0.4	24,096	36.4	32,784	49.5	6,539	9.9
Hawaii*	18,204	400	2.2	17	0.1	12,957	71.2	3,087	17.0	1,743	9.6
Idaho	13,034	884	6.8	62	0.5	4,581	35.1	5,919	45.4	1,588	12.2
Illinois*	168,468	4,704	2.8	339	0.2	115,231	68.4	36,548	21.7	11,646	6.9
Indiana*	104,554	1,816	1.7	155	0.1	77,710	74.3	18,832	18.0	6,041	5.8
Iowa*	55,187	1,963	3.6	203	0.4	40,523	73.4	9,962	18.1	2,536	4.6
Kansas	20,580	1,402	6.8	264	1.3	10,537	51.2	6,404	31.1	1,973	9.6
Kentucky*	145,810	2,825	1.9	402	0.3	109,266	74.9	28,444	19.5	4,873	3.3
Louisiana*	111,220	2,018	1.8	308	0.3	82,102	73.8	21,809	19.6	4,983	4.5
Maine	19,658	488	2.5	54	0.3	10,025	51.0	8,293	42.2	798	4.1
Maryland*	114,620	1,400	1.2	159	0.1	88,303	77.0	21,395	18.7	3,363	2.9
Massachusetts*	172,494	1,315	0.8	330	0.2	87,466	50.7	66,537	38.6	16,846	9.8
Michigan*	200,025	3,198	1.6	329	0.2	147,562	73.8	43,558	21.8	5,378	2.7
Minnesota*	107,635	3,014	2.8	163	0.2	76,506	71.1	20,179	18.7	7,773	7.2
Mississippi	18,411	1,123	6.1	260	1.4	7,490	40.7	9,496	51.6	42	0.2

Table A.6 (continued)

State	Total number of Medicaid beneficiaries treated for a SUD	Children (ages 12-18)				Adults (ages 19-64)				Aged (ages 65+)	
		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		All aged beneficiaries treated for a SUD	
		Number treated for a SUD	Percent	Number treated for a SUD	Percent	Number treated for a SUD	Percent	Number treated for a SUD	Percent	Number treated for a SUD	Percent
Missouri	67,867	3,820	5.6	14	0.0	25,080	37.0	35,120	51.7	3,833	5.6
Montana*	26,463	979	3.7	31	0.1	20,848	78.8	3,473	13.1	1,132	4.3
Nebraska	8,498	779	9.2	29	0.3	3,752	44.2	3,410	40.1	528	6.2
Nevada*	47,974	966	2.0	71	0.1	37,728	78.6	7,107	14.8	2,102	4.4
New Hampshire*	13,591	186	1.4	DS	DS	10,265	75.5	2,548	18.7	585	4.3
New Jersey*	81,845	1,574	1.9	232	0.3	52,730	64.4	19,747	24.1	7,562	9.2
New Mexico*	55,511	2,283	4.1	239	0.4	42,333	76.3	8,929	16.1	1,727	3.1
New York*	411,974	6,062	1.5	1,008	0.2	286,301	69.5	87,355	21.2	31,248	7.6
North Carolina	106,926	3,165	3.0	409	0.4	41,361	38.7	51,390	48.1	10,601	9.9
North Dakota*	4,416	360	8.2	DS	DS	2,323	52.6	1,305	29.6	420	9.5
Ohio*	358,066	8,345	2.3	842	0.2	259,637	72.5	71,791	20.0	17,451	4.9
Oklahoma	44,503	1,633	3.7	29	0.1	16,407	36.9	20,444	45.9	5,990	13.5
Oregon*	99,912	2,659	2.7	15	0.0	89,965	90.0	2,606	2.6	4,667	4.7
Pennsylvania*	286,789	5,482	1.9	1,437	0.5	192,529	67.1	74,188	25.9	13,153	4.6
Puerto Rico*	10,459	341	3.3	0	0.0	8,515	81.4	828	7.9	775	7.4
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	3,054	7.1	220	0.5	20,345	47.3	16,621	38.6	2,786	6.5
South Dakota	5,333	936	17.6	45	0.8	1,835	34.4	1,944	36.5	573	10.7
Tennessee	84,818	3,807	4.5	262	0.3	46,115	54.4	29,541	34.8	5,093	6.0
Texas	117,410	8,230	7.0	1,509	1.3	35,894	30.6	60,223	51.3	11,554	9.8
Utah	15,679	665	4.2	205	1.3	7,971	50.8	5,813	37.1	1,025	6.5
Vermont*	19,845	440	2.2	20	0.1	6,188	31.2	12,265	61.8	932	4.7
Virginia	43,361	1,201	2.8	124	0.3	18,366	42.4	20,029	46.2	3,641	8.4
Virgin Islands*	177	0	0.0	0	0.0	152	85.9	16	9.0	DS	DS
Washington*	138,154	5,233	3.8	244	0.2	108,310	78.4	21,510	15.6	2,857	2.1
West Virginia*	52,791	808	1.5	55	0.1	38,346	72.6	10,899	20.6	2,683	5.1
Wisconsin	84,612	1,652	2.0	239	0.3	55,660	65.8	22,623	26.7	4,438	5.2
Wyoming	3,957	474	12.0	27	0.7	1,851	46.8	1,247	31.5	358	9.0

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Appendix B includes detailed information on how we identified SUD treatment.

Table A.6 (continued)

We used eligibility group and age to identify beneficiaries who were eligible for Medicaid on the basis of disability. Beneficiaries whose eligibility was unknown were considered “not disabled” for this analysis.

Results for the aged group (65 and older) are not broken down by eligibility category because virtually all of these beneficiaries are dually eligible.

\*The state expanded Medicaid for adults by January 1, 2018..

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table A.7. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018 who were dually eligible, and beneficiaries who were dually eligible and treated for a SUD**

State	Total number of Medicaid beneficiaries treated for a SUD (1)	Number of full-benefit duals (2)	Number of full-benefit duals treated for a SUD (3)	Percent of beneficiaries who were treated for a SUD who were dually eligible (3)/(1)	Percent of dually eligible beneficiaries who were treated for a SUD (3)/(2)
<b>United States</b>	<b>4,604,297</b>	<b>8,706,405</b>	<b>671,821</b>	<b>14.6</b>	<b>7.7</b>
Alabama	44,897	95,156	10,177	22.7	10.7
Alaska*	19,115	20,800	2,188	11.4	10.5
Arizona*	139,778	211,909	16,299	11.7	7.7
Arkansas*	34,218	0	0	0.0	.
California*	458,854	1,642,008	68,126	14.8	4.1
Colorado*	78,233	49,356	4,450	5.7	9.0
Connecticut*	90,962	73,377	8,382	9.2	11.4
Delaware*	22,623	15,440	1,417	6.3	9.2
District of Columbia*	12,887	22,087	2,353	18.3	10.7
Florida	132,689	533,938	28,295	21.3	5.3
Georgia	66,184	162,131	13,248	20.0	8.2
Hawaii*	18,204	43,418	3,234	17.8	7.4
Idaho	13,034	0	0	0.0	.
Illinois*	168,468	319,195	24,423	14.5	7.7
Indiana*	104,554	168,637	15,759	15.1	9.3
Iowa*	55,187	75,552	8,837	16.0	11.7
Kansas	20,580	45,555	4,722	22.9	10.4
Kentucky*	145,810	121,433	13,425	9.2	11.1
Louisiana*	111,220	126,507	12,490	11.2	9.9
Maine	19,658	25,436	3,546	18.0	13.9
Maryland*	114,620	94,523	8,591	7.5	9.1
Massachusetts*	172,494	363,285	58,067	33.7	16.0
Michigan*	200,025	292,021	16,491	8.2	5.6
Minnesota*	107,635	139,563	19,653	18.3	14.1
Mississippi	18,411	0	0	0.0	.
Missouri	67,867	158,633	14,585	21.5	9.2
Montana*	26,463	21,375	2,753	10.4	12.9
Nebraska	8,498	35,742	2,051	24.1	5.7
Nevada*	47,974	25,998	3,144	6.6	12.1
New Hampshire*	13,591	22,216	2,264	16.7	10.2
New Jersey*	81,845	234,929	18,340	22.4	7.8
New Mexico*	55,511	42,935	4,101	7.4	9.6
New York*	411,974	858,464	69,334	16.8	8.1
North Carolina	106,926	257,134	28,804	26.9	11.2
North Dakota*	4,416	11,235	1,025	23.2	9.1
Ohio*	358,066	256,013	38,746	10.8	15.1
Oklahoma	44,503	105,629	13,872	31.2	13.1
Oregon*	99,912	76,880	7,995	8.0	10.4
Pennsylvania*	286,789	334,637	27,384	9.5	8.2
Puerto Rico*	10,459	374,391	895	8.6	0.2
Rhode Island*	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	172,817	8,638	20.1	5.0
South Dakota	5,333	14,795	1,292	24.2	8.7
Tennessee	84,818	155,381	14,421	17.0	9.3
Texas	117,410	418,027	23,196	19.8	5.5
Utah	15,679	31,330	2,743	17.5	8.8
Vermont*	19,845	21,471	3,083	15.5	14.4
Virginia	43,361	143,725	9,760	22.5	6.8
Virgin Islands*	177	3,088	14	7.9	0.5
Washington*	138,154	72,988	8,222	6.0	11.3

Table A.7 (continued)

State	Total number of Medicaid beneficiaries treated for a SUD (1)	Number of full-benefit duals (2)	Number of full-benefit duals treated for a SUD (3)	Percent of beneficiaries who were treated for a SUD who were dually eligible (3)/(1)	Percent of dually eligible beneficiaries who were treated for a SUD (3)/(2)
West Virginia*	52,791	50,858	5,483	10.4	10.8
Wisconsin	84,612	157,680	14,788	17.5	9.4
Wyoming	3,957	6,707	715	18.1	10.7

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Appendix B includes detailed information on how we identified SUD treatment.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.



## B. SUD services provided by state Medicaid programs

Section 1015(a)(2)(B) of the SUPPORT Act requires the SUD Data Book to provide a list of the SUD treatment services by each major type of service for which beneficiaries in each state received at least one service under the state Medicaid plan or a waiver of such plan.<sup>41</sup> Table B.1 provides information on the types of services available to Medicaid beneficiaries generally (and reported on in this SUD Data Book), and Table B.2 provides information on the number of states that do not provide the services. These tables and the analysis that follows are based on information available in the T-MSIS claims records that states report to CMS, and represent services provided to Medicaid beneficiaries. This analysis does not necessarily represent what is included in a state’s Medicaid plan, its section 1115 demonstration, or its Medicaid and CHIP Program (MACPro) data.

Most states have at least one Medicaid beneficiary who received each type of service. The exceptions appear to be peer support and partial hospitalization, which fewer states provide to Medicaid beneficiaries compared to other categories of SUD treatment services (Table B.2).

**Table B.1. SUD treatment services used by Medicaid beneficiaries**

SUD treatment services	Description
Case management	Offers beneficiaries a single point of contact with the health and social service systems. Promotes continuity of care and provides support and advocacy for beneficiaries.
Community support	Activities and services that take place in the community, such as halfway house services or mental health clubhouse services.
Consultation	A procedure in which a patient meets with a provider, and the provider reviews the patient’s medical history, examines the patient, and recommends a course of treatment.
Counseling	Therapeutic interventions that are intended to improve a beneficiary’s sense of well-being, to alleviate feelings of distress, and to resolve crises.
Detoxification	A set of services designed to manage acute symptoms and withdrawal following intoxication or dependence on substances. It can include medication and can be a precursor to continued treatment.
Emergency services	Services delivered in an emergency department.
Inpatient care	Services delivered in an inpatient hospital setting.
Intervention services	Crisis intervention services typically offered to patients in acute crisis.
MAT	Treatment that consists of medications intended to reduce the symptoms of a SUD; often augmented with counseling or other behavioral therapeutic interventions.
Medication management	Medication training, support, and management services provided by a prescriber to a patient to facilitate adherence to medication.
Observation care	An observation status in a hospital setting at which point a provider decides whether an inpatient admission is necessary.
Partial hospitalization	A structured program of outpatient services that are delivered to a beneficiary in an inpatient setting during the day and do not require an overnight stay.
Peer supports	Nonclinical assistance provided by individuals who are credentialed by states and are self-identified individuals in recovery from mental illness and/or SUD.
Physician services	Outpatient services—typically evaluation and management—provided by physicians.
Pharmacotherapy	Pharmacotherapy for SUD that cannot be specifically categorized as MAT.
Screening and assessment	Using validated instruments to identify individuals with a SUD.
Treatment program	Residential or intensive outpatient treatment for a SUD.
Other services	These include services without sufficient detail to be categorized and services that do not fit into any of the other categories.

<sup>41</sup> We use the statutory language “or a waiver of such plan” here and in Appendix Table F.1, and we interpret this language as intended to refer to section 1115 demonstration projects that do not necessarily involve the use of “waivers.” See above discussion of section 1115 demonstrations, and the authority under section 1115(a)(2) to provide FFP in payments for which FFP would otherwise not be allowed under the IMD exclusion.

**Table B.2. SUD treatment service types *not* billed, by state**

Service	Number of states and territories that <i>do not</i> have claims for the service	States and territories that <i>do not</i> have claims for the service
Case management	7	Alabama, Delaware,* Louisiana,* Missouri, Puerto Rico,* South Dakota, Virgin Islands*
Community support	1	Virgin Islands*
Consultation	1	North Dakota*
Counseling	0	—
Detoxification	0	—
Emergency services	0	—
Inpatient care	0	—
Intervention services	1	Virgin Islands*
MAT	0	—
Medication management	4	Nebraska, North Dakota,* South Dakota, Virgin Islands*
Observation care	0	—
Partial hospitalization	16	Alaska*, District of Columbia,* Idaho, Illinois,* Kansas, Louisiana,* Maine, Mississippi, Nebraska, New Hampshire,* South Carolina, South Dakota, Utah, Vermont,* Virgin Islands,* Wyoming
Peer support	14	Alabama,* California,* Connecticut,* Illinois,* Maine, Maryland,* Montana,* North Dakota,* Oklahoma, Puerto Rico,* South Dakota, Vermont,* Virginia, Virgin Islands*
Physician services	0	—
Pharmacotherapy	0	—
Screening and assessment	0	—
Treatment program	3	Puerto Rico,* Virgin Islands,* Wyoming
Other services	1	Virgin Islands*

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Note: "Other services" are services without sufficient detail to be categorized and services that do not fit into any of the other categories.

\*The state expanded Medicaid for adults by January 1, 2018.

### **C. SUD services provided by state Medicaid programs, by service type and setting**

Section 1015(a)(2)(C) of the SUPPORT Act requires the SUD Data Book to provide the number and percentage of individuals with a SUD diagnosis who received SUD treatment services under either the Medicaid plan or a waiver program by major type of service identified in Section B above and by major setting type, such as outpatient, inpatient, residential, and other home- and community-based settings.<sup>42</sup> Table C.1 provides the number and percentage of Medicaid beneficiaries treated for a SUD in 2018 by service type, and Table C.2 provides the same information by service setting. We present these tables separately to avoid issues related to examining cross-tabulations of multiple variables simultaneously.<sup>43</sup>

**Table C.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type**

- Acute care services were the most common SUD treatment service received by Medicaid beneficiaries treated for a SUD. Nearly half of these beneficiaries (46 percent) received emergency services (the most common SUD treatment service), followed by inpatient care (42 percent). The share of beneficiaries who received acute care services for a SUD varied widely across states and territories, from 67 percent in Alabama and the District of Columbia to 13 percent in Puerto Rico for emergency services, and from 72 percent in the Virgin Islands to 19 percent in Maine for inpatient care. The populations of the District of Columbia, Puerto Rico, and the Virgin Islands are small compared with other states, which may make their percentages more likely to fluctuate.
- About one-fourth of the beneficiaries treated for a SUD received MAT (24 percent) in 2018, although there was significant variation across states. More than 30 percent of the beneficiaries treated for a SUD in 14 states received MAT, whereas less than 20 percent of the beneficiaries treated for a SUD in 24 states received MAT.
- Across the states, one-third of the beneficiaries treated for a SUD received physician services (33 percent), one-fourth received counseling (25 percent), and one-fifth received screening or assessment (19 percent).
- In several states, more than 10 percent of the beneficiaries treated for a SUD received community support (Alaska [21 percent], Missouri [13 percent], and Wyoming [21 percent]).

**Table C.2. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service setting**

- Approximately three-quarters (77 percent) of the Medicaid beneficiaries treated for a SUD received at least one service in an outpatient setting in 2018, and 43 percent received at least one service in an inpatient setting. A much smaller percentage of beneficiaries treated for a

<sup>42</sup> Appendix B contains information about how service type and setting were defined. A service provided in a residential setting refers to a residential facility setting. Services provided in a community-based setting are services delivered in a school, clubhouse, or other non-medical setting.

<sup>43</sup> As noted, because the data in these tables are based on T-MSIS claims reported by the states and represent services provided, they do not necessarily represent what is included in a state's Medicaid plan, section 1115 demonstration, or MACPro information.

SUD received services in a residential setting (6 percent) or in a home- or community-based setting (2 percent for each).<sup>44</sup>

- Arkansas, Florida, Georgia, Mississippi, South Dakota, and the Virgin Islands had the largest share of Medicaid beneficiaries with a SUD who received SUD treatment services in an inpatient setting (over 60 percent of the beneficiaries in each state). Maine and New Hampshire had the smallest share of beneficiaries with a SUD who received SUD treatment services in an inpatient setting (20 and 27 percent, respectively).
- Delaware and Louisiana had the largest share of beneficiaries with a SUD who received SUD treatment services in a residential setting (15 and 18 percent, respectively). In most other states, less than 10 percent of the beneficiaries treated for a SUD received residential care.
- Although receipt of care in community-based settings was uncommon in most states, approximately one-fifth of the beneficiaries who received SUD treatment were served in community-based settings in Alaska (21 percent) and in Wyoming (18 percent).

---

<sup>44</sup> For 8 percent of the beneficiaries treated for a SUD in 2018, there was not enough information on their claims to identify the setting. The prevalence of beneficiaries for which the SUD treatment setting was unknown was particularly high in Arizona, Colorado, Connecticut, North Dakota, Pennsylvania, and Utah.

**Table C.1.i. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type**

State	Total number of Medicaid beneficiaries with a SUD	Case management		Community support		Consultation		Counseling		Detoxification	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>227,584</b>	<b>4.9</b>	<b>117,393</b>	<b>2.5</b>	<b>356,886</b>	<b>7.8</b>	<b>1,150,118</b>	<b>25.0</b>	<b>180,167</b>	<b>3.9</b>
Alabama	44,897	0	0.0	250	0.6	5,001	11.1	4,676	10.4	1,181	2.6
Alaska*	19,115	1,611	8.4	4,038	21.1	442	2.3	2,641	13.8	860	4.5
Arizona*	139,778	56,293	40.3	2,987	2.1	10,833	7.8	42,075	30.1	4,493	3.2
Arkansas*	34,218	23	0.1	428	1.3	2,861	8.4	3,775	11.0	265	0.8
California*	458,854	27,903	6.1	10,094	2.2	78,419	17.1	96,297	21.0	9,230	2.0
Colorado*	78,233	1,421	1.8	234	0.3	58	0.1	9,043	11.6	542	0.7
Connecticut*	90,962	274	0.3	295	0.3	19,385	21.3	25,003	27.5	2,367	2.6
Delaware*	22,623	0	0.0	192	0.8	250	1.1	7,970	35.2	1,961	8.7
District of Columbia*	12,887	489	3.8	44	0.3	596	4.6	1,662	12.9	49	0.4
Florida	132,689	857	0.6	12,249	9.2	11,240	8.5	13,189	9.9	2,192	1.7
Georgia	66,184	873	1.3	1,886	2.8	1,475	2.2	7,944	12.0	1,404	2.1
Hawaii*	18,204	80	0.4	179	1.0	470	2.6	3,366	18.5	41	0.2
Idaho	13,034	884	6.8	72	0.6	1,415	10.9	2,225	17.1	91	0.7
Illinois*	168,468	3,152	1.9	2,646	1.6	34,645	20.6	34,598	20.5	6,187	3.7
Indiana*	104,554	4,913	4.7	129	0.1	722	0.7	22,949	21.9	6,193	5.9
Iowa*	55,187	99	0.2	1,110	2.0	5,275	9.6	14,646	26.5	952	1.7
Kansas	20,580	636	3.1	329	1.6	13	0.1	4,258	20.7	191	0.9
Kentucky*	145,810	10,454	7.2	966	0.7	4,850	3.3	47,394	32.5	4,350	3.0
Louisiana*	111,220	0	0.0	2,017	1.8	8,533	7.7	13,691	12.3	4,071	3.7
Maine	19,658	148	0.8	263	1.3	2,943	15.0	6,251	31.8	160	0.8
Maryland*	114,620	DS	DS	91	0.1	3,942	3.4	51,266	44.7	2,238	2.0
Massachusetts*	172,494	39	0.0	8,128	4.7	15,138	8.8	46,956	27.2	13,852	8.0
Michigan*	200,025	12,635	6.3	8,626	4.3	8,446	4.2	59,821	29.9	11,660	5.8
Minnesota*	107,635	1,737	1.6	1,397	1.3	3,974	3.7	16,096	15.0	2,730	2.5
Mississippi	18,411	220	1.2	169	0.9	552	3.0	3,241	17.6	33	0.2
Missouri	67,867	0	0.0	8,819	13.0	3,790	5.6	15,182	22.4	1,331	2.0
Montana*	26,463	490	1.9	61	0.2	DS	DS	8,076	30.5	1,283	4.8
Nebraska	8,498	DS	DS	168	2.0	142	1.7	1,547	18.2	269	3.2
Nevada*	47,974	1,077	2.2	337	0.7	1,398	2.9	9,620	20.1	1,689	3.5
New Hampshire*	13,591	806	5.9	655	4.8	1,737	12.8	3,408	25.1	570	4.2

Table C.1.i (continued)

State	Total number of Medicaid beneficiaries with a SUD	Case management		Community support		Consultation		Counseling		Detoxification	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	81,845	1,363	1.7	681	0.8	3,287	4.0	23,722	29.0	4,757	5.8
New Mexico*	55,511	427	0.8	1,457	2.6	2,786	5.0	15,726	28.3	799	1.4
New York*	411,974	18	0.0	314	0.1	4,111	1.0	112,523	27.3	20,462	5.0
North Carolina	106,926	14	0.0	1,050	1.0	7,606	7.1	23,130	21.6	992	0.9
North Dakota*	4,416	203	4.6	36	0.8	0	0.0	927	21.0	25	0.6
Ohio*	358,066	58,342	16.3	21,425	6.0	38,262	10.7	127,804	35.7	20,617	5.8
Oklahoma	44,503	2,163	4.9	2,642	5.9	1,391	3.1	7,357	16.5	289	0.6
Oregon*	99,912	10,334	10.3	534	0.5	95	0.1	42,375	42.4	6,553	6.6
Pennsylvania*	286,789	8,066	2.8	5,742	2.0	36,207	12.6	78,628	27.4	21,352	7.4
Puerto Rico*	10,459	0	0.0	150	1.4	194	1.9	3,032	29.0	556	5.3
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	509	1.2	800	1.9	1,813	4.2	8,457	19.7	965	2.2
South Dakota	5,333	0	0.0	133	2.5	77	1.4	819	15.4	27	0.5
Tennessee	84,818	2,201	2.6	1,395	1.6	1,293	1.5	15,860	18.7	2,577	3.0
Texas	117,410	3,432	2.9	2,138	1.8	4,984	4.2	13,932	11.9	2,248	1.9
Utah	15,679	686	4.4	1,080	6.9	35	0.2	2,231	14.2	210	1.3
Vermont*	19,845	1,588	8.0	734	3.7	3,472	17.5	6,651	33.5	908	4.6
Virginia	43,361	621	1.4	430	1.0	127	0.3	7,202	16.6	1,240	2.9
Virgin Islands*	177	0	0.0	0	0.0	DS	DS	19	10.7	DS	DS
Washington*	138,154	7,895	5.7	4,991	3.6	12,794	9.3	43,202	31.3	7,895	5.7
West Virginia*	52,791	1,582	3.0	99	0.2	4,064	7.7	20,005	37.9	792	1.5
Wisconsin	84,612	859	1.0	1,886	2.2	5,291	6.3	17,216	20.3	4,468	5.3
Wyoming	3,957	167	4.2	817	20.6	452	11.4	434	11.0	DS	DS

**Table C.1.ii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type**

State	Total number of Medicaid beneficiaries with a SUD	Emergency services		Inpatient care		Intervention		MAT		Medication management		Observation care		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>2,116,374</b>	<b>46.0</b>	<b>1,930,591</b>	<b>41.9</b>	<b>182,271</b>	<b>4.0</b>	<b>1,097,024</b>	<b>23.8</b>	<b>50,208</b>	<b>1.1</b>	<b>230,329</b>	<b>5.0</b>	<b>262,889</b>	<b>5.7</b>
Alabama	44,897	30,103	67.0	23,124	51.5	230	0.5	5,329	11.9	1,114	2.5	1,142	2.5	2,825	6.3
Alaska*	19,115	7,595	39.7	6,948	36.3	900	4.7	5,312	27.8	491	2.6	782	4.1	4,891	25.6
Arizona*	139,778	58,118	41.6	58,395	41.8	15,151	10.8	30,006	21.5	12,317	8.8	10,144	7.3	30,299	21.7
Arkansas*	34,218	19,258	56.3	22,242	65.0	272	0.8	3,795	11.1	DS	DS	1,959	5.7	370	1.1
California*	458,854	234,661	51.1	200,791	43.8	9,941	2.2	100,869	22.0	9,303	2.0	11,948	2.6	7,431	1.6
Colorado*	78,233	44,540	56.9	32,288	41.3	2,525	3.2	16,716	21.4	114	0.1	7,682	9.8	1,338	1.7
Connecticut*	90,962	33,020	36.3	27,717	30.5	1,927	2.1	35,205	38.7	41	0.0	2,429	2.7	3,194	3.5
Delaware*	22,623	9,788	43.3	8,784	38.8	854	3.8	9,071	40.1	38	0.2	837	3.7	1,631	7.2
District of Columbia*	12,887	8,651	67.1	7,291	56.6	132	1.0	2,799	21.7	39	0.3	606	4.7	334	2.6
Florida	132,689	77,959	58.8	77,789	58.6	2,320	1.7	16,195	12.2	1,390	1.0	14,105	10.6	10,797	8.1
Georgia	66,184	34,581	52.2	38,958	58.9	718	1.1	6,662	10.1	205	0.3	4,307	6.5	4,486	6.8
Hawaii*	18,204	9,636	52.9	7,723	42.4	230	1.3	2,657	14.6	DS	DS	1,167	6.4	64	0.4
Idaho	13,034	6,002	46.0	5,170	39.7	104	0.8	1,821	14.0	DS	DS	423	3.2	272	2.1
Illinois*	168,468	54,065	32.1	89,307	53.0	5,200	3.1	22,578	13.4	3,041	1.8	8,520	5.1	5,609	3.3
Indiana*	104,554	29,043	27.8	51,339	49.1	1,949	1.9	34,026	32.5	2,330	2.2	4,726	4.5	4,845	4.6
Iowa*	55,187	26,509	48.0	25,139	45.6	449	0.8	7,194	13.0	11	0.0	3,424	6.2	1,111	2.0
Kansas	20,580	5,223	25.4	11,411	55.4	580	2.8	2,693	13.1	DS	DS	853	4.1	367	1.8
Kentucky*	145,810	64,195	44.0	53,619	36.8	4,972	3.4	49,033	33.6	115	0.1	4,923	3.4	10,875	7.5
Louisiana*	111,220	66,385	59.7	49,890	44.9	1,066	1.0	18,681	16.8	137	0.1	3,750	3.4	536	0.5
Maine	19,658	5,968	30.4	3,721	18.9	846	4.3	8,928	45.4	1,692	8.6	504	2.6	196	1.0
Maryland*	114,620	46,943	41.0	34,203	29.8	1,571	1.4	55,295	48.2	DS	DS	8,561	7.5	11,927	10.4
Massachusetts*	172,494	75,542	43.8	67,100	38.9	15,392	8.9	54,320	31.5	264	0.2	10,708	6.2	3,445	2.0
Michigan*	200,025	92,649	46.3	70,656	35.3	11,034	5.5	43,935	22.0	87	0.0	9,062	4.5	9,372	4.7
Minnesota*	107,635	48,526	45.1	41,465	38.5	2,810	2.6	23,307	21.7	59	0.1	6,273	5.8	5,407	5.0
Mississippi	18,411	10,064	54.7	11,329	61.5	280	1.5	2,651	14.4	DS	DS	1,554	8.4	953	5.2
Missouri	67,867	27,822	41.0	27,735	40.9	473	0.7	12,162	17.9	806	1.2	2,723	4.0	6,971	10.3
Montana*	26,463	12,184	46.0	9,957	37.6	323	1.2	6,570	24.8	DS	DS	1,443	5.5	2,449	9.3
Nebraska	8,498	3,633	42.8	3,854	45.4	39	0.5	1,058	12.4	0	0.0	263	3.1	275	3.2
Nevada*	47,974	21,799	45.4	24,544	51.2	1,808	3.8	7,197	15.0	1,263	2.6	2,792	5.8	4,845	10.1
New Hampshire*	13,591	4,323	31.8	3,588	26.4	651	4.8	6,520	48.0	113	0.8	462	3.4	263	1.9

Table C.1.ii (continued)

State	Total number of Medicaid beneficiaries with a SUD	Emergency services		Inpatient care		Intervention		MAT		Medication management		Observation care		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	81,845	38,624	47.2	32,056	39.2	1,364	1.7	22,710	27.7	229	0.3	5,717	7.0	2,027	2.5
New Mexico*	55,511	22,691	40.9	19,750	35.6	785	1.4	17,465	31.5	442	0.8	2,036	3.7	5,653	10.2
New York*	411,974	182,335	44.3	168,480	40.9	16,854	4.1	88,090	21.4	3,986	1.0	14,484	3.5	3,292	0.8
North Carolina	106,926	54,652	51.1	54,172	50.7	3,447	3.2	14,417	13.5	DS	DS	7,129	6.7	3,042	2.8
North Dakota*	4,416	1,947	44.1	2,503	56.7	32	0.7	328	7.4	0	0.0	306	6.9	165	3.7
Ohio*	358,066	192,166	53.7	133,984	37.4	7,011	2.0	91,737	25.6	218	0.1	23,039	6.4	33,355	9.3
Oklahoma	44,503	15,692	35.3	22,846	51.3	418	0.9	5,643	12.7	164	0.4	1,178	2.6	3,102	7.0
Oregon*	99,912	42,376	42.4	28,318	28.3	3,957	4.0	27,124	27.1	475	0.5	3,368	3.4	11,061	11.1
Pennsylvania*	286,789	118,615	41.4	110,148	38.4	6,354	2.2	87,574	30.5	6,147	2.1	13,123	4.6	10,613	3.7
Puerto Rico*	10,459	1,315	12.6	4,221	40.4	639	6.1	2,608	24.9	93	0.9	350	3.3	41	0.4
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	22,296	51.8	20,516	47.7	656	1.5	6,591	15.3	53	0.1	1,988	4.6	6,343	14.7
South Dakota	5,333	2,547	47.8	3,296	61.8	51	1.0	389	7.3	0	0.0	355	6.7	121	2.3
Tennessee	84,818	34,383	40.5	39,598	46.7	3,550	4.2	12,500	14.7	1,701	2.0	3,649	4.3	1,555	1.8
Texas	117,410	62,908	53.6	68,844	58.6	2,033	1.7	14,247	12.1	1,472	1.3	10,784	9.2	6,601	5.6
Utah	15,679	6,088	38.8	5,295	33.8	16	0.1	2,845	18.1	DS	DS	387	2.5	383	2.4
Vermont*	19,845	6,456	32.5	5,632	28.4	919	4.6	9,481	47.8	DS	DS	446	2.2	605	3.0
Virginia	43,361	19,014	43.9	19,779	45.6	80	0.2	11,251	25.9	24	0.1	1,721	4.0	821	1.9
Virgin Islands*	177	102	57.6	127	71.8	0	0.0	16	9.0	0	0.0	11	6.2	0	0.0
Washington*	138,154	64,154	46.4	40,619	29.4	31,179	22.6	41,712	30.2	139	0.1	4,569	3.3	31,596	22.9
West Virginia*	52,791	19,513	37.0	19,879	37.7	2,083	3.9	21,465	40.7	42	0.1	2,714	5.1	2,508	4.8
Wisconsin	84,612	37,965	44.9	32,569	38.5	16,078	19.0	25,816	30.5	DS	DS	4,689	5.5	2,500	3.0
Wyoming	3,957	1,750	44.2	1,882	47.6	18	0.5	430	10.9	53	1.3	214	5.4	127	3.2



**Table C.1.iii. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type**

State	Total number of Medicaid beneficiaries with a SUD	Partial hospitalization		Peer support		Physician services		Pharmacotherapy		Screening/assessment		Treatment program	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>9,599</b>	<b>0.2</b>	<b>48,177</b>	<b>1.0</b>	<b>1,507,765</b>	<b>32.7</b>	<b>215,987</b>	<b>4.7</b>	<b>851,342</b>	<b>18.5</b>	<b>322,798</b>	<b>7.0</b>
Alabama	44,897	18	0.0	0	0.0	13,136	29.3	3,034	6.8	3,781	8.4	148	0.3
Alaska*	19,115	0	0.0	105	0.5	9,621	50.3	1,769	9.3	4,852	25.4	54	0.3
Arizona*	139,778	DS	DS	15,112	10.8	41,367	29.6	5,694	4.1	45,562	32.6	9,158	6.6
Arkansas*	34,218	DS	DS	DS	DS	6,142	17.9	780	2.3	2,236	6.5	50	0.1
California*	458,854	24	0.0	0	0.0	100,027	21.8	23,556	5.1	23,811	5.2	21,333	4.6
Colorado*	78,233	DS	DS	DS	DS	29,467	37.7	4,600	5.9	8,490	10.9	69	0.1
Connecticut*	90,962	1,021	1.1	0	0.0	24,162	26.6	5,353	5.9	26,695	29.3	10,007	11.0
Delaware*	22,623	801	3.5	1,156	5.1	11,364	50.2	1,350	6.0	4,510	19.9	1,943	8.6
District of Columbia*	12,887	0	0.0	DS	DS	1,987	15.4	394	3.1	1,463	11.4	DS	DS
Florida	132,689	17	0.0	17	0.0	23,341	17.6	4,589	3.5	13,874	10.5	70	0.1
Georgia	66,184	206	0.3	278	0.4	17,013	25.7	840	1.3	7,275	11.0	379	0.6
Hawaii*	18,204	256	1.4	DS	DS	6,393	35.1	971	5.3	2,855	15.7	1,141	6.3
Idaho	13,034	0	0.0	92	0.7	4,192	32.2	403	3.1	2,449	18.8	23	0.2
Illinois*	168,468	0	0.0	0	0.0	53,896	32.0	1,310	0.8	34,279	20.3	DS	DS
Indiana*	104,554	329	0.3	178	0.2	30,891	29.5	2,107	2.0	18,613	17.8	1,143	1.1
Iowa*	55,187	708	1.3	94	0.2	21,012	38.1	1,568	2.8	17,213	31.2	4,302	7.8
Kansas	20,580	0	0.0	969	4.7	5,137	25.0	241	1.2	3,999	19.4	1,859	9.0
Kentucky*	145,810	119	0.1	8,079	5.5	64,283	44.1	11,062	7.6	31,350	21.5	12,119	8.3
Louisiana*	111,220	0	0.0	DS	DS	30,649	27.6	10,250	9.2	16,759	15.1	13,908	12.5
Maine	19,658	0	0.0	0	0.0	9,734	49.5	676	3.4	7,647	38.9	1,022	5.2
Maryland*	114,620	14	0.0	0	0.0	48,953	42.7	1,058	0.9	41,633	36.3	16,376	14.3
Massachusetts*	172,494	1,182	0.7	23	0.0	77,522	44.9	6,326	3.7	32,614	18.9	20,166	11.7
Michigan*	200,025	47	0.0	8,051	4.0	76,063	38.0	17,277	8.6	54,773	27.4	19,677	9.8
Minnesota*	107,635	117	0.1	107	0.1	44,440	41.3	6,571	6.1	35,092	32.6	29,636	27.5
Mississippi	18,411	0	0.0	415	2.3	5,343	29.0	1,807	9.8	1,767	9.6	97	0.5
Missouri	67,867	DS	DS	127	0.2	25,076	36.9	977	1.4	11,965	17.6	4,141	6.1
Montana*	26,463	42	0.2	0	0.0	11,591	43.8	1,445	5.5	5,950	22.5	2,140	8.1
Nebraska	8,498	0	0.0	DS	DS	1,706	20.1	644	7.6	1,431	16.8	489	5.8
Nevada*	47,974	139	0.3	609	1.3	11,561	24.1	3,220	6.7	9,646	20.1	1,240	2.6
New Hampshire*	13,591	0	0.0	221	1.6	5,741	42.2	547	4.0	2,504	18.4	1,543	11.4

Table C.1.iii (continued)

State	Total number of Medicaid beneficiaries with a SUD	Partial hospitalization		Peer support		Physician services		Pharmacotherapy		Screening/assessment		Treatment program	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	81,845	1,357	1.7	DS	DS	23,794	29.1	3,227	3.9	18,532	22.6	5,249	6.4
New Mexico*	55,511	253	0.5	131	0.2	18,535	33.4	3,717	6.7	13,973	25.2	2,465	4.4
New York*	411,974	685	0.2	DS	DS	113,493	27.5	3,383	0.8	30,296	7.4	7,355	1.8
North Carolina	106,926	DS	DS	1,900	1.8	35,384	33.1	6,378	6.0	15,597	14.6	7,743	7.2
North Dakota*	4,416	49	1.1	0	0.0	1,427	32.3	245	5.5	727	16.5	456	10.3
Ohio*	358,066	28	0.0	2,845	0.8	159,241	44.5	38,093	10.6	90,548	25.3	38,146	10.7
Oklahoma	44,503	DS	DS	0	0.0	12,851	28.9	2,013	4.5	3,444	7.7	DS	DS
Oregon*	99,912	DS	DS	5,315	5.3	39,255	39.3	6,744	6.7	31,581	31.6	6,590	6.6
Pennsylvania*	286,789	317	0.1	294	0.1	87,122	30.4	2,813	1.0	57,970	20.2	53,552	18.7
Puerto Rico*	10,459	138	1.3	0	0.0	4,756	45.5	13	0.1	1,691	16.2	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	0	0.0	239	0.6	10,509	24.4	2,733	6.4	8,407	19.5	1,714	4.0
South Dakota	5,333	0	0.0	0	0.0	873	16.4	221	4.1	648	12.2	460	8.6
Tennessee	84,818	1,005	1.2	63	0.1	29,422	34.7	5,346	6.3	12,920	15.2	7,316	8.6
Texas	117,410	627	0.5	DS	DS	29,070	24.8	2,427	2.1	9,864	8.4	2,722	2.3
Utah	15,679	0	0.0	103	0.7	2,865	18.3	748	4.8	2,141	13.7	199	1.3
Vermont*	19,845	0	0.0	0	0.0	8,949	45.1	239	1.2	4,375	22.0	1,704	8.6
Virginia	43,361	100	0.2	0	0.0	10,483	24.2	1,402	3.2	2,998	6.9	624	1.4
Virgin Islands*	177	0	0.0	0	0.0	39	22.0	DS	DS	11	6.2	0	0.0
Washington*	138,154	DS	DS	1,429	1.0	49,793	36.0	8,432	6.1	39,144	28.3	9,466	6.9
West Virginia*	52,791	DS	DS	134	0.3	24,284	46.0	2,286	4.3	10,819	20.5	1,054	2.0
Wisconsin	84,612	DS	DS	DS	DS	32,632	38.6	4,967	5.9	19,884	23.5	1,750	2.1
Wyoming	3,957	0	0.0	91	2.3	1,178	29.8	141	3.6	684	17.3	0	0.0

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Appendix B includes detailed information on how we identified SUD treatment.

We determined service types on the basis of National Drug Codes, procedure codes, and revenue codes.

The sum of the percentages across service categories within each state will not be 100 because many Medicaid beneficiaries treated for a SUD received more than one treatment.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Table C.2. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service setting**

State	Total number of Medicaid beneficiaries with a SUD	Treated in an inpatient setting		Treated in an outpatient setting		Treated in a residential setting		Treated in a home-based setting		Treated in a community-based setting		Treated in an unknown setting	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>1,997,667</b>	<b>43.4</b>	<b>3,532,323</b>	<b>76.7</b>	<b>259,210</b>	<b>5.6</b>	<b>94,478</b>	<b>2.1</b>	<b>89,745</b>	<b>1.9</b>	<b>367,270</b>	<b>8.0</b>
Alabama	44,897	23,312	51.9	34,591	77.0	1,254	2.8	627	1.4	222	0.5	177	0.4
Alaska*	19,115	6,965	36.4	15,450	80.8	1,605	8.4	200	1.0	3,988	20.9	337	1.8
Arizona*	139,778	58,992	42.2	112,062	80.2	7,802	5.6	10,329	7.4	1,355	1.0	36,416	26.1
Arkansas*	34,218	21,436	62.6	20,187	59.0	1,746	5.1	381	1.1	340	1.0	395	1.2
California*	458,854	201,990	44.0	326,101	71.1	41,722	9.1	4,994	1.1	8,492	1.9	23,274	5.1
Colorado*	78,233	31,695	40.5	50,459	64.5	772	1.0	340	0.4	90	0.1	44,330	56.7
Connecticut*	90,962	29,649	32.6	79,200	87.1	2,014	2.2	2,024	2.2	100	0.1	29,164	32.1
Delaware*	22,623	8,012	35.4	19,329	85.4	3,336	14.7	206	0.9	145	0.6	230	1.0
District of Columbia*	12,887	7,053	54.7	8,538	66.3	1,106	8.6	65	0.5	26	0.2	68	0.5
Florida	132,689	81,874	61.7	81,363	61.3	2,676	2.0	2,690	2.0	11,135	8.4	445	0.3
Georgia	66,184	40,076	60.6	41,201	62.3	1,090	1.6	951	1.4	1,508	2.3	1,075	1.6
Hawaii*	18,204	8,124	44.6	13,668	75.1	827	4.5	49	0.3	164	0.9	36	0.2
Idaho	13,034	6,103	46.8	9,796	75.2	392	3.0	177	1.4	28	0.2	695	5.3
Illinois*	168,468	91,569	54.4	112,757	66.9	10,004	5.9	2,056	1.2	2,407	1.4	23,369	13.9
Indiana*	104,554	53,005	50.7	72,091	69.0	2,258	2.2	879	0.8	81	0.1	1,723	1.6
Iowa*	55,187	25,607	46.4	42,934	77.8	3,058	5.5	451	0.8	504	0.9	629	1.1
Kansas	20,580	11,757	57.1	12,539	60.9	1,868	9.1	474	2.3	171	0.8	605	2.9
Kentucky*	145,810	55,350	38.0	121,322	83.2	9,081	6.2	871	0.6	947	0.6	1,866	1.3
Louisiana*	111,220	49,128	44.2	84,437	75.9	20,219	18.2	898	0.8	118	0.1	1,043	0.9
Maine	19,658	3,930	20.0	18,166	92.4	178	0.9	196	1.0	220	1.1	491	2.5
Maryland*	114,620	34,844	30.4	99,440	86.8	11,331	9.9	350	0.3	70	0.1	6,601	5.8
Massachusetts*	172,494	79,462	46.1	143,965	83.5	13,412	7.8	4,280	2.5	7,464	4.3	3,751	2.2
Michigan*	200,025	73,338	36.7	159,446	79.7	22,390	11.2	6,607	3.3	5,270	2.6	16,813	8.4
Minnesota*	107,635	41,922	38.9	90,922	84.5	3,105	2.9	5,868	5.5	562	0.5	4,901	4.6
Mississippi	18,411	11,161	60.6	11,609	63.1	616	3.3	412	2.2	148	0.8	593	3.2
Missouri	67,867	29,299	43.2	54,908	80.9	1,398	2.1	1,624	2.4	8,539	12.6	7,097	10.5
Montana*	26,463	10,479	39.6	21,993	83.1	1,122	4.2	118	0.4	38	0.1	567	2.1
Nebraska	8,498	4,136	48.7	5,964	70.2	592	7.0	55	0.6	143	1.7	188	2.2
Nevada*	47,974	24,880	51.9	34,754	72.4	1,137	2.4	834	1.7	225	0.5	7,273	15.2
New Hampshire*	13,591	3,730	27.4	11,560	85.1	1,056	7.8	443	3.3	214	1.6	1,842	13.6

Table C.2 (continued)

State	Total number of Medicaid beneficiaries with a SUD	Treated in an inpatient setting		Treated in an outpatient setting		Treated in a residential setting		Treated in a home-based setting		Treated in a community-based setting		Treated in an unknown setting	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	81,845	35,044	42.8	63,185	77.2	1,685	2.1	2,446	3.0	651	0.8	753	0.9
New Mexico*	55,511	19,988	36.0	46,786	84.3	1,402	2.5	650	1.2	1,343	2.4	301	0.5
New York*	411,974	177,785	43.2	334,865	81.3	8,828	2.1	4,313	1.0	158	0.0	9,200	2.2
North Carolina	106,926	56,303	52.7	74,841	70.0	3,406	3.2	3,198	3.0	621	0.6	2,713	2.5
North Dakota*	4,416	2,324	52.6	2,940	66.6	417	9.4	81	1.8	12	0.3	859	19.5
Ohio*	358,066	138,091	38.6	302,139	84.4	25,844	7.2	12,871	3.6	16,851	4.7	29,458	8.2
Oklahoma	44,503	23,034	51.8	29,829	67.0	1,595	3.6	896	2.0	2,404	5.4	701	1.6
Oregon*	99,912	29,013	29.0	86,751	86.8	9,690	9.7	1,274	1.3	452	0.5	3,173	3.2
Pennsylvania*	286,789	115,021	40.1	215,718	75.2	4,242	1.5	8,276	2.9	444	0.2	79,211	27.6
Puerto Rico*	10,459	4,990	47.7	7,136	68.2	DS	DS	DS	DS	150	1.4	DS	DS
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	21,416	49.8	29,845	69.4	1,000	2.3	333	0.8	739	1.7	2,303	5.4
South Dakota	5,333	3,322	62.3	3,196	59.9	401	7.5	DS	DS	133	2.5	160	3.0
Tennessee	84,818	43,526	51.3	63,251	74.6	1,239	1.5	1,647	1.9	1,305	1.5	958	1.1
Texas	117,410	68,047	58.0	73,635	62.7	6,897	5.9	3,520	3.0	1,621	1.4	2,152	1.8
Utah	15,679	5,285	33.7	8,154	52.0	1,761	11.2	79	0.5	29	0.2	8,490	54.1
Vermont*	19,845	5,688	28.7	17,331	87.3	1,309	6.6	246	1.2	573	2.9	3,391	17.1
Virginia	43,361	20,823	48.0	30,276	69.8	797	1.8	482	1.1	367	0.8	388	0.9
Virgin Islands*	177	132	74.6	79	44.6	0	0.0	0	0.0	0	0.0	0	0.0
Washington*	138,154	41,053	29.7	118,812	86.0	16,178	11.7	1,807	1.3	4,714	3.4	3,553	2.6
West Virginia*	52,791	22,359	42.4	40,185	76.1	1,774	3.4	1,453	2.8	18	0.0	428	0.8
Wisconsin	84,612	33,660	39.8	69,956	82.7	1,338	1.6	1,408	1.7	1,746	2.1	3,026	3.6
Wyoming	3,957	1,885	47.6	2,661	67.2	240	6.1	49	1.2	700	17.7	58	1.5

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Appendix B includes detailed information on how we identified SUD treatment.

We defined service setting on the basis of the TAF file containing the claim; for claims from the Other Services file, we defined the setting on the basis of the claim’s type of bill, place of service, procedure codes, or revenue codes. We defined a setting as “unknown” when there was not enough information on the claim to categorize the service by setting.

The sum of the percentages across service settings within each state will not be 100 because many Medicaid beneficiaries treated for a SUD received more than one treatment.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

#### **D. Number of SUD services provided by state Medicaid programs**

Section 1015(a)(2)(D) of the SUPPORT Act requires the SUD Data Book to present the number of services provided to Medicaid beneficiaries treated for a SUD. Table D.1 provides this information disaggregated by service type.<sup>45</sup>

**Table D.1. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

- Across the states included in the table, beneficiaries who received inpatient care for a SUD spent an average of 10 days in an inpatient facility over the course of the year, ranging from an average of 15 days in South Dakota to 4 days in Idaho. Beneficiaries who received partial hospitalization services for a SUD received an average of 16 days of these services, and beneficiaries who received observation care for a SUD received this type of care for an average of 4 days during 2018.
- Beneficiaries treated for a SUD in a treatment program spent an average of 31 days in that program. The range was less than two weeks in 4 states, two weeks to a month in 27 states, and more than one month<sup>46</sup> in 15 states.
- Beneficiaries who received MAT for a SUD received an average of 130 days worth of medication, or more than four months. The number of days varied substantially across states. In 7 states, beneficiaries treated for a SUD received MAT for an average of three months or fewer; in 40 states, beneficiaries received MAT for an average of three to six months; and in 5 states, beneficiaries received MAT for an average of six months or more.
- Beneficiaries treated for a SUD and who received counseling services attended an average of almost 10 sessions in 2018. The number of sessions ranged from an average of 17 in Oregon to 2 in Florida and the Virgin Islands.<sup>47</sup>

---

<sup>45</sup> As noted, because the data in these tables are based on T-MSIS claims reported by the states and represent services provided, they do not necessarily represent what is included in a state's Medicaid plan, section 1115 demonstration, or MACPro information.

<sup>46</sup> We defined a month as 30 days.

<sup>47</sup> The average number of counseling claims in a month was greater than 1.0 in all states that provided this service, suggesting that states are billing individually for each counseling session rather than for a month of counseling services.

**Table D.1.i. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

State	Total number of Medicaid beneficiaries with a SUD	Consultation			Counseling			Emergency services		
		Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary
<b>United States</b>	<b>4,604,297</b>	<b>356,886</b>	<b>1,536,455</b>	<b>4.3</b>	<b>1,150,118</b>	<b>11,132,395</b>	<b>9.7</b>	<b>2,116,374</b>	<b>4,433,248</b>	<b>2.1</b>
Alabama	44,897	5,001	8,503	1.7	4,676	46,362	9.9	30,103	77,308	2.6
Alaska*	19,115	442	483	1.1	2,641	16,449	6.2	7,595	18,244	2.4
Arizona*	139,778	10,833	19,200	1.8	42,075	350,370	8.3	58,118	120,401	2.1
Arkansas*	34,218	2,861	5,461	1.9	3,775	13,989	3.7	19,258	34,693	1.8
California*	458,854	78,419	209,701	2.7	96,297	1,475,095	15.3	234,661	512,272	2.2
Colorado*	78,233	58	124	2.1	9,043	38,447	4.3	44,540	108,271	2.4
Connecticut*	90,962	19,385	137,189	7.1	25,003	220,497	8.8	33,020	79,058	2.4
Delaware*	22,623	250	382	1.5	7,970	87,095	10.9	9,788	20,741	2.1
District of Columbia*	12,887	596	2,253	3.8	1,662	18,055	10.9	8,651	21,108	2.4
Florida	132,689	11,240	48,013	4.3	13,189	24,689	1.9	77,959	154,818	2.0
Georgia	66,184	1,475	2,157	1.5	7,944	42,009	5.3	34,581	66,446	1.9
Hawaii*	18,204	470	6,493	13.8	3,366	23,593	7.0	9,636	20,106	2.1
Idaho	13,034	1,415	3,641	2.6	2,225	24,469	11.0	6,002	11,672	1.9
Illinois*	168,468	34,645	94,941	2.7	34,598	332,982	9.6	54,065	108,845	2.0
Indiana*	104,554	722	884	1.2	22,949	164,586	7.2	29,043	48,199	1.7
Iowa*	55,187	5,275	12,756	2.4	14,646	107,505	7.3	26,509	57,846	2.2
Kansas	20,580	13	15	1.2	4,258	43,655	10.3	5,223	8,621	1.7
Kentucky*	145,810	4,850	5,918	1.2	47,394	412,390	8.7	64,195	125,390	2.0
Louisiana*	111,220	8,533	24,999	2.9	13,691	75,693	5.5	66,385	131,210	2.0
Maine	19,658	2,943	19,000	6.5	6,251	59,212	9.5	5,968	12,760	2.1
Maryland*	114,620	3,942	5,589	1.4	51,266	749,684	14.6	46,943	100,553	2.1
Massachusetts*	172,494	15,138	72,939	4.8	46,956	385,968	8.2	75,542	184,647	2.4
Michigan*	200,025	8,446	13,871	1.6	59,821	388,121	6.5	92,649	196,075	2.1
Minnesota*	107,635	3,974	5,580	1.4	16,096	55,901	3.5	48,526	109,207	2.3
Mississippi	18,411	552	617	1.1	3,241	18,269	5.6	10,064	19,478	1.9
Missouri	67,867	3,790	6,285	1.7	15,182	204,718	13.5	27,822	57,263	2.1
Montana*	26,463	DS	DS	DS	8,076	64,738	8.0	12,184	27,725	2.3
Nebraska	8,498	142	535	3.8	1,547	12,392	8.0	3,633	7,344	2.0
Nevada*	47,974	1,398	3,368	2.4	9,620	93,179	9.7	21,799	52,339	2.4
New Hampshire*	13,591	1,737	5,645	3.2	3,408	20,713	6.1	4,323	7,815	1.8

Table D.1.i (continued)

State	Total number of Medicaid beneficiaries with a SUD	Consultation			Counseling			Emergency services		
		Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary
New Jersey*	81,845	3,287	7,068	2.2	23,722	144,946	6.1	38,624	74,861	1.9
New Mexico*	55,511	2,786	8,478	3.0	15,726	131,141	8.3	22,691	54,624	2.4
New York*	411,974	4,111	5,047	1.2	112,523	1,173,331	10.4	182,335	413,969	2.3
North Carolina	106,926	7,606	15,241	2.0	23,130	127,825	5.5	54,652	102,626	1.9
North Dakota*	4,416	0	0	.	927	5,630	6.1	1,947	4,019	2.1
Ohio*	358,066	38,262	91,413	2.4	127,804	1,352,665	10.6	192,166	408,569	2.1
Oklahoma	44,503	1,391	4,060	2.9	7,357	71,998	9.8	15,692	27,071	1.7
Oregon*	99,912	95	150	1.6	42,375	731,150	17.3	42,376	87,416	2.1
Pennsylvania*	286,789	36,207	488,102	13.5	78,628	901,334	11.5	118,615	215,354	1.8
Puerto Rico*	10,459	194	240	1.2	3,032	11,126	3.7	1,315	1,901	1.4
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	1,813	2,851	1.6	8,457	52,429	6.2	22,296	42,183	1.9
South Dakota	5,333	77	96	1.2	819	4,591	5.6	2,547	4,681	1.8
Tennessee	84,818	1,293	1,698	1.3	15,860	63,779	4.0	34,383	62,815	1.8
Texas	117,410	4,984	8,798	1.8	13,932	69,313	5.0	62,908	117,536	1.9
Utah	15,679	35	53	1.5	2,231	33,706	15.1	6,088	11,876	2.0
Vermont*	19,845	3,472	17,013	4.9	6,651	71,178	10.7	6,456	12,790	2.0
Virginia	43,361	127	143	1.1	7,202	44,189	6.1	19,014	34,399	1.8
Virgin Islands*	177	DS	DS	DS	19	31	1.6	102	136	1.3
Washington*	138,154	12,794	135,839	10.6	43,202	228,880	5.3	64,154	140,828	2.2
West Virginia*	52,791	4,064	23,174	5.7	20,005	220,541	11.0	19,513	32,069	1.6
Wisconsin	84,612	5,291	8,695	1.6	17,216	119,915	7.0	37,965	79,603	2.1
Wyoming	3,957	452	1,754	3.9	434	1,872	4.3	1,750	3,467	2.0

**Table D.1.ii. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

State	Total number of Medicaid beneficiaries with a SUD	Inpatient care			MAT			Observation care			Partial hospitalization		
		Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary
<b>United States</b>	<b>4,604,297</b>	<b>1,930,591</b>	<b>18,782,882</b>	<b>9.7</b>	<b>1,097,024</b>	<b>14,275,159</b>	<b>130.1</b>	<b>230,329</b>	<b>808,526</b>	<b>3.5</b>	<b>9,599</b>	<b>149,774</b>	<b>15.6</b>
Alabama	44,897	23,124	322,969	14.0	5,329	978,218	183.6	1,142	3,782	3.3	18	387	21.5
Alaska*	19,115	6,948	62,852	9.0	5,312	577,665	108.7	782	3,347	4.3	0	.	.
Arizona*	139,778	58,395	529,782	9.1	30,006	2,503,839	83.4	10,144	42,162	4.2	DS	DS	DS
Arkansas*	34,218	22,242	315,857	14.2	3,795	244,104	64.3	1,959	7,845	4.0	DS	DS	DS
California*	458,854	200,791	1,630,540	8.1	100,869	15,095,235	149.7	11,948	40,121	3.4	24	366	15.3
Colorado*	78,233	32,288	378,469	11.7	16,716	1,498,197	89.6	7,682	33,365	4.3	DS	DS	DS
Connecticut*	90,962	27,717	370,186	13.4	35,205	6,782,210	192.6	2,429	6,287	2.6	1,021	8,633	8.5
Delaware*	22,623	8,784	104,198	11.9	9,071	1,662,629	183.3	837	3,538	4.2	801	15,008	18.7
District of Columbia*	12,887	7,291	83,769	11.5	2,799	453,167	161.9	606	3,256	5.4	0	.	.
Florida	132,689	77,789	699,949	9.0	16,195	884,911	54.6	14,105	66,896	4.7	17	180	10.6
Georgia	66,184	38,958	405,852	10.4	6,662	695,042	104.3	4,307	17,260	4.0	206	1,945	9.4
Hawaii*	18,204	7,723	57,355	7.4	2,657	382,948	144.1	1,167	3,717	3.2	256	2,294	9.0
Idaho	13,034	5,170	21,929	4.2	1,821	215,331	118.2	423	770	1.8	0	.	.
Illinois*	168,468	89,307	1,222,484	13.7	22,578	2,258,125	100.0	8,520	21,292	2.5	0	.	.
Indiana*	104,554	51,339	434,587	8.5	34,026	4,187,240	123.1	4,726	17,729	3.8	329	5,378	16.3
Iowa*	55,187	25,139	196,289	7.8	7,194	734,752	102.1	3,424	12,847	3.8	708	11,954	16.9
Kansas	20,580	11,411	127,564	11.2	2,693	218,211	81.0	853	3,143	3.7	0	.	.
Kentucky*	145,810	53,619	442,384	8.3	49,033	6,356,362	129.6	4,923	17,383	3.5	119	2,403	20.2
Louisiana*	111,220	49,890	448,364	9.0	18,681	2,221,550	118.9	3,750	13,569	3.6	0	.	.
Maine	19,658	3,721	25,733	6.9	8,928	1,806,582	202.4	504	902	1.8	0	.	.
Maryland*	114,620	34,203	305,904	8.9	55,295	5,409,324	97.8	8,561	34,940	4.1	14	85	6.1
Massachusetts*	172,494	67,100	922,580	13.7	54,320	9,294,717	171.1	10,708	23,236	2.2	1,182	10,068	8.5
Michigan*	200,025	70,656	543,601	7.7	43,935	5,677,976	129.2	9,062	29,415	3.2	47	366	7.8
Minnesota*	107,635	41,465	518,286	12.5	23,307	3,211,045	137.8	6,273	25,952	4.1	117	1,028	8.8
Mississippi	18,411	11,329	85,063	7.5	2,651	311,261	117.4	1,554	6,104	3.9	0	.	.
Missouri	67,867	27,735	198,482	7.2	12,162	1,424,158	117.1	2,723	6,234	2.3	DS	DS	DS
Montana*	26,463	9,957	86,684	8.7	6,570	802,058	122.1	1,443	4,318	3.0	42	843	20.1
Nebraska	8,498	3,854	27,341	7.1	1,058	107,297	101.4	263	931	3.5	0	.	.
Nevada*	47,974	24,544	232,894	9.5	7,197	776,180	107.8	2,792	10,279	3.7	139	1,022	7.4
New Hampshire*	13,591	3,588	39,898	11.1	6,520	847,779	130.0	462	1,503	3.3	0	.	.



Table D.1.ii (continued)

State	Total number of Medicaid beneficiaries with a SUD	Inpatient care			MAT			Observation care			Partial hospitalization		
		Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary
New Jersey*	81,845	32,056	330,042	10.3	22,710	2,130,762	93.8	5,717	22,580	3.9	1,357	46,479	34.3
New Mexico*	55,511	19,750	97,952	5.0	17,465	2,886,130	165.3	2,036	2,733	1.3	253	1,198	4.7
New York*	411,974	168,480	2,150,517	12.8	88,090	10,994,037	124.8	14,484	56,760	3.9	685	13,285	19.4
North Carolina	106,926	54,172	468,613	8.7	14,417	1,426,078	98.9	7,129	32,434	4.5	DS	DS	DS
North Dakota*	4,416	2,503	26,449	10.6	328	38,283	116.7	306	445	1.5	49	345	7.0
Ohio*	358,066	133,984	940,377	7.0	91,737	11,514,631	125.5	23,039	45,710	2.0	28	101	3.6
Oklahoma	44,503	22,846	237,097	10.4	5,643	579,018	102.6	1,178	4,343	3.7	DS	DS	DS
Oregon*	99,912	28,318	238,254	8.4	27,124	3,517,563	129.7	3,368	14,959	4.4	DS	DS	DS
Pennsylvania*	286,789	110,148	1,118,051	10.2	87,574	13,051,062	149.0	13,123	41,490	3.2	317	5,006	15.8
Puerto Rico*	10,459	4,221	36,709	8.7	2,608	455,525	174.7	350	1,561	4.5	138	501	3.6
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	20,516	165,646	8.1	6,591	739,192	112.2	1,988	10,179	5.1	0	.	.
South Dakota	5,333	3,296	50,256	15.2	389	35,839	92.1	355	1,576	4.4	0	.	.
Tennessee	84,818	39,598	379,719	9.6	12,500	922,230	73.8	3,649	12,919	3.5	1,005	13,213	13.1
Texas	117,410	68,844	615,253	8.9	14,247	1,474,591	103.5	10,784	44,664	4.1	627	6,191	9.9
Utah	15,679	5,295	52,376	9.9	2,845	284,207	99.9	387	1,412	3.6	0	.	.
Vermont*	19,845	5,632	58,942	10.5	9,481	2,138,614	225.6	446	1,869	4.2	0	.	.
Virginia	43,361	19,779	146,204	7.4	11,251	1,343,102	119.4	1,721	3,465	2.0	100	1,495	15.0
Virgin Islands*	177	127	988	7.8	16	1,466	91.6	11	28	2.5	0	.	.
Washington*	138,154	40,619	351,657	8.7	41,712	4,675,176	112.1	4,569	18,923	4.1	DS	DS	DS
West Virginia*	52,791	19,879	169,779	8.5	21,465	3,616,320	168.5	2,714	10,635	3.9	DS	DS	DS
Wisconsin	84,612	32,569	290,400	8.9	25,816	3,276,715	126.9	4,689	17,429	3.7	DS	DS	DS
Wyoming	3,957	1,882	15,756	8.4	430	32,939	76.6	214	289	1.4	0	.	.

**Table D.1.iii. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

State	Total number of Medicaid beneficiaries with a SUD	Physician services			Screening/assessment			Treatment program		
		Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary
<b>United States</b>	<b>4,604,297</b>	<b>1,507,765</b>	<b>5,923,679</b>	<b>3.9</b>	<b>851,342</b>	<b>1,707,057</b>	<b>2.0</b>	<b>322,798</b>	<b>9,946,843</b>	<b>30.8</b>
Alabama	44,897	13,136	34,205	2.6	3,781	5,008	1.3	148	11,792	79.7
Alaska*	19,115	9,621	41,533	4.3	4,852	7,916	1.6	54	3,672	68.0
Arizona*	139,778	41,367	134,303	3.2	45,562	87,174	1.9	9,158	377,690	41.2
Arkansas*	34,218	6,142	12,639	2.1	2,236	2,993	1.3	50	2,649	53.0
California*	458,854	100,027	241,408	2.4	23,811	37,568	1.6	21,333	794,606	37.2
Colorado*	78,233	29,467	97,100	3.3	8,490	13,424	1.6	69	2,805	40.7
Connecticut*	90,962	24,162	106,735	4.4	26,695	44,007	1.6	10,007	151,672	15.2
Delaware*	22,623	11,364	59,547	5.2	4,510	7,346	1.6	1,943	52,596	27.1
District of Columbia*	12,887	1,987	7,411	3.7	1,463	3,299	2.3	DS	DS	DS
Florida	132,689	23,341	52,070	2.2	13,874	21,901	1.6	70	650	9.3
Georgia	66,184	17,013	45,925	2.7	7,275	15,855	2.2	379	5,319	14.0
Hawaii*	18,204	6,393	20,196	3.2	2,855	4,084	1.4	1,141	37,875	33.2
Idaho	13,034	4,192	14,142	3.4	2,449	13,077	5.3	23	534	23.2
Illinois*	168,468	53,896	138,835	2.6	34,279	61,632	1.8	DS	DS	DS
Indiana*	104,554	30,891	126,256	4.1	18,613	25,036	1.3	1,143	11,898	10.4
Iowa*	55,187	21,012	50,229	2.4	17,213	36,360	2.1	4,302	95,665	22.2
Kansas	20,580	5,137	11,642	2.3	3,999	5,333	1.3	1,859	51,069	27.5
Kentucky*	145,810	64,283	392,735	6.1	31,350	47,101	1.5	12,119	243,789	20.1
Louisiana*	111,220	30,649	73,412	2.4	16,759	24,241	1.4	13,908	344,436	24.8
Maine	19,658	9,734	41,788	4.3	7,647	22,783	3.0	1,022	33,512	32.8
Maryland*	114,620	48,953	241,946	4.9	41,633	63,754	1.5	16,376	469,286	28.7
Massachusetts*	172,494	77,522	550,478	7.1	32,614	56,269	1.7	20,166	486,997	24.1
Michigan*	200,025	76,063	228,390	3.0	54,773	123,687	2.3	19,677	524,904	26.7
Minnesota*	107,635	44,440	118,248	2.7	35,092	66,146	1.9	29,636	1,355,536	45.7
Mississippi	18,411	5,343	15,318	2.9	1,767	2,428	1.4	97	1,232	12.7
Missouri	67,867	25,076	71,696	2.9	11,965	19,122	1.6	4,141	94,163	22.7
Montana*	26,463	11,591	67,767	5.8	5,950	8,849	1.5	2,140	33,039	15.4
Nebraska	8,498	1,706	4,007	2.3	1,431	1,901	1.3	489	19,919	40.7
Nevada*	47,974	11,561	29,873	2.6	9,646	19,507	2.0	1,240	26,089	21.0
New Hampshire*	13,591	5,741	27,771	4.8	2,504	5,885	2.4	1,543	26,282	17.0

Table D.1.iii (continued)

State	Total number of Medicaid beneficiaries with a SUD	Physician services			Screening/assessment			Treatment program		
		Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary	Count of beneficiaries with service	Total count of services	Average # per beneficiary
New Jersey*	81,845	23,794	82,214	3.5	18,532	89,783	4.8	5,249	141,898	27.0
New Mexico*	55,511	18,535	73,371	4.0	13,973	24,767	1.8	2,465	55,810	22.6
New York*	411,974	113,493	316,457	2.8	30,296	55,123	1.8	7,355	197,069	26.8
North Carolina	106,926	35,384	167,425	4.7	15,597	24,932	1.6	7,743	221,495	28.6
North Dakota*	4,416	1,427	4,777	3.3	727	1,129	1.6	456	6,784	14.9
Ohio*	358,066	159,241	738,971	4.6	90,548	139,788	1.5	38,146	1,145,458	30.0
Oklahoma	44,503	12,851	39,149	3.0	3,444	4,270	1.2	DS	DS	DS
Oregon*	99,912	39,255	112,645	2.9	31,581	46,163	1.5	6,590	302,096	45.8
Pennsylvania*	286,789	87,122	433,891	5.0	57,970	130,370	2.2	53,552	1,937,710	36.2
Puerto Rico*	10,459	4,756	17,528	3.7	1,691	2,253	1.3	0	.	.
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	10,509	35,399	3.4	8,407	13,681	1.6	1,714	39,352	23.0
South Dakota	5,333	873	1,708	2.0	648	824	1.3	460	46,197	100.4
Tennessee	84,818	29,422	93,548	3.2	12,920	22,009	1.7	7,316	165,048	22.6
Texas	117,410	29,070	76,442	2.6	9,864	14,881	1.5	2,722	51,155	18.8
Utah	15,679	2,865	8,643	3.0	2,141	4,338	2.0	199	10,829	54.4
Vermont*	19,845	8,949	53,809	6.0	4,375	6,572	1.5	1,704	33,075	19.4
Virginia	43,361	10,483	43,944	4.2	2,998	5,344	1.8	624	6,723	10.8
Virgin Islands*	177	39	78	2.0	11	12	1.1	0	.	.
Washington*	138,154	49,793	251,700	5.1	39,144	74,852	1.9	9,466	270,220	28.5
West Virginia*	52,791	24,284	203,951	8.4	10,819	14,467	1.3	1,054	28,384	26.9
Wisconsin	84,612	32,632	107,057	3.3	19,884	176,788	8.9	1,750	27,864	15.9
Wyoming	3,957	1,178	3,367	2.9	684	1,025	1.5	0	.	.

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Detailed information on how SUD treatment was identified is reported in Appendix B.

We counted certain service types by days (inpatient care, MAT, observation care, partial hospitalization, and treatment program), but we counted other service types by claims (consultation, counseling, emergency services, physician services, screening/assessment). A claim roughly represents a single service, such as a physician service or a screening/assessment.

Service types counted by claims are for claims on different dates of service.

We did not count claims with missing dates of service, procedure codes, or other information. The services presented in the table are for a SUD; if the claim did not have a SUD diagnosis code, we did not count the service.

Variation across states in the number of services beneficiaries received may be a result of billing practices, policies or programs (for instance, if a state covers specific services), or data quality issues.

\*The state expanded Medicaid for adults by January 1, 2018.

## Table D.1.iii (continued)

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

### **E. Delivery system for SUD services provided by state Medicaid programs**

Section 1015(a)(2)(E) of the SUPPORT Act requires the SUD Data Book to provide the number and percentage of Medicaid beneficiaries treated for a SUD through managed care entities,<sup>48</sup> FFS payment models, or an alternative payment model, by enrollment category. We split the tables that show this information by enrollment category (Tables A.3 and A.4) and delivery system (Table E.1). We did this to avoid not only small groups, which would have required us to suppress information to maintain the confidentiality of beneficiaries, but also data quality issues that arise when cross tabulating multiple variables simultaneously. Furthermore, we do not present results for alternative payment models because it is not possible to identify alternative payment models in the TAF data.

#### **Table E.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by delivery system**

- Approximately 72 percent of the Medicaid beneficiaries treated for a SUD received at least one SUD service through a managed care organization in 2018, and about 45 percent of the Medicaid beneficiaries treated for a SUD received at least one service through a state's FFS system in 2018. Because some states use both types of delivery systems to serve beneficiaries with a SUD, they are not mutually exclusive, and some beneficiaries receive SUD services through both managed care and FFS systems.
- In 12 states (Arizona, Delaware, Hawaii, Iowa, Kansas, Kentucky, Louisiana, Michigan, Nebraska, New Mexico, Pennsylvania, and Washington) and Puerto Rico, 90 percent or more of the beneficiaries treated for a SUD received at least one service through a managed care organization.
- In 10 states and territories, none of the beneficiaries treated for a SUD received any services through managed care (Alaska, Arkansas, Connecticut, Maine, Montana, Oklahoma, South Dakota, Vermont, the Virgin Islands and Wyoming).<sup>49</sup>

---

<sup>48</sup> Managed care entities may include both risk-based managed care, including comprehensive managed care plans and behavioral health organizations, as well as primary care case management entities.

<sup>49</sup> A number of these states do enroll Medicaid beneficiaries in managed care but may not provide SUD services through managed care (CMS 2018).

**Table E.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by delivery system**

State	Total number of Medicaid beneficiaries with a SUD	Total with a managed care SUD claim		Total with a FFS SUD claim	
		Number	Percent	Number	Percent
<b>United States</b>	<b>4,604,297</b>	<b>3,307,777</b>	<b>71.8</b>	<b>2,057,387</b>	<b>44.7</b>
Alabama	44,897	76	0.2	44,885	100.0
Alaska*	19,115	0	0.0	19,115	100.0
Arizona*	139,778	127,643	91.3	15,864	11.3
Arkansas*	34,218	0	0.0	34,218	100.0
California*	458,854	309,622	67.5	275,744	60.1
Colorado*	78,233	13,793	17.6	70,204	89.7
Connecticut*	90,962	0	0.0	90,962	100.0
Delaware*	22,623	21,386	94.5	3,248	14.4
District of Columbia*	12,887	6,224	48.3	7,148	55.5
Florida	132,689	113,967	85.9	26,303	19.8
Georgia	66,184	26,018	39.3	41,809	63.2
Hawaii*	18,204	18,123	99.6	218	1.2
Idaho	13,034	3,121	23.9	11,319	86.8
Illinois*	168,468	124,302	73.8	70,659	41.9
Indiana*	104,554	85,365	81.6	26,846	25.7
Iowa*	55,187	50,836	92.1	8,939	16.2
Kansas	20,580	20,239	98.3	616	3.0
Kentucky*	145,810	142,205	97.5	5,125	3.5
Louisiana*	111,220	100,936	90.8	12,051	10.8
Maine	19,658	0	0.0	19,658	100.0
Maryland*	114,620	62,305	54.4	90,963	79.4
Massachusetts*	172,494	111,648	64.7	106,711	61.9
Michigan*	200,025	181,635	90.8	45,163	22.6
Minnesota*	107,635	88,311	82.0	46,159	42.9
Mississippi	18,411	14,830	80.5	5,528	30.0
Missouri	67,867	21,394	31.5	56,062	82.6
Montana*	26,463	0	0.0	26,463	100.0
Nebraska	8,498	8,394	98.8	224	2.6
Nevada*	47,974	31,410	65.5	19,332	40.3
New Hampshire*	13,591	9,517	70.0	6,402	47.1
New Jersey*	81,845	62,686	76.6	38,461	47.0
New Mexico*	55,511	51,334	92.5	4,947	8.9
New York*	411,974	327,311	79.4	234,561	56.9
North Carolina	106,926	35,522	33.2	93,778	87.7
North Dakota*	4,416	14	0.3	4,406	99.8
Ohio*	358,066	315,490	88.1	144,958	40.5
Oklahoma	44,503	0	0.0	44,503	100.0
Oregon*	99,912	88,629	88.7	25,644	25.7
Pennsylvania*	286,789	259,970	90.6	47,828	16.7
Puerto Rico*	10,459	10,459	100.0	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ
South Carolina	43,026	31,808	73.9	15,182	35.3
South Dakota	5,333	0	0.0	5,333	100.0
Tennessee	84,818	75,238	88.7	12,828	15.1
Texas	117,410	92,147	78.5	34,258	29.2

Table E.1 (continued)

State	Total number of Medicaid beneficiaries with a SUD	Total with a managed care SUD claim		Total with a FFS SUD claim	
		Number	Percent	Number	Percent
Utah	15,679	9,912	63.2	9,299	59.3
Vermont*	19,845	0	0.0	19,845	100.0
Virginia	43,361	36,920	85.1	9,330	21.5
Virgin Islands*	177	0	0.0	177	100.0
Washington*	138,154	124,825	90.4	27,876	20.2
West Virginia*	52,791	36,506	69.2	35,863	67.9
Wisconsin	84,612	55,706	65.8	56,415	66.7
Wyoming	3,957	0	0.0	3,957	100.0

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Appendix B includes detailed information on how we identified SUD treatment.

We categorized SUD claims as covered under managed care if they were managed care encounter records or if they had a managed care plan ID.

We categorized claims as paid for by FFS if they were FFS claims without a managed care plan ID. Beneficiaries could have one or both types of claims during the year.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

## **F. Progression of care for Medicaid beneficiaries treated for a SUD**

Section 1015(a)(2)(F) of the SUPPORT Act requires the SUD Data Book to provide the number and percentage of Medicaid beneficiaries with a SUD who receive SUD treatment services in an outpatient or in a home- or a community-based setting after receiving treatment in an inpatient or residential setting; the statute also requires the SUD Data Book to provide the number of services received by these individuals in these settings. However, the number of outpatient or home- or community-based services provided after beneficiaries have received services in an inpatient or a residential setting cannot be calculated consistently across beneficiaries because of different patterns of care and because of the time at which the services in the inpatient or residential setting were received. Furthermore, different methodologies are used to count different types of services (for instance, by claims and by days). We therefore present the number and percentage of Medicaid beneficiaries who received at least one, or two or more, outpatient or home- or community-based services after receiving services in an inpatient or a residential setting during 2018 in Table F.1.<sup>50</sup>

**Table F.1. Progression of care for Medicaid beneficiaries treated for a SUD who received services in an inpatient or a residential setting in 2018**

- Among the Medicaid beneficiaries treated for a SUD and who received SUD services in an inpatient or a residential setting during 2018, 26 percent received at least one service in an outpatient or home- or community-based setting within 30 days of discharge, and 18 percent received two services or more in these settings.
- The proportion of Medicaid beneficiaries treated for a SUD in an inpatient or a residential setting during 2018 and who received a SUD service in an outpatient or in a home- or community-based setting within 30 days of discharge ranged from a low of 13 percent in Arkansas, Colorado, and the Virgin Islands to a high of 44 percent in Massachusetts. Massachusetts also had the highest percentage of beneficiaries who received two or more SUD services in an outpatient or in a home- or community-based setting within 30 days of discharge (36 percent).

---

<sup>50</sup> As noted, because the data in this table are based on T-MSIS claims reported by the states and represent services provided, they do not necessarily represent what is included in a state's Medicaid plan, section 1115 demonstration, or MACPro information.



**Table F.1. Progression of care for Medicaid beneficiaries treated for a SUD who received services in an inpatient or a residential setting in 2018**

State	Number of beneficiaries with a SUD who received services in an inpatient or a residential setting	Received at least one outpatient or home- or community-based SUD service within 30 days of discharge		Received more than one outpatient or home- or community-based service within 30 days of discharge	
		Number	Percent	Number	Percent
<b>United States</b>	<b>2,016,781</b>	<b>524,742</b>	<b>26.0</b>	<b>356,178</b>	<b>17.7</b>
Alabama	22,480	5,692	25.3	2,813	12.5
Alaska*	7,587	2,395	31.6	1,609	21.2
Arizona*	58,761	19,182	32.6	14,161	24.1
Arkansas*	21,266	2,749	12.9	1,188	5.6
California*	213,562	42,933	20.1	28,058	13.1
Colorado*	30,000	3,860	12.9	1,591	5.3
Connecticut*	28,594	10,603	37.1	7,824	27.4
Delaware*	9,473	4,072	43.0	3,007	31.7
District of Columbia*	7,134	1,189	16.7	734	10.3
Florida	77,951	11,972	15.4	6,180	7.9
Georgia	38,096	5,277	13.9	2,704	7.1
Hawaii*	8,116	1,955	24.1	1,116	13.8
Idaho	5,853	1,122	19.2	600	10.3
Illinois*	90,945	19,140	21.0	10,263	11.3
Indiana*	50,913	9,552	18.8	6,095	12.0
Iowa*	25,827	7,070	27.4	4,669	18.1
Kansas	12,122	1,974	16.3	1,084	8.9
Kentucky*	56,469	15,399	27.3	9,617	17.0
Louisiana*	55,191	12,638	22.9	9,489	17.2
Maine	3,732	1,385	37.1	1,049	28.1
Maryland*	39,755	15,388	38.7	12,394	31.2
Massachusetts*	79,881	35,137	44.0	28,490	35.7
Michigan*	83,705	23,840	28.5	15,831	18.9
Minnesota*	40,820	13,757	33.7	9,633	23.6
Mississippi	10,793	1,600	14.8	769	7.1
Missouri	28,342	7,402	26.1	4,891	17.3
Montana*	10,449	3,212	30.7	2,129	20.4
Nebraska	4,235	774	18.3	395	9.3
Nevada*	24,084	5,716	23.7	3,617	15.0
New Hampshire*	4,273	1,411	33.0	930	21.8
New Jersey*	33,393	8,538	25.6	6,629	19.9
New Mexico*	19,340	5,923	30.6	3,794	19.6
New York*	171,168	59,428	34.7	45,345	26.5
North Carolina	54,291	9,978	18.4	5,339	9.8
North Dakota*	2,393	447	18.7	240	10.0
Ohio*	143,024	48,997	34.3	35,752	25.0
Oklahoma	22,419	3,084	13.8	1,415	6.3
Oregon*	33,954	12,575	37.0	9,188	27.1
Pennsylvania*	110,242	23,991	21.8	15,172	13.8
Puerto Rico*	4,612	878	19.0	500	10.8
Rhode Island*	DQ	DQ	DQ	DQ	DQ
South Carolina	20,708	3,228	15.6	1,910	9.2
South Dakota	3,381	606	17.9	316	9.3
Tennessee	41,533	9,648	23.2	5,264	12.7
Texas	68,070	10,258	15.1	5,410	7.9

Table F.1 (continued)

State	Number of beneficiaries with a SUD who received services in an inpatient or a residential setting	Received at least one outpatient or home- or community-based SUD service within 30 days of discharge		Received more than one outpatient or home- or community-based service within 30 days of discharge	
		Number	Percent	Number	Percent
Utah	6,349	1,415	22.3	1,035	16.3
Vermont*	6,121	2,549	41.6	1,961	32.0
Virginia	19,776	2,808	14.2	1,548	7.8
Virgin Islands*	125	16	12.8	DS	DS
Washington*	49,576	17,762	35.8	13,169	26.6
West Virginia*	21,741	4,053	18.6	2,433	11.2
Wisconsin	32,215	9,822	30.5	6,639	20.6
Wyoming	1,941	342	17.6	189	9.7

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with a SUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims. Appendix B includes detailed information on how we identified SUD treatment.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**This page left blank for double-sided printing.**

---

**REFERENCES**

---

- American Psychiatric Association. “Diagnostic and Statistical Manual of Mental Disorders.” 5th edition. Arlington, VA: APA, 2013.
- Centers for Disease Control and Prevention. “Drug and Opioid-Involved Overdose Deaths—United States, 2013–2017.” *Morbidity and Mortality Weekly Report*, vol. 67, no. 5152, January 4, 2019, pp. 1419–1427. Available at <https://www.cdc.gov/mmwr/volumes/67/wr/mm675152e1.htm>. Accessed July 3, 2020.
- Centers for Medicare & Medicaid Services. *DQ Atlas*. Available at <https://www.medicaid.gov/dq-atlas/> as of July 2020.
- Centers for Medicare & Medicaid Services. “Medicaid Managed Care Enrollment Summary.” 2018. Available at <https://www.medicaid.gov/medicaid/managed-care/enrollment-report/index.html>. Accessed June 25, 2020.
- Centers for Medicare & Medicaid Services. “Strategies to Address the Opioid Epidemic.” Letter #17-003 to State Medicaid Directors. November 1, 2017. Available at <https://www.medicaid.gov/federal-policy-guidance/downloads/smd17003.pdf>. Accessed July 29, 2020.
- Centers for Medicare & Medicaid Services. “State Waivers List.” Available at <https://www.medicaid.gov/medicaid/section-1115-demonstrations/1115-substance-use-disorder-demonstrations/section-1115-demonstrations-substance-use-disorders-serious-mental-illness-and-serious-emotional-disturbance/index.html>. Accessed June 25, 2020.
- Hedegaard, H., A.M. Miniño, and M. Warner. “Drug Overdose Deaths in the United States, 1999–2018.” NCHS Data Brief No. 356. Hyattsville, MD: Centers for Disease Control and Prevention, National Center for Health Statistics, 2020. Available at <https://www.cdc.gov/nchs/data/databriefs/db356-h.pdf>. Accessed July 3, 2020.
- Medicaid and CHIP Payment and Access Commission. “Chapter 2: Medicaid and the Opioid Epidemic.” In *June 2017 Report to Congress on Medicaid and CHIP*. Washington, DC: MACPAC, 2017. Available at <https://www.macpac.gov/wp-content/uploads/2017/06/June-2017-Report-to-Congress-on-Medicaid-and-CHIP.pdf>. Accessed March 19, 2019.
- Substance Abuse and Mental Health Services Administration. “Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health.” HHS Publication No. PEP19-5068, NSDUH Series H-54. Rockville, MD: SAMHSA, Center for Behavioral Health Statistics and Quality, 2019. Available at <https://www.samhsa.gov/data/report/2017-nsduh-annual-national-report>. Accessed June 29, 2020.
- Substance Abuse and Mental Health Services Administration. “NSDUH Table 5.13B (Received Substance Use Treatment in Past Year among Persons Aged 12 or Older, by Geographic and Socioeconomic Characteristics: Percentages, 2017 and 2018).” Available at <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>. Accessed June 1, 2020.
-

Substance Abuse and Mental Health Services Administration. “NSDUH Tables 5.18A and 5.18B (Received Substance Use Treatment at Any Location in Past Year among Persons Aged 12 and Older, by Past Year Substance Use Disorder for Specific Substances: 2017 and 2018).” Available at <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>. Accessed December 22, 2020.

The President’s Commission on Combating Drug Addiction and the Opioid Crisis. November 1, 2017. Available at [https://www.whitehouse.gov/sites/whitehouse.gov/files/images/Final\\_Report\\_Draft\\_11-1-2017.pdf](https://www.whitehouse.gov/sites/whitehouse.gov/files/images/Final_Report_Draft_11-1-2017.pdf). Accessed July 29, 2020.

U.S. Department of Health and Human Services, Office of Inspector General. “Geographic Disparities Affect Access to Buprenorphine Services for Opioid Use Disorder.” January 2020. OEI-12-17-00240. Available at <https://oig.hhs.gov/oei/reports/oei-12-17-00240.pdf>. Accessed July 28, 2020.

**APPENDIX A:**

**SUPPORT ACT, SECTION 1015 OPIOID ADDICTION TREATMENT PROGRAMS  
ENHANCEMENT**

**This page left blank for double-sided printing.**

**H. R. 6—28**

Commission shall make publicly available a report containing the results of the study conducted under subsection (a).

**SEC. 1015. OPIOID ADDICTION TREATMENT PROGRAMS ENHANCEMENT.**

(a) T—MSIS SUBSTANCE USE DISORDER DATA BOOK.—

(1) IN GENERAL.—Not later than the date that is 12 months after the date of enactment of this Act, the Secretary of Health and Human Services (in this section referred to as the “Secretary”) shall publish on the public website of the Centers for Medicare & Medicaid Services a report with comprehensive data on the prevalence of substance use disorders in the Medicaid beneficiary population and services provided for the treatment of substance use disorders under Medicaid.

(2) CONTENT OF REPORT.—The report required under paragraph (1) shall include, at a minimum, the following data for each State (including, to the extent available, for the District of Columbia, Puerto Rico, the United States Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa):

(A) The number and percentage of individuals enrolled in the State Medicaid plan or waiver of such plan in each of the major enrollment categories (as defined in a public letter from the Medicaid and CHIP Payment and Access Commission to the Secretary) who have been diagnosed with a substance use disorder and whether such individuals are enrolled under the State Medicaid plan or a waiver of such plan, including the specific waiver authority under which they are enrolled, to the extent available.

(B) A list of the substance use disorder treatment services by each major type of service, such as counseling, medication-assisted treatment, peer support, residential treatment, and inpatient care, for which beneficiaries in each State received at least 1 service under the State Medicaid plan or a waiver of such plan.

(C) The number and percentage of individuals with a substance use disorder diagnosis enrolled in the State Medicaid plan or waiver of such plan who received substance use disorder treatment services under such plan or waiver by each major type of service under subparagraph (B) within each major setting type, such as outpatient, inpatient, residential, and other home-based and community-based settings.

(D) The number of services provided under the State Medicaid plan or waiver of such plan per individual with a substance use disorder diagnosis enrolled in such plan or waiver for each major type of service under subparagraph (B).

(E) The number and percentage of individuals enrolled in the State Medicaid plan or waiver, by major enrollment category, who received substance use disorder treatment through—

(i) a medicaid managed care entity (as defined in section 1932(a)(1)(B) of the Social Security Act (42 U.S.C. 1396u–2(a)(1)(B))), including the number of such individuals who



received such assistance through a prepaid inpatient health plan or a prepaid ambulatory health plan;

#### H. R. 6—28

(ii) a fee-for-service payment model; or  
(iii) an alternative payment model, to the extent available.

(F) The number and percentage of individuals with a substance use disorder who receive substance use disorder treatment services in an outpatient or home-based and community-based setting after receiving treatment in an inpatient or residential setting, and the number of services received by such individuals in the outpatient or homebased and community-based setting.

(3) ANNUAL UPDATES.—The Secretary shall issue an updated version of the report required under paragraph (1) not later than January 1 of each calendar year through 2024.

(4) USE OF T-MSIS DATA.—The report required under paragraph (1) and updates required under paragraph (3) shall—

(A) use data and definitions from the Transformed Medicaid Statistical Information System (“T-MSIS”) data set that is no more than 12 months old on the date that the report or update is published; and

(B) as appropriate, include a description with respect to each State of the quality and completeness of the data and caveats describing the limitations of the data reported to the Secretary by the State that is sufficient to communicate the appropriate uses for the information.

(b) MAKING T-MSIS DATA ON SUBSTANCE USE DISORDERS AVAILABLE TO RESEARCHERS.—

(1) IN GENERAL.—The Secretary shall publish in the Federal Register a system of records notice for the data specified in paragraph (2) for the Transformed Medicaid Statistical Information System, in accordance with section 552a(e)(4) of title 5, United States Code. The notice shall outline policies that protect the security and privacy of the data that, at a minimum, meet the security and privacy policies of SORN 09–70–0541 for the Medicaid Statistical Information System.

(2) REQUIRED DATA.—The data covered by the systems of records notice required under paragraph (1) shall be sufficient for researchers and States to analyze the prevalence of substance use disorders in the Medicaid beneficiary population and the treatment of substance use disorders under Medicaid across all States (including the District of Columbia, Puerto Rico, the United States Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa), forms of treatment, and treatment settings.

(3) INITIATION OF DATA-SHARING ACTIVITIES.—Not later than January 1, 2019, the Secretary shall initiate the data-sharing activities outlined in the notice required under paragraph (1).

**APPENDIX B:**

**SUPPLEMENTARY TECHNICAL INFORMATION**

**This page left blank for double-sided printing.**

## Data source

Since 1999, the federal government has required Medicaid state agencies to report Medicaid claims and eligibility data through the Medicaid Statistical Information System (MSIS), the first national, uniform, and comprehensive Medicaid data collection system. In 2015, MSIS was replaced by T-MSIS, or “Transformed” MSIS, representing the next generation of national Medicaid data. T-MSIS enhanced and expanded on MSIS in a number of ways. The data are more detailed (more files and data elements), and data files are submitted more frequently, among other enhancements. The T-MSIS Analytic Files (TAF) are built directly from the T-MSIS data files submitted by states. The TAF are more appropriate than the T-MSIS source data for analytic tasks because of the size, complexity, and frequency of updates to the T-MSIS data, which makes it very challenging to use for analytic purposes. Most important, TAF reorganizes both enrollment and claims records from their date of submission by the state to the date of enrollment and date of service. This reorganization facilitates the identification of beneficiaries during a specific time period, such as a calendar year, and aligning service provision with a beneficiary’s enrollment in Medicaid.

To create the tables in this SUD Data Book, we relied on the following files in the TAF:

**Annual Demographic and Eligibility (DE) File:** contains demographic, eligibility, and enrollment information for all Medicaid- or CHIP-eligible beneficiaries who were enrolled for at least one day during the calendar year.

**Inpatient (IP) File:** contains inpatient hospital institutional claims.

**Long-Term (LT) File:** contains long-term care institutional claims, including claims from nursing facilities, intermediate care facilities that provide services for individuals with intellectual disabilities, mental health facilities, and independent (free-standing) psychiatric wings of acute care hospitals.

**Other Services (OT) File:** contains institutional and professional claims for services other than those provided by an inpatient hospital, a long-term care facility, or a pharmacy. Services include but are not limited to physician services; outpatient hospital services; dental services; other physician services such as those provided by chiropractors, podiatrists, psychologists, optometrists, and so on; clinic services, laboratory services, radiology services, home health services, and personal assistance services. The file also includes managed care capitation payments.

**Pharmacy (RX) File:** contains claims for drugs or other services provided by an outpatient pharmacy.

## Excluded states and data quality issues

At the time of this analysis, the most recent full year of data available were the 2018 TAF enrollment and claims data (release 1), which included the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. The TAF was designed to present a comprehensive, current, and reliable picture of the Medicaid program across the United States. However, a number of states had severe data quality issues and were not included in the tables in this SUD Data Book.

Several other states had data quality issues that did not prevent them from being included in the analyses but called into question the validity of results. Appendix Table B.1 lists the severe, and the less severe but still problematic, data quality issues by state. We assessed three measures of data quality:

1. **Number of Medicaid beneficiaries in the DE file.** To assess this, we compared the TAF-based counts of Medicaid beneficiaries who had full or comprehensive benefits with the states' reports from the Eligibility and Enrollment Performance Indicator (PI) data set.<sup>51</sup> To examine enrollment information in the DE file, we compared monthly counts of Medicaid beneficiaries who had comprehensive benefits according to the 2018 DE file to monthly counts from the PI data. We evaluated the percent difference between the TAF-based enrollment counts and the PI data, averaged across all 12 months. When the difference between these two data sets was greater than 20 percent and less than or equal to 50 percent, we had a high concern about the quality of the state's TAF data. States are considered to have unusable data when the difference between the TAF-based count and the benchmark was greater than 50 percent.
2. **Volume of claims in three of the four claims files.** To assess this, we compared the number of claim headers, claim lines, and the ratio of headers to lines, by state, to the national median. To examine unexpected claims volumes, we computed the total volume of header records, total volume of line records, and average number of lines per header. We compared each of these three measures to the national median for the IP, OT, and RX files. The LT file was excluded because we rely most heavily on the IP, OT, and RX files to identify Medicaid beneficiaries treated for a SUD and the services they received. Additionally, wide variation in the volume of LT claims may be a result of the differences between benefit packages in some states rather than a data quality issue. States in which any of the three measures fell below 10 percent of the national median were deemed to have incomplete data that are unusable for analysis. We had a high level of concern for the data in states in which any of these measures were less than 50 percent or more than 200 percent of the national median.
3. **Valid diagnosis codes.** To assess this, we evaluated missingness in the diagnosis code field on claims in the IP and OT files. To examine the severity of data quality issues related to diagnosis code, we calculated the percentage of header records in the IP and OT claims files that had a valid ICD-10 diagnosis code in the field for the primary diagnosis code (DGNS\_1\_CD). If a valid ICD-10 diagnosis code was not available, we calculated the percentage of records for which the field was missing, had an ICD-9 diagnosis code, or (3) had another non-missing but invalid value. States were categorized as high concern if 50 to 80 percent of their records had a valid ICD-10 primary diagnosis code. States in which less than 50 percent of the records had a valid ICD-10 primary diagnosis code were considered to have unusable data.

More information on these and other data quality measures is available in the *DQ Atlas* (CMS 2020).

---

<sup>51</sup> PI data represent enrollment in comprehensive benefits in Medicaid and CHIP by state at a single point in time during the enrollment period. More information is available at <https://www.medicaid.gov/medicaid/program-information/medicaid-and-chip-enrollment-data/report-highlights/index.html>.

**Appendix Table B.1. Severe and other data quality issues by state**

State	Volume of claims				
	Medicaid enrollment	IP file	OT file	RX file	Missing diagnosis code
Alabama	—	—	—	—	—
Alaska	—	—	—	—	—
Arizona	—	—	—	—	—
Arkansas	—	—	—	—	—
California	—	—	—	—	—
Colorado	—	—	—	—	—
Connecticut	—	High concern	—	—	—
Delaware	—	—	—	—	—
District of Columbia	—	—	—	—	—
Florida	—	—	—	High concern	—
Georgia	—	High concern	—	—	—
Hawaii	—	—	—	—	—
Idaho	—	—	—	—	—
Illinois	—	—	—	—	—
Indiana	—	—	—	—	—
Iowa	—	—	—	—	—
Kansas	—	—	—	—	—
Kentucky	—	—	—	—	—
Louisiana	—	—	—	—	—
Maine	High concern	—	—	—	—
Maryland	—	—	—	—	—
Massachusetts	—	High concern	High concern	—	—
Michigan	—	—	—	—	—
Minnesota	—	—	High concern	—	—
Mississippi	—	—	—	—	—
Missouri	—	—	—	—	—
Montana	—	—	—	—	—
Nebraska	—	—	—	—	—
Nevada	—	—	—	—	—
New Hampshire	—	High concern	—	—	High concern (LT)
New Jersey	—	—	High concern	—	—
New Mexico	—	—	—	—	—
New York	—	—	—	—	—

Appendix Table B.1 (continued)

State	Volume of claims				
	Medicaid enrollment	IP file	OT file	RX file	Missing diagnosis code
North Carolina	—	—	—	High concern	—
North Dakota	—	—	—	—	—
Ohio	—	—	—	High concern	—
Oklahoma	—	High concern	—	—	—
Oregon	—	—	—	—	—
Pennsylvania	—	—	—	—	—
Puerto Rico	Unclassified	High concern	High concern	—	—
Rhode Island	—	Unusable	High concern	—	—
South Carolina	—	—	—	—	Unusable (LT)
South Dakota	—	—	—	—	—
Tennessee	—	—	—	—	—
Texas	—	—	—	—	High concern (LT)
Utah	—	—	—	—	—
Vermont	—	—	—	—	—
Virgin Islands	Unclassified	High concern	High concern	—	—
Virginia	—	—	—	—	—
Washington	—	—	—	—	—
West Virginia	—	—	—	—	—
Wisconsin	—	—	—	—	—
Wyoming	—	—	—	—	—

Source: Mathematica's analysis of the 2018 TAF release 1.

Note: Data quality issues were so severe in Rhode Island that the state was not included in the tables in this SUD Data Book. Dashes represent a low or medium concern about the quality of the data.

## Identifying beneficiaries with a SUD

This SUD Data Book includes individuals ages 12 and older who were enrolled in Medicaid for at least one day in 2018;<sup>52</sup> the SUD Data Book excludes Medicaid-Expansion CHIP and separate CHIP beneficiaries enrolled only in these programs throughout the year.<sup>53, 54</sup> To be identified as having a SUD (see methods below), a beneficiary must have received SUD services. Hence, the counts of beneficiaries presented in this SUD Data Book underestimate the true prevalence of SUD because the reported counts exclude those with a SUD who do not seek treatment.

The SUD Data Book focuses on Medicaid beneficiaries eligible for the full range benefits or comprehensive benefits. We excluded Medicaid beneficiaries who were eligible for only partial (also referred to as limited, or restricted) benefits from the analysis because they are often not eligible for SUD treatment services.

*Data quality note:* Incomplete, inconsistent, or incorrect reporting of Medicaid enrollment, restricted benefits, or age may result in an incorrect estimate of the number of beneficiaries in Medicaid.

To identify beneficiaries who were treated for a SUD, we first identified claims related to SUD treatment<sup>55</sup> that had (1) a diagnosis code indicating a SUD and (2) a relevant type of bill, revenue, or procedure code. We then determined whether a beneficiary had enough claims to be identified as having a SUD. In general, a beneficiary was identified as having a SUD if he or she had one qualifying inpatient claim for SUD treatment, two outpatient or long-term care claims for SUD treatment on different days, or one pharmacy claim for MAT.<sup>56</sup>

*Data quality note:* Missing or invalid diagnosis codes make it difficult to identify Medicaid beneficiaries with a SUD or any specific type of medical condition. Additionally, a low volume of claims in TAF may have resulted in an underestimate of the number of Medicaid beneficiaries with a SUD.

<sup>52</sup> This SUD data book includes individuals eligible for Medicaid coverage only, as well as those dually eligible for Medicare and Medicaid.

<sup>53</sup> Since the SUD Data Book includes beneficiaries enrolled in Medicaid for one or more months in 2018, some beneficiaries enrolled in both Medicaid and CHIP during 2018 are also included.

<sup>54</sup> This age group is consistent with the age range used in the National Survey of Drug Use and Health; please see <https://nsduhweb.rti.org/respweb/homepage.cfm>.

<sup>55</sup> The SUD Data Book does not include lab or transportation claims because they can cause beneficiaries to be incorrectly identified as having a SUD.

<sup>56</sup> This approach uses SUD Tool 1, Identifying Beneficiaries with a SUD (identification tool), developed for CMS's Innovation Accelerator Program.



## Defining eligibility categories

We grouped Medicaid beneficiaries who were treated with a SUD into five eligibility categories: (1) adults; (2) children; (3) pregnant; (4) aged, blind, disabled; and (5) VIII Group adults. Because some beneficiaries change eligibility groups during the year (children may age into adulthood or adults into the aged group), each beneficiary's categorization is based on the group that accounted for the most enrolled months during 2018. If two or more groups tied, we used the eligibility group of the beneficiary's final month enrolled in Medicaid in 2018. Beneficiaries for whom information on the eligibility group code was missing are included in the Unknown category. We also provide a breakdown of beneficiaries eligible for Medicaid on the basis of disability, by age group.

*Data quality note:* Missing eligibility information made it impossible to group some beneficiaries into the major enrollment categories used for this data book. Conflicting information between eligibility group and Medicaid enrollment information from other variables also affected the accuracy with which individuals could be placed in each major enrollment category.

## Identifying types of settings for SUD treatment

We grouped treatment services into four types of settings: inpatient, residential, outpatient, and home- and community-based. By design, all services in the IP file are delivered in an inpatient setting, all services in the LT file are delivered in a residential setting, and all services in the RX file are delivered in an outpatient setting. Since the OT file includes claims for services delivered in all settings, the logic for grouping those services by setting is more complex. For records from institutional settings in the OT file, we relied either on the type of bill to classify the treatment setting or on revenue codes if the type of bill was missing. For professional claims in the OT file, we relied either on the place of service to classify the treatment setting or on the procedure codes if the place of service code was missing. For community-based services, we relied on procedure codes.

*Data quality note:* Missing place of service and type of bill makes it impossible to determine the setting in which a service was delivered.

## Defining and counting SUD treatment services

The tables in this SUD Data Book include counts of beneficiaries who received certain treatment services (Table C.1), and for a subset of those services, a count of services by service type (Table D.1). The counts were constructed only for beneficiaries who received these services; hence, the counts are for users of each service only. For some services, we counted claims, whereas for others, we counted the number of days. We did this to account for variation in billing practices across both states and service types. To identify the SUD treatment services, we relied on National Drug Codes, procedure codes, and revenue codes, and on diagnosis codes to identify them as for a SUD.

*Data quality note:* Missing, erroneous, or state-specific procedure codes and revenue center codes make it difficult to count services received by Medicaid beneficiaries with a SUD.

The following is the list of services and how each was counted.

- Consultation (claims)
- Counseling (claims)
- Emergency services (claims)
- Inpatient care (days)
- MAT (days)<sup>57</sup>
- Observation care (days)
- Partial hospitalization (days)
- Physician services (claims)
- Screening/assessment (claims)
- Treatment program (days)

### Identifying the care delivery system

The SUD Data Book reports on the number and percentage of beneficiaries receiving SUD treatment services by the two major delivery systems state Medicaid programs use, managed care or FFS (Table E.1).<sup>58</sup> Beneficiaries were counted as receiving SUD treatment services through a managed care entity if they (1) had one or more encounter records for SUD treatment, or (2) had a claim for SUD treatment associated with a managed care plan identification number. Beneficiaries were counted as receiving SUD treatment services through FFS if they had a FFS claim for SUD treatment that was not associated with a managed care plan identification number.

*Data quality note:* If a high percentage of claims that could not be linked to enrollment information disproportionately represent a particular claim type (for instance, managed care encounters), the estimates of the distribution of services across FFS and managed care could be adversely affected.

---

<sup>57</sup> For MAT days, we counted the number of unique days for which a beneficiary filled a prescription. For example, if a beneficiary filled two naltrexone prescriptions for the same seven-day period, this would count as seven days.

<sup>58</sup> Beneficiaries could be counted as having services delivered through both managed care and FFS if they had separate claims that met each criterion.

**This page left blank for double-sided printing.**

**APPENDIX C:**

**COMPARISON OF KEY FINDINGS TO OTHER DATA SOURCES**

**This page has been left blank for double-sided copying.**

To provide additional context for the proportion of Medicaid beneficiaries treated for a SUD, we compared this key finding with other payer groups, as shown in Appendix Table C.1. A larger share of Medicaid beneficiaries nationwide received treatment in 2018 for any SUD (8.2 percent) compared with Medicare beneficiaries (3.4 percent) and privately insured individuals (0.9 percent). However, the share of Medicaid beneficiaries treated for an alcohol use disorder (1.8 percent) was similar to the share of Medicare beneficiaries treated for this disorder (2.5 percent). A smaller share of privately insured individuals received treatment for an alcohol use disorder (0.6 percent).

The results presented below are based on (1) the application of the Chronic Conditions Warehouse (CCW) chronic conditions algorithms to Medicare administrative data<sup>59</sup> and (2) data from the National Survey on Drug Use and Health (NSDUH) (SAMHSA 2019). These two data sources are based on methods that differ from the method used in the SUD Data Book, and as a result, the comparisons shown in Appendix Table C.1 should be interpreted with caution. For instance, the CCW algorithms rely on ICD-10 diagnosis and procedure codes, whereas the SUD Data Book includes these codes as well as a more exhaustive set of codes, including type of bill, revenue, NDC, and procedure codes. The NSDUH is a nationally representative survey in which self-reported data would be used to obtain treatment rates for a SUD, whereas the TAF include all Medicaid beneficiaries, and treatment rates are based on actual services rendered. In addition, the NSDUH rates of illicit drug or alcohol use, and the CCW rates of drug/substance abuse do not include tobacco use disorder, but the SUD Data Book rate for any SUD does.

---

<sup>59</sup> CCW chronic conditions algorithms are available at <https://www.ccwdata.org/web/guest/condition-categories>. Last accessed on June 20, 2019.

### Appendix Table C.1. Comparison of SUD treatment rates in the US in the Medicaid, Medicare, and commercially/privately insured population

	Percentage of individuals who received treatment for a SUD <sup>a</sup>	Percentage of individuals who received treatment for alcohol use
Medicaid: SUD Data Book	8.2	1.8
Medicare: CCW algorithm <sup>b</sup>	3.4	2.5
Commercial/private: NSDUH	0.9	0.6

Source: SUD Data Book, Table A.1.i; Medicare-only beneficiaries of any age, available at [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Chartbook\\_Charts](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Chartbook_Charts); NSDUH data, SAMHSA, Center for Behavioral Health Statistics and Quality, Table 5.13B, available at <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>.

<sup>a</sup> SUD is defined differently across the three data sources. The methods section describes how any SUD was measured in the SUD Data Book. The Medicare CCW algorithm measures drug/substance abuse, and NSDUH measures treatment for illicit drugs or alcohol. Neither the Medicare CCW algorithm nor the NSDUH includes tobacco use. The NSDUH does not include individuals residing in institutional settings.

<sup>b</sup> The most recent data available for the Medicare CCW algorithm are from 2017.

**APPENDIX D:**  
**OPIOID USE DISORDER TABLES**



**This page left blank for double-sided printing.**

**Appendix Table D.1. Number and percentage of Medicaid beneficiaries treated for an OUD and another SUD in 2018, by disorder**

- In the states included in this analysis, 1.4 million Medicaid beneficiaries were treated for an OUD in 2018. Nine percent of these beneficiaries (124,703 beneficiaries) were in New York, followed by California (120,938 beneficiaries), Pennsylvania (118,829 beneficiaries) and Ohio (109,726 beneficiaries).
- Tobacco use most frequently co-occurred with OUD (29 percent of beneficiaries with an OUD), followed by alcohol (20 percent of beneficiaries with an OUD) and stimulants (16 percent of beneficiaries with an OUD).

**Appendix Table D.2. Distribution of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category**

- Across the states included in the analysis, beneficiaries in the VIII Group—the adult expansion group—accounted for the largest percentage of beneficiaries treated for OUD (48 percent), followed by those in the aged, blind, or disabled enrollment category (27 percent), and the adult group (23 percent).

**Appendix Table D.3. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category**

- Across the major enrollment categories, the VIII Group had the highest proportion of beneficiaries treated for an OUD (4 percent), followed by the aged, blind, or disabled enrollment category (3 percent) and the adult group (3 percent).

**Appendix Table D.4. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status**

- Five percent of Medicaid beneficiaries ages 19 to 64 who were eligible on the basis of disability in 2018 were treated for an OUD, compared with 3 percent of the same age group who were not eligible on the basis of disability.
- One percent of Medicaid beneficiaries ages 65 and older were treated for an OUD, and similarly, less than 1 percent children younger than 19 were treated for an OUD.

**Appendix Table D.5. Distribution of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status**

- Seventy-three percent of Medicaid beneficiaries who were treated for an OUD in 2018 were adults ages 19 to 64 who were not eligible for Medicaid on the basis of disability.
- Twenty-four percent of Medicaid beneficiaries who were treated for an OUD in 2018 were adults ages 19 to 64 who were eligible for Medicaid on the basis of disability.
- In 10 states, the percentage of adults ages 19 to 64 who received treatment for an OUD was greater for those eligible for Medicaid on the basis of disability than for those not eligible on the basis of disability (Alabama, Florida, Georgia, Idaho, Missouri, Nebraska, Oklahoma, Texas, Vermont, and Virginia).

- Three percent of beneficiaries who were treated for an OUD in 2018 were adults ages 65 and older, and 1 percent were children under 19.

**Appendix Table D.6. SUD treatment service types not billed for Medicaid beneficiaries with an OUD, by state**

- As with the table for all beneficiaries with a SUD in 2018 (Table B.2), most states had at least one Medicaid beneficiary with an OUD who received each type of service. The exceptions appear to be peer support and partial hospitalization, which fewer states are providing to Medicaid beneficiaries.

**Appendix Table D.7. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type**

- More than half (60 percent) of the beneficiaries treated for an OUD received MAT. This share varied substantially across the states, ranging from 83 percent in Vermont to 30 percent in Kansas and Oklahoma.
- Across all states, more than one-third of the beneficiaries treated for an OUD received physician services (44 percent), 39 percent received counseling, 36 percent received emergency services, 28 percent received inpatient care, and 28 percent received screening or an assessment.

**Appendix Table D.8. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service setting**

- Almost 94 percent of the Medicaid beneficiaries treated for an OUD received one or more service in an outpatient setting in 2018, which is higher than the share of Medicaid beneficiaries treated for any SUD who received services in this type of setting according to Table C.2 (77 percent). Almost one-third (30 percent) of the beneficiaries treated for an OUD received one or more services in an inpatient setting, which is lower than the share of Medicaid beneficiaries treated for any SUD (43 percent). Tennessee had the highest rate of beneficiaries treated for an OUD who received services in an inpatient setting (54 percent), and Maine had the lowest rate (12 percent).
- A combined 5 percent of beneficiaries treated for an OUD received services in a home- or community-based setting in 2018. In several states, the percentage of beneficiaries who received treatment in home- or community- based settings was above 10 percent. In Minnesota, 14 percent of Medicaid beneficiaries treated for an OUD received home-based services. In Alaska 29 percent of Medicaid beneficiaries treated for an OUD received community-based services, followed by 24 percent in Missouri, 20 percent in Florida, and 17 percent in Wyoming.

**Appendix Table D.9. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

- Beneficiaries treated for an OUD who received MAT received an average of 153 days worth of medication in 2018. The number of days ranged from an average of 57 in Florida to 246 days in Vermont.

- Beneficiaries treated for an OUD who received inpatient care averaged 11 days of inpatient care in 2018. This average number of inpatient care days is a day longer than what all beneficiaries with any SUD received in Table D.1 (10 days). Beneficiaries treated for an OUD also averaged slightly more emergency services (almost three claims per beneficiary in 2018) and physician services (seven claims per beneficiary in 2018) than did beneficiaries treated for any SUD, who averaged two and four claims per beneficiary, respectively.

**Appendix Table D.10. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by delivery system**

- Almost 75 percent of the Medicaid beneficiaries treated for an OUD received at least one service through a managed care organization, and 50 percent received at least one service through FFS in 2018. This is very similar to the results for all beneficiaries treated for any SUD, found in Table E.1.

**Appendix Table D.11. Progression of care for Medicaid beneficiaries treated for an OUD who received services in an inpatient or a residential setting in 2018**

- Among the Medicaid beneficiaries treated for an OUD who received any SUD service in an inpatient or a residential setting during 2018, 54 percent received at least one outpatient or home- or community-based service within 30 days of discharge, and 43 percent of this same group received two or more of these services. These rates of follow-up care after discharge from an inpatient or residential setting are substantially higher than for Medicaid beneficiaries treated for a SUD more generally, found in Table F.1.
- The proportion of Medicaid beneficiaries treated for an OUD who received any SUD service in an inpatient or a residential setting during 2018 and who received OUD services in an outpatient or home or a community-based setting within 30 days ranged from a low of about 22 percent in Colorado to a high of about 73 percent in Massachusetts. Massachusetts also had the highest percentage of beneficiaries who received two or more outpatient or home or community-based services within 30 days of discharge, at 65 percent.

**Appendix Table D.1. Number and percentage of Medicaid beneficiaries treated for an OUD and another SUD in 2018, by disorder**

State	Total number of Medicaid beneficiaries with OUD	Alcohol		Cannabis		Polysubstance		Stimulants		Tobacco		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>282,413</b>	<b>20.1</b>	<b>129,055</b>	<b>9.2</b>	<b>706,312</b>	<b>50.2</b>	<b>222,345</b>	<b>15.8</b>	<b>404,874</b>	<b>28.8</b>	<b>204,024</b>	<b>14.5</b>
Alabama	9,001	1,000	11.1	708	7.9	4,305	47.8	975	10.8	3,419	38.0	1,511	16.8
Alaska*	6,231	2,148	34.5	646	10.4	3,858	61.9	1,244	20.0	1,478	23.7	922	14.8
Arizona*	45,540	8,121	17.8	4,330	9.5	22,142	48.6	9,749	21.4	12,087	26.5	5,948	13.1
Arkansas*	3,706	481	13.0	339	9.1	1,877	50.6	459	12.4	1,421	38.3	599	16.2
California*	120,938	19,057	15.8	6,164	5.1	45,964	38.0	14,666	12.1	24,626	20.4	10,641	8.8
Colorado*	23,132	6,066	26.2	943	4.1	10,658	46.1	2,061	8.9	5,310	23.0	1,886	8.2
Connecticut*	38,364	8,772	22.9	3,496	9.1	19,522	50.9	6,088	15.9	10,149	26.5	4,538	11.8
Delaware*	11,624	2,171	18.7	1,096	9.4	6,420	55.2	2,172	18.7	3,858	33.2	1,250	10.8
District of Columbia*	3,460	756	21.8	233	6.7	1,705	49.3	413	11.9	1,106	32.0	417	12.1
Florida	31,099	3,442	11.1	2,137	6.9	13,341	42.9	3,012	9.7	9,958	32.0	4,790	15.4
Georgia	11,298	1,248	11.0	662	5.9	4,726	41.8	1,046	9.3	3,134	27.7	1,604	14.2
Hawaii*	4,000	549	13.7	184	4.6	1,567	39.2	497	12.4	830	20.8	399	10.0
Idaho	3,356	513	15.3	233	6.9	1,538	45.8	336	10.0	1,056	31.5	251	7.5
Illinois*	40,077	9,914	24.7	4,597	11.5	22,697	56.6	7,161	17.9	14,530	36.3	6,964	17.4
Indiana*	37,359	7,345	19.7	3,100	8.3	16,997	45.5	4,944	13.2	9,400	25.2	4,874	13.0
Iowa*	7,431	2,820	37.9	1,233	16.6	4,868	65.5	1,811	24.4	2,321	31.2	966	13.0
Kansas	3,098	634	20.5	266	8.6	1,614	52.1	414	13.4	930	30.0	384	12.4
Kentucky*	53,471	7,111	13.3	4,163	7.8	26,510	49.6	9,149	17.1	15,093	28.2	9,253	17.3
Louisiana*	23,630	5,316	22.5	3,240	13.7	13,854	58.6	5,643	23.9	8,134	34.4	5,429	23.0
Maine	9,581	1,106	11.5	220	2.3	3,510	36.6	425	4.4	1,750	18.3	1,056	11.0
Maryland*	65,778	10,089	15.3	2,629	4.0	24,210	36.8	5,602	8.5	12,244	18.6	6,477	9.8
Massachusetts*	78,367	19,996	25.5	7,554	9.6	43,368	55.3	13,165	16.8	25,724	32.8	15,752	20.1
Michigan*	49,293	8,427	17.1	3,744	7.6	23,702	48.1	6,247	12.7	12,920	26.2	6,010	12.2
Minnesota*	26,289	7,353	28.0	2,730	10.4	15,146	57.6	4,940	18.8	8,609	32.7	3,903	14.8
Mississippi	2,925	388	13.3	261	8.9	1,420	48.5	374	12.8	935	32.0	595	20.3
Missouri	15,164	3,603	23.8	1,412	9.3	8,425	55.6	2,702	17.8	4,367	28.8	2,308	15.2
Montana*	6,359	1,619	25.5	1,170	18.4	4,453	70.0	1,652	26.0	2,795	44.0	895	14.1
Nebraska	1,395	386	27.7	65	4.7	598	42.9	97	7.0	210	15.1	88	6.3
Nevada*	12,677	2,046	16.1	1,004	7.9	5,725	45.2	2,072	16.3	3,482	27.5	1,782	14.1
New Hampshire*	7,789	1,428	18.3	309	4.0	3,102	39.8	735	9.4	1,197	15.4	901	11.6

Appendix Table D.1 (continued)

State	Total number of Medicaid beneficiaries with OUD	Alcohol		Cannabis		Polysubstance		Stimulants		Tobacco		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	28,575	5,016	17.6	1,658	5.8	12,302	43.1	2,515	8.8	7,778	27.2	3,865	13.5
New Mexico*	21,698	4,739	21.8	1,424	6.6	10,130	46.7	3,237	14.9	4,873	22.5	2,529	11.7
New York*	124,703	33,535	26.9	19,067	15.3	76,201	61.1	26,952	21.6	51,138	41.0	24,231	19.4
North Carolina	26,473	2,421	9.1	2,226	8.4	12,018	45.4	2,977	11.2	7,626	28.8	4,070	15.4
North Dakota*	636	161	25.3	73	11.5	452	71.1	182	28.6	200	31.4	155	24.4
Ohio*	109,726	28,346	25.8	18,183	16.6	68,685	62.6	22,298	20.3	40,952	37.3	20,150	18.4
Oklahoma	10,486	1,112	10.6	466	4.4	4,323	41.2	719	6.9	2,952	28.2	954	9.1
Oregon*	28,724	6,127	21.3	2,030	7.1	15,817	55.1	6,235	21.7	7,538	26.2	2,647	9.2
Pennsylvania*	118,829	24,709	20.8	9,547	8.0	57,993	48.8	17,324	14.6	29,467	24.8	17,511	14.7
Puerto Rico*	3,839	154	4.0	391	10.2	1,265	33.0	814	21.2	663	17.3	487	12.7
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	948	12.3	627	8.2	3,680	47.9	1,084	14.1	2,180	28.4	1,168	15.2
South Dakota	555	148	26.7	57	10.3	296	53.3	47	8.5	162	29.2	63	11.4
Tennessee	18,499	3,480	18.8	2,403	13.0	11,278	61.0	3,634	19.6	7,117	38.5	4,873	26.3
Texas	17,812	3,182	17.9	1,347	7.6	8,265	46.4	1,943	10.9	5,157	29.0	2,431	13.6
Utah	6,152	1,214	19.7	318	5.2	2,828	46.0	1,115	18.1	1,272	20.7	684	11.1
Vermont*	10,256	1,693	16.5	839	8.2	4,764	46.5	1,035	10.1	2,661	25.9	919	9.0
Virginia	15,612	1,788	11.5	527	3.4	5,231	33.5	914	5.9	3,320	21.3	1,392	8.9
Virgin Islands*	14	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	0	0.0
Washington*	51,226	9,343	18.2	5,648	11.0	29,311	57.2	12,996	25.4	14,338	28.0	6,565	12.8
West Virginia*	26,103	4,195	16.1	1,228	4.7	11,022	42.2	2,678	10.3	5,786	22.2	3,452	13.2
Wisconsin	25,771	6,078	23.6	2,093	8.1	12,327	47.8	3,728	14.5	6,442	25.0	3,442	13.4
Wyoming	657	119	18.1	35	5.3	302	46.0	67	10.2	179	27.2	43	6.5

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims. We identified polysubstance use disorder on the basis of a diagnosis of two or more SUD or a polysubstance diagnosis code.

The "Other" category includes treatment for caffeine; hallucinogens; sedatives, hypnotics and anxiolytics; inhalants; and unspecified or unknown SUD.

The percentages in this table may not sum to 100 within a state because beneficiaries could be treated for more than one condition in addition to OUD.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.2. Distribution of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category**

State	Total number of Medicaid beneficiaries with OUD	Adult		Children		Pregnant		Aged, blind, disabled		VIII Group adult		Unknown	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>322,557</b>	<b>22.9</b>	<b>11,361</b>	<b>0.8</b>	<b>17,349</b>	<b>1.2</b>	<b>375,760</b>	<b>26.7</b>	<b>668,717</b>	<b>47.5</b>	<b>9,153</b>	<b>0.7</b>
Alabama	9,001	3,245	36.1	88	1.0	DS	DS	5,586	62.1	0	0.0	DS	DS
Alaska*	6,231	1,640	26.3	118	1.9	125	2.0	849	13.6	3,499	56.2	0	0.0
Arizona*	45,540	9,963	21.9	533	1.2	538	1.2	8,420	18.5	26,086	57.3	0	0.0
Arkansas*	3,706	805	21.7	DS	DS	DS	DS	1,602	43.2	1,191	32.1	0	0.0
California*	120,938	18,836	15.6	604	0.5	129	0.1	38,030	31.4	63,321	52.4	18	0.0
Colorado*	23,132	4,810	20.8	232	1.0	739	3.2	3,987	17.2	13,364	57.8	0	0.0
Connecticut*	38,364	7,376	19.2	158	0.4	189	0.5	4,099	10.7	26,542	69.2	0	0.0
Delaware*	11,624	2,927	25.2	36	0.3	238	2.0	984	8.5	7,439	64.0	0	0.0
District of Columbia*	3,460	347	10.0	12	0.3	0	0.0	1,856	53.6	1,245	36.0	0	0.0
Florida	31,099	12,796	41.1	DS	DS	1,416	4.6	16,445	52.9	0	0.0	DS	DS
Georgia	11,298	3,915	34.7	DS	DS	355	3.1	6,841	60.6	0	0.0	DS	DS
Hawaii*	4,000	441	11.0	DS	DS	169	4.2	1,168	29.2	2,186	54.7	DS	DS
Idaho	3,356	1,222	36.4	52	1.5	0	0.0	2,030	60.5	0	0.0	52	1.5
Illinois*	40,077	27,942	69.7	513	1.3	DS	DS	9,705	24.2	1,821	4.5	DS	DS
Indiana*	37,359	1,510	4.0	282	0.8	1,539	4.1	5,923	15.9	27,596	73.9	509	1.4
Iowa*	7,431	1,601	21.5	DS	DS	DS	DS	1,472	19.8	4,170	56.1	DS	DS
Kansas	3,098	1,318	42.5	86	2.8	73	2.4	1,066	34.4	0	0.0	555	17.9
Kentucky*	53,471	9,080	17.0	153	0.3	534	1.0	8,633	16.1	35,071	65.6	0	0.0
Louisiana*	23,630	4,119	17.4	167	0.7	144	0.6	3,866	16.4	15,334	64.9	0	0.0
Maine	9,581	5,162	53.9	113	1.2	337	3.5	3,651	38.1	271	2.8	47	0.5
Maryland*	65,778	15,022	22.8	393	0.6	213	0.3	13,536	20.6	36,614	55.7	0	0.0
Massachusetts*	78,367	13,451	17.2	246	0.3	240	0.3	30,782	39.3	33,554	42.8	94	0.1
Michigan*	49,293	11,500	23.3	349	0.7	91	0.2	12,431	25.2	24,922	50.6	0	0.0
Minnesota*	26,289	5,619	21.4	606	2.3	270	1.0	6,573	25.0	13,221	50.3	0	0.0
Mississippi	2,925	1,515	51.8	77	2.6	83	2.8	1,250	42.7	0	0.0	0	0.0
Missouri	15,164	4,764	31.4	465	3.1	644	4.2	9,291	61.3	0	0.0	0	0.0
Montana*	6,359	879	13.8	DS	DS	DS	DS	932	14.7	4,480	70.5	0	0.0
Nebraska	1,395	490	35.1	42	3.0	19	1.4	844	60.5	0	0.0	0	0.0
Nevada*	12,677	1,706	13.5	63	0.5	188	1.5	2,617	20.6	8,103	63.9	0	0.0
New Hampshire*	7,789	1,497	19.2	35	0.4	145	1.9	1,246	16.0	4,531	58.2	335	4.3

Appendix Table D.2 (continued)

State	Total number of Medicaid beneficiaries with OUD	Adult		Children		Pregnant		Aged, blind, disabled		VIII Group adult		Unknown	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	28,575	3,317	11.6	246	0.9	140	0.5	7,732	27.1	15,328	53.6	1,812	6.3
New Mexico*	21,698	4,131	19.0	231	1.1	94	0.4	4,091	18.9	13,151	60.6	0	0.0
New York*	124,703	14,996	12.0	444	0.4	341	0.3	31,414	25.2	77,508	62.2	0	0.0
North Carolina	26,473	12,541	47.4	280	1.1	235	0.9	13,208	49.9	0	0.0	209	0.8
North Dakota*	636	293	46.1	DS	DS	31	4.9	241	37.9	43	6.8	DS	DS
Ohio*	109,726	28,144	25.6	1,442	1.3	929	0.8	19,742	18.0	59,469	54.2	0	0.0
Oklahoma	10,486	3,715	35.4	223	2.1	388	3.7	6,160	58.7	0	0.0	0	0.0
Oregon*	28,724	3,896	13.6	268	0.9	225	0.8	1,128	3.9	19,129	66.6	4,078	14.2
Pennsylvania*	118,829	21,114	17.8	526	0.4	862	0.7	27,575	23.2	68,752	57.9	0	0.0
Puerto Rico*	3,839	459	12.0	DS	DS	DS	DS	368	9.6	2,976	77.5	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	4,341	56.5	175	2.3	160	2.1	3,001	39.1	0	0.0	0	0.0
South Dakota	555	230	41.4	DS	DS	DS	DS	274	49.4	0	0.0	0	0.0
Tennessee	18,499	9,211	49.8	493	2.7	2,507	13.6	6,288	34.0	0	0.0	0	0.0
Texas	17,812	3,629	20.4	664	3.7	1,210	6.8	12,247	68.8	0	0.0	62	0.3
Utah	6,152	2,008	32.6	55	0.9	344	5.6	2,438	39.6	0	0.0	1,307	21.2
Vermont*	10,256	3,528	34.4	DS	DS	DS	DS	6,680	65.1	0	0.0	DS	DS
Virginia	15,612	6,014	38.5	195	1.2	488	3.1	8,859	56.7	0	0.0	56	0.4
Virgin Islands*	14	0	0.0	0	0.0	0	0.0	DS	DS	DS	DS	0	0.0
Washington*	51,226	686	1.3	401	0.8	DS	DS	8,326	16.3	41,666	81.3	DS	DS
West Virginia*	26,103	5,290	20.3	159	0.6	505	1.9	3,996	15.3	16,134	61.8	19	0.1
Wisconsin	25,771	19,211	74.5	136	0.5	444	1.7	5,980	23.2	0	0.0	0	0.0
Wyoming	657	305	46.4	DS	DS	28	4.3	297	45.2	0	0.0	DS	DS

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims. We identified polysubstance use disorder on the basis of a diagnosis of two or more SUD or a polysubstance diagnosis code.

Beneficiaries in the “unknown” enrollment category did not have enough information on their enrollment record to be included in any of the other standard categories.

Virginia and Maine appear to have VIII Group beneficiaries even though the states did not expand Medicaid until 2019. Virginia expanded Medicaid in November 2018, but coverage was not effective until January 1, 2019. Maine implemented a Medicaid expansion for adults in 2019 with retroactive coverage to July 2, 2018. Vermont expanded Medicaid in 2014 but did not report any beneficiaries in the VIII Group.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.



**Appendix Table D.3.i. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category**

State	Total number of Medicaid beneficiaries	Adult			Children			Pregnant		
		Total number	Number with OUD	Percent	Total number	Number with OUD	Percent	Total number	Number with OUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>11,541,052</b>	<b>322,557</b>	<b>2.8</b>	<b>10,831,258</b>	<b>11,451</b>	<b>0.1</b>	<b>1,403,775</b>	<b>16,420</b>	<b>1.2</b>
Alabama	485,531	100,086	3,245	3.2	144,261	88	0.1	19,010	DS	DS
Alaska*	169,556	46,020	1,640	3.6	36,749	118	0.3	4,494	125	2.8
Arizona*	1,519,362	372,579	9,963	2.7	258,719	533	0.2	31,230	538	1.7
Arkansas*	699,618	66,159	805	1.2	128,412	DS	DS	2,401	DS	DS
California*	9,883,471	2,120,657	18,836	0.9	1,264,213	604	0.0	110,286	129	0.1
Colorado*	1,095,450	221,048	4,810	2.2	178,413	232	0.1	42,433	739	1.7
Connecticut*	715,912	184,884	7,376	4.0	133,157	158	0.1	12,911	189	1.5
Delaware*	181,135	40,242	2,927	7.3	34,114	36	0.1	4,845	238	4.9
District of Columbia*	198,082	54,889	347	0.6	26,411	12	0.0	DS	DS	DS
Florida	2,448,041	559,888	12,796	2.3	804,093	DS	DS	91,446	1,416	1.5
Georgia	1,120,989	411,308	3,915	1.0	294,457	DS	DS	73,555	355	0.5
Hawaii*	297,355	32,789	441	1.3	47,393	DS	DS	19,621	169	0.9
Idaho	158,946	43,283	1,222	2.8	55,739	52	0.1	0	.	.
Illinois*	2,365,929	1,081,234	27,942	2.6	521,062	513	0.1	21,652	DS	DS
Indiana*	1,105,260	88,520	1,510	1.7	185,406	282	0.2	55,930	1,539	2.8
Iowa*	493,576	97,731	1,601	1.6	67,469	DS	DS	25,391	DS	DS
Kansas	236,878	80,626	1,318	1.6	55,941	86	0.2	13,111	73	0.6
Kentucky*	1,110,467	128,160	9,080	7.1	130,938	153	0.1	18,006	534	3.0
Louisiana*	1,121,670	107,320	4,119	3.8	220,579	167	0.1	14,919	144	1.0
Maine	166,901	54,612	5,162	9.5	43,774	113	0.3	5,488	337	6.1
Maryland*	996,324	241,656	15,022	6.2	198,614	393	0.2	10,667	213	2.0
Massachusetts*	1,409,587	364,880	13,451	3.7	127,007	246	0.2	10,219	240	2.3
Michigan*	2,050,614	399,166	11,500	2.9	309,746	349	0.1	15,916	91	0.6
Minnesota*	893,109	201,108	5,619	2.8	221,758	606	0.3	23,906	270	1.1
Mississippi	289,666	65,375	1,515	2.3	136,402	77	0.1	16,128	83	0.5
Missouri	697,180	148,388	4,764	3.2	243,206	465	0.2	48,393	644	1.3
Montana*	208,459	19,822	879	4.4	36,274	DS	DS	1,823	DS	DS
Nebraska	148,250	38,524	490	1.3	45,608	42	0.1	9,513	19	0.2
Nevada*	540,863	66,684	1,706	2.6	107,236	63	0.1	13,868	188	1.4
New Hampshire*	159,531	13,891	1,497	10.8	33,155	35	0.1	3,748	145	3.9

Appendix Table D.3.i (continued)

State	Total number of Medicaid beneficiaries	Adult			Children			Pregnant		
		Total number	Number with OUD	Percent	Total number	Number with OUD	Percent	Total number	Number with OUD	Percent
New Jersey*	1,310,876	94,554	3,317	3.5	241,661	246	0.1	21,757	140	0.6
New Mexico*	560,025	80,922	4,131	5.1	121,404	231	0.2	5,411	94	1.7
New York*	4,889,974	631,693	14,996	2.4	643,588	444	0.1	65,219	341	0.5
North Carolina	1,081,753	407,684	12,541	3.1	178,624	280	0.2	26,646	235	0.9
North Dakota*	75,840	13,138	293	2.2	13,797	DS	DS	2,364	31	1.3
Ohio*	2,255,004	491,739	28,144	5.7	415,712	1,442	0.3	DS	DS	DS
Oklahoma	454,890	108,364	3,715	3.4	152,518	223	0.1	31,140	388	1.2
Oregon*	798,447	84,963	3,896	4.6	110,619	268	0.2	13,605	225	1.7
Pennsylvania*	2,354,799	314,140	21,114	6.7	341,003	526	0.2	30,899	862	2.8
Puerto Rico*	1,231,194	248,644	459	0.2	171,446	DS	DS	4,351	DS	DS
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	191,811	4,341	2.3	206,394	175	0.1	18,124	160	0.9
South Dakota	67,380	19,566	230	1.2	23,410	45	0.2	DS	DS	DS
Tennessee	1,049,258	435,890	9,211	2.1	254,780	493	0.2	83,462	2,507	3.0
Texas	2,498,968	259,231	3,629	1.4	1,040,429	664	0.1	280,412	1,210	0.4
Utah	196,679	46,136	2,008	4.4	66,368	55	0.1	16,097	344	2.1
Vermont*	137,840	34,340	3,528	10.3	26,297	45	0.2	DS	DS	DS
Virginia	597,364	125,085	6,014	4.8	188,984	195	0.1	30,220	488	1.6
Virgin Islands*	16,961	4,628	0	0.0	130	0	0.0	1,593	0	0.0
Washington*	1,352,481	26,475	686	2.6	303,707	401	0.1	15,039	DS	DS
West Virginia*	467,770	55,341	5,290	9.6	77,309	159	0.2	9,277	505	5.4
Wisconsin	809,887	404,768	19,211	4.7	148,000	136	0.1	23,729	444	1.9
Wyoming	46,101	10,411	305	2.9	14,772	DS	DS	3,520	28	0.8

**Appendix Table D.3.ii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by major enrollment category**

State	Total number of Medicaid beneficiaries	Aged, blind, disabled			VIII Group adult			Unknown		
		Total Number	Number with OUD	Percent	Total Number	Number with OUD	Percent	Total Number	Number with OUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>13,492,062</b>	<b>375,760</b>	<b>2.8</b>	<b>17,948,975</b>	<b>668,717</b>	<b>3.7</b>	<b>545,731</b>	<b>9,091</b>	<b>1.7</b>
Alabama	485,531	221,083	5,586	2.5	0	.	.	1,091	DS	DS
Alaska*	169,556	27,491	849	3.1	54,802	3,499	6.4	0	.	.
Arizona*	1,519,362	265,845	8,420	3.2	519,409	26,086	5.0	71,580	0	0.0
Arkansas*	699,618	139,845	1,602	1.1	362,801	1,191	0.3	0	.	.
California*	9,883,471	2,192,491	38,030	1.7	4,176,521	63,321	1.5	19,303	18	0.1
Colorado*	1,095,450	140,478	3,987	2.8	512,965	13,364	2.6	113	0	0.0
Connecticut*	715,912	90,315	4,099	4.5	294,645	26,542	9.0	0	.	.
Delaware*	181,135	22,352	984	4.4	79,582	7,439	9.3	0	.	.
District of Columbia*	198,082	40,362	1,856	4.6	75,984	1,245	1.6	DS	DS	DS
Florida	2,448,041	842,763	16,445	2.0	0	.	.	149,851	DS	DS
Georgia	1,120,989	340,775	6,841	2.0	0	.	.	894	DS	DS
Hawaii*	297,355	51,281	1,168	2.3	136,443	2,186	1.6	9,828	DS	DS
Idaho	158,946	54,281	2,030	3.7	0	.	.	5,643	52	0.9
Illinois*	2,365,929	467,966	9,705	2.1	273,869	1,821	0.7	146	DS	DS
Indiana*	1,105,260	229,197	5,923	2.6	525,495	27,596	5.3	20,712	509	2.5
Iowa*	493,576	98,417	1,472	1.5	204,300	4,170	2.0	268	DS	DS
Kansas	236,878	53,088	1,066	2.0	0	.	.	34,112	555	1.6
Kentucky*	1,110,467	219,198	8,633	3.9	614,165	35,071	5.7	0	.	.
Louisiana*	1,121,670	219,464	3,866	1.8	559,388	15,334	2.7	0	.	.
Maine	166,901	50,978	3,651	7.2	6,797	271	4.0	5,252	47	0.9
Maryland*	996,324	167,390	13,536	8.1	377,997	36,614	9.7	0	.	.
Massachusetts*	1,409,587	491,510	30,782	6.3	406,858	33,554	8.2	9,113	94	1.0
Michigan*	2,050,614	453,095	12,431	2.7	872,601	24,922	2.9	90	0	0.0
Minnesota*	893,109	184,221	6,573	3.6	262,116	13,221	5.0	0	.	.
Mississippi	289,666	71,761	1,250	1.7	0	.	.	0	.	.
Missouri	697,180	257,193	9,291	3.6	0	.	.	0	.	.
Montana*	208,459	30,918	932	3.0	119,622	4,480	3.7	0	.	.
Nebraska	148,250	54,522	844	1.5	0	.	.	83	0	0.0
Nevada*	540,863	61,760	2,617	4.2	291,315	8,103	2.8	0	.	.
New Hampshire*	159,531	22,640	1,246	5.5	76,978	4,531	5.9	9,119	335	3.7

Appendix Table D.3.ii (continued)

State	Total number of Medicaid beneficiaries	Aged, blind, disabled			VIII Group adult			Unknown		
		Total Number	Number with OUD	Percent	Total Number	Number with OUD	Percent	Total Number	Number with OUD	Percent
New Jersey*	1,310,876	287,589	7,732	2.7	628,354	15,328	2.4	36,961	1,812	4.9
New Mexico*	560,025	75,119	4,091	5.4	277,169	13,151	4.7	0	.	.
New York*	4,889,974	1,108,383	31,414	2.8	2,441,071	77,508	3.2	20	0	0.0
North Carolina	1,081,753	427,642	13,208	3.1	0	.	.	41,157	209	0.5
North Dakota*	75,840	15,585	241	1.5	30,541	43	0.1	415	DS	DS
Ohio*	2,255,004	470,058	19,742	4.2	844,619	59,469	7.0	DS	DS	DS
Oklahoma	454,890	162,851	6,160	3.8	0	.	.	17	0	0.0
Oregon*	798,447	37,016	1,128	3.0	449,388	19,129	4.3	102,856	4,078	4.0
Pennsylvania*	2,354,799	705,353	27,575	3.9	963,404	68,752	7.1	0	.	.
Puerto Rico*	1,231,194	370,117	368	0.1	436,636	2,976	0.7	0	.	.
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	246,249	3,001	1.2	0	.	.	3,726	0	0.0
South Dakota	67,380	23,877	274	1.1	0	.	.	DS	DS	DS
Tennessee	1,049,258	275,019	6,288	2.3	0	.	.	107	0	0.0
Texas	2,498,968	828,849	12,247	1.5	DS	DS	DS	DS	DS	DS
Utah	196,679	60,951	2,438	4.0	0	.	.	7,127	1,307	18.3
Vermont*	137,840	76,435	6,680	8.7	0	.	.	DS	DS	DS
Virginia	597,364	245,907	8,859	3.6	38	0	0.0	7,130	56	0.8
Virgin Islands*	16,961	3,296	DS	DS	7,227	DS	DS	87	0	0.0
Washington*	1,352,481	151,097	8,326	5.5	853,600	41,666	4.9	2,563	DS	DS
West Virginia*	467,770	111,662	3,996	3.6	212,275	16,134	7.6	1,906	19	1.0
Wisconsin	809,887	233,390	5,980	2.6	0	.	.	0	.	.
Wyoming	46,101	12,937	297	2.3	0	.	.	4,461	DS	DS

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries 12 years and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims.

Virginia and Maine appear to have VIII Group beneficiaries even though the states did not expand Medicaid until 2019. Virginia expanded Medicaid in November 2018, but coverage was not effective until January 1, 2019. Maine implemented a Medicaid expansion for adults in 2019 with retroactive coverage to July 2, 2018. Vermont expanded Medicaid in 2014 but did not report any beneficiaries in the VIII Group.

Beneficiaries in the "unknown" enrollment category did not have enough information on their enrollment record to be included in any of the other standard categories.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.4.i. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status**

State	Total number of Medicaid beneficiaries	Children (ages 12-18)					
		Eligible for Medicaid due to reasons other than disability			Eligible for Medicaid on the basis of disability		
		Total number	Number treated for an OUD	Percent	Total number	Number treated for an OUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>10,691,908</b>	<b>8,748</b>	<b>0.1</b>	<b>738,193</b>	<b>2,235</b>	<b>0.3</b>
Alabama	485,531	134,856	78	0.1	12,981	69	0.5
Alaska*	169,556	27,834	46	0.2	1,274	DS	DS
Arizona*	1,519,362	266,950	423	0.2	15,082	53	0.4
Arkansas*	699,618	117,405	86	0.1	12,885	32	0.2
California*	9,883,471	1,416,307	506	0.0	66,621	149	0.2
Colorado*	1,095,450	175,564	189	0.1	6,779	25	0.4
Connecticut*	715,912	124,260	102	0.1	415	0	0.0
Delaware*	181,135	33,024	23	0.1	2,605	15	0.6
District of Columbia*	198,082	18,431	DS	DS	2,373	DS	DS
Florida	2,448,041	703,916	264	0.0	52,962	141	0.3
Georgia	1,120,989	393,279	203	0.1	25,033	85	0.3
Hawaii*	297,355	44,730	29	0.1	828	DS	DS
Idaho	158,946	57,143	62	0.1	3,961	18	0.5
Illinois*	2,365,929	438,510	287	0.1	14,585	31	0.2
Indiana*	1,105,260	193,248	282	0.1	14,028	72	0.5
Iowa*	493,576	88,923	157	0.2	6,440	44	0.7
Kansas	236,878	73,744	187	0.3	6,504	52	0.8
Kentucky*	1,110,467	151,290	226	0.1	15,505	71	0.5
Louisiana*	1,121,670	203,330	136	0.1	19,226	36	0.2
Maine	166,901	35,256	43	0.1	3,152	17	0.5
Maryland*	996,324	154,903	124	0.1	11,308	35	0.3
Massachusetts*	1,409,587	149,643	134	0.1	27,913	51	0.2
Michigan*	2,050,614	322,255	184	0.1	21,752	59	0.3
Minnesota*	893,109	177,010	230	0.1	8,187	31	0.4
Mississippi	289,666	124,324	64	0.1	11,937	55	0.5
Missouri	697,180	219,949	389	0.2	1,385	DS	DS
Montana*	208,459	33,549	54	0.2	1,405	DS	DS
Nebraska	148,250	44,084	29	0.1	1,937	DS	DS
Nevada*	540,863	100,897	52	0.1	5,328	DS	DS
New Hampshire*	159,531	31,987	22	0.1	385	DS	DS
New Jersey*	1,310,876	205,842	136	0.1	13,818	30	0.2

Appendix Table D.4.i (continued)

State	Total number of Medicaid beneficiaries	Children (ages 12-18)					
		Eligible for Medicaid due to reasons other than disability			Eligible for Medicaid on the basis of disability		
		Total number	Number treated for an OUD	Percent	Total number	Number treated for an OUD	Percent
New Mexico*	560,025	113,609	199	0.2	4,917	51	1.0
New York*	4,889,974	572,509	269	0.0	56,722	129	0.2
North Carolina	1,081,753	338,664	219	0.1	23,908	84	0.4
North Dakota*	75,840	13,142	17	0.1	405	DS	DS
Ohio*	2,255,004	335,579	580	0.2	26,563	129	0.5
Oklahoma	454,890	142,475	205	0.1	1,173	DS	DS
Oregon*	798,447	107,425	205	0.2	790	DS	DS
Pennsylvania*	2,354,799	338,153	378	0.1	75,298	180	0.2
Puerto Rico*	1,231,194	127,736	15	0.0	DS	0	.
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	192,492	129	0.1	11,768	48	0.4
South Dakota	67,380	22,927	44	0.2	1,584	DS	DS
Tennessee	1,049,258	266,897	199	0.1	14,859	26	0.2
Texas	2,498,968	1,075,471	699	0.1	82,206	269	0.3
Utah	196,679	66,914	61	0.1	3,720	22	0.6
Vermont*	137,840	23,475	22	0.1	787	DS	DS
Virginia	597,364	179,485	169	0.1	13,890	49	0.4
Virgin Islands*	16,961	307	0	0.0	0	.	.
Washington*	1,352,481	278,037	322	0.1	10,186	28	0.3
West Virginia*	467,770	71,064	129	0.2	4,674	20	0.4
Wisconsin	809,887	148,181	115	0.1	15,308	29	0.2
Wyoming	46,101	14,923	25	0.2	841	DS	DS

**Appendix Table D.4.ii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status**

State	Total number of Medicaid beneficiaries	Adults (ages 19-64)						Aged (ages 65+)		
		Eligible for Medicaid due to reasons other than disability			Eligible for Medicaid on the basis of disability			All aged beneficiaries, including the dually eligible		
		Total number	Number treated for an OUD	Percent	Total number	Number treated for an OUD	Percent	Total number	Number treated for an OUD	Percent
<b>United States</b>	<b>55,887,507</b>	<b>31,351,489</b>	<b>1,019,212</b>	<b>3.3</b>	<b>7,132,676</b>	<b>330,700</b>	<b>4.6</b>	<b>5,973,237</b>	<b>45,478</b>	<b>0.8</b>
Alabama	485,531	129,484	3,337	2.6	143,007	5,085	3.6	65,203	432	0.7
Alaska*	169,556	113,454	5,330	4.7	14,269	740	5.2	12,725	110	0.9
Arizona*	1,519,362	977,936	36,643	3.7	128,004	7,242	5.7	131,390	1,179	0.9
Arkansas*	699,618	440,008	2,018	0.5	82,214	1,348	1.6	47,106	222	0.5
California*	9,883,471	6,204,827	81,938	1.3	832,254	30,036	3.6	1,363,462	8,309	0.6
Colorado*	1,095,450	773,901	18,913	2.4	80,753	3,516	4.4	58,453	489	0.8
Connecticut*	715,912	498,330	34,100	6.8	40,295	3,457	8.6	52,612	705	1.3
Delaware*	181,135	123,396	10,590	8.6	13,124	914	7.0	8,986	82	0.9
District of Columbia*	198,082	138,721	1,595	1.1	24,515	1,492	6.1	14,042	364	2.6
Florida	2,448,041	877,582	14,343	1.6	402,145	14,676	3.6	411,436	1,675	0.4
Georgia	1,120,989	386,723	4,249	1.1	213,493	6,062	2.8	102,461	699	0.7
Hawaii*	297,355	198,076	2,784	1.4	20,256	831	4.1	33,465	353	1.1
Idaho	158,946	47,412	1,262	2.7	33,823	1,586	4.7	16,607	428	2.6
Illinois*	2,365,929	1,450,870	30,020	2.1	244,576	8,294	3.4	217,388	1,445	0.7
Indiana*	1,105,260	660,421	31,025	4.7	146,428	5,347	3.7	91,135	633	0.7
Iowa*	493,576	304,039	5,805	1.9	59,898	1,189	2.0	34,276	236	0.7
Kansas	236,878	95,263	1,761	1.8	35,204	939	2.7	26,163	159	0.6
Kentucky*	1,110,467	737,391	44,600	6.0	143,579	8,090	5.6	62,702	484	0.8
Louisiana*	1,121,670	696,416	19,615	2.8	135,829	3,496	2.6	66,869	347	0.5
Maine	166,901	80,383	5,888	7.3	36,730	3,536	9.6	11,380	97	0.9
Maryland*	996,324	669,226	52,030	7.8	98,169	12,460	12.7	62,718	1,129	1.8
Massachusetts*	1,409,587	759,341	47,412	6.2	290,028	28,123	9.7	182,662	2,647	1.4
Michigan*	2,050,614	1,268,457	36,616	2.9	285,125	10,996	3.9	153,025	1,438	0.9
Minnesota*	893,109	528,373	19,447	3.7	100,995	4,949	4.9	78,544	1,632	2.1
Mississippi	289,666	93,628	1,611	1.7	59,402	1,191	2.0	375	DS	DS

Appendix Table D.4.ii (continued)

State	Total number of Medicaid beneficiaries	Adults (ages 19-64)						Aged (ages 65+)		
		Eligible for Medicaid due to reasons other than disability			Eligible for Medicaid on the basis of disability			All aged beneficiaries, including the dually eligible		
		Total number	Number treated for an OUD	Percent	Total number	Number treated for an OUD	Percent	Total number	Number treated for an OUD	Percent
Missouri	697,180	219,726	5,481	2.5	174,741	8,709	5.0	81,379	577	0.7
Montana*	208,459	143,102	5,360	3.7	18,217	771	4.2	12,186	169	1.4
Nebraska	148,250	49,609	522	1.1	32,378	736	2.3	20,242	100	0.5
Nevada*	540,863	376,798	9,993	2.7	35,326	2,008	5.7	22,514	617	2.7
New Hampshire*	159,531	101,944	6,510	6.4	13,217	1,181	8.9	11,998	74	0.6
New Jersey*	1,310,876	806,769	20,615	2.6	121,006	6,648	5.5	163,441	1,146	0.7
New Mexico*	560,025	370,759	17,398	4.7	44,448	3,696	8.3	26,292	354	1.3
New York*	4,889,974	3,167,429	92,777	2.9	466,086	26,393	5.7	627,228	5,135	0.8
North Carolina	1,081,753	312,681	13,044	4.2	271,642	12,131	4.5	134,858	995	0.7
North Dakota*	75,840	46,918	378	0.8	8,425	198	2.4	6,950	42	0.6
Ohio*	2,255,004	1,439,812	89,294	6.2	283,948	17,310	6.1	169,102	2,413	1.4
Oklahoma	454,890	149,468	4,125	2.8	103,290	5,113	5.0	58,484	1,035	1.8
Oregon*	798,447	611,735	26,616	4.4	18,933	716	3.8	59,564	1,181	2.0
Pennsylvania*	2,354,799	1,307,551	90,849	6.9	406,611	25,763	6.3	227,186	1,659	0.7
Puerto Rico*	1,231,194	718,136	3,436	0.5	98,526	269	0.3	286,792	119	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	666,304	224,711	4,545	2.0	144,683	2,786	1.9	92,650	169	0.2
South Dakota	67,380	20,540	237	1.2	13,581	232	1.7	8,748	37	0.4
Tennessee	1,049,258	504,876	11,998	2.4	186,098	5,612	3.0	76,528	664	0.9
Texas	2,498,968	594,589	4,866	0.8	444,295	10,724	2.4	302,407	1,254	0.4
Utah	196,679	68,782	3,652	5.3	38,689	2,164	5.6	18,574	253	1.4
Vermont*	137,840	37,843	3,553	9.4	64,657	6,568	10.2	11,078	111	1.0
Virginia	597,364	167,461	6,564	3.9	148,593	8,346	5.6	87,935	484	0.6
Virgin Islands*	16,961	13,194	11	0.1	857	DS	DS	2,603	DS	DS
Washington*	1,352,481	915,881	42,504	4.6	105,151	7,629	7.3	43,226	743	1.7
West Virginia*	467,770	282,875	21,955	7.8	74,844	3,770	5.0	34,313	229	0.7
Wisconsin	809,887	426,719	19,662	4.6	142,239	5,378	3.8	77,440	587	0.8
Wyoming	46,101	17,923	335	1.9	8,080	254	3.1	4,334	37	0.9

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with an OUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims.



## Appendix Table D.4.ii (continued)

We used eligibility group and age to identify beneficiaries who were eligible for Medicaid on the basis of disability. Beneficiaries whose eligibility was unknown were considered “not disabled” for this analysis. Results for the aged group (65 and older) are not broken out by eligibility on the basis of disability because most of these beneficiaries are in an eligibility group that indicates that they are dually eligible for Medicare and Medicaid.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.5. Distribution of Medicaid beneficiaries treated for an OUD in 2018, by age group and disability status**

State	Total number of Medicaid beneficiaries treated for an OUD	Children (ages 12-18)				Adults (ages 19-64)				Aged (ages 65+)	
		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		All aged beneficiaries treated for a SUD, including the dually eligible	
		Number treated for an OUD	Percent	Number treated for an OUD	Percent	Number treated for an OUD	Percent	Number treated for an OUD	Percent	Number treated for an OUD	Percent
<b>United States</b>	<b>1,406,455</b>	<b>8,748</b>	<b>0.6</b>	<b>2,235</b>	<b>0.2</b>	<b>1,019,212</b>	<b>72.5</b>	<b>330,700</b>	<b>23.5</b>	<b>45,478</b>	<b>3.2</b>
Alabama	9,001	78	0.9	69	0.8	3,337	37.1	5,085	56.5	432	4.8
Alaska*	6,231	46	0.7	DS	DS	5,330	85.5	740	11.9	110	1.8
Arizona*	45,540	423	0.9	53	0.1	36,643	80.5	7,242	15.9	1,179	2.6
Arkansas*	3,706	86	2.3	32	0.9	2,018	54.5	1,348	36.4	222	6.0
California*	120,938	506	0.4	149	0.1	81,938	67.8	30,036	24.8	8,309	6.9
Colorado*	23,132	189	0.8	25	0.1	18,913	81.8	3,516	15.2	489	2.1
Connecticut*	38,364	102	0.3	0	0.0	34,100	88.9	3,457	9.0	705	1.8
Delaware*	11,624	23	0.2	15	0.1	10,590	91.1	914	7.9	82	0.7
District of Columbia*	3,460	DS	DS	DS	DS	1,595	46.1	1,492	43.1	364	10.5
Florida	31,099	264	0.8	141	0.5	14,343	46.1	14,676	47.2	1,675	5.4
Georgia	11,298	203	1.8	85	0.8	4,249	37.6	6,062	53.7	699	6.2
Hawaii*	4,000	29	0.7	DS	DS	2,784	69.6	831	20.8	353	8.8
Idaho	3,356	62	1.8	18	0.5	1,262	37.6	1,586	47.3	428	12.8
Illinois*	40,077	287	0.7	31	0.1	30,020	74.9	8,294	20.7	1,445	3.6
Indiana*	37,359	282	0.8	72	0.2	31,025	83.0	5,347	14.3	633	1.7
Iowa*	7,431	157	2.1	44	0.6	5,805	78.1	1,189	16.0	236	3.2
Kansas	3,098	187	6.0	52	1.7	1,761	56.8	939	30.3	159	5.1
Kentucky*	53,471	226	0.4	71	0.1	44,600	83.4	8,090	15.1	484	0.9
Louisiana*	23,630	136	0.6	36	0.2	19,615	83.0	3,496	14.8	347	1.5
Maine	9,581	43	0.4	17	0.2	5,888	61.5	3,536	36.9	97	1.0
Maryland*	65,778	124	0.2	35	0.1	52,030	79.1	12,460	18.9	1,129	1.7
Massachusetts*	78,367	134	0.2	51	0.1	47,412	60.5	28,123	35.9	2,647	3.4
Michigan*	49,293	184	0.4	59	0.1	36,616	74.3	10,996	22.3	1,438	2.9
Minnesota*	26,289	230	0.9	31	0.1	19,447	74.0	4,949	18.8	1,632	6.2
Mississippi	2,925	64	2.2	55	1.9	1,611	55.1	1,191	40.7	DS	DS

Appendix Table D.5 (continued)

State	Total number of Medicaid beneficiaries treated for an OUD	Children (ages 12-18)				Adults (ages 19-64)				Aged (ages 65+)	
		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		Eligible for Medicaid due to reasons other than disability		Eligible for Medicaid on the basis of disability		All aged beneficiaries treated for a SUD, including the dually eligible	
		Number treated for an OUD	Percent	Number treated for an OUD	Percent	Number treated for an OUD	Percent	Number treated for an OUD	Percent	Number treated for an OUD	Percent
Missouri	15,164	389	2.6	DS	DS	5,481	36.1	8,709	57.4	577	3.8
Montana*	6,359	54	0.8	DS	DS	5,360	84.3	771	12.1	169	2.7
Nebraska	1,395	29	2.1	DS	DS	522	37.4	736	52.8	100	7.2
Nevada*	12,677	52	0.4	DS	DS	9,993	78.8	2,008	15.8	617	4.9
New Hampshire*	7,789	22	0.3	DS	DS	6,510	83.6	1,181	15.2	74	1.0
New Jersey*	28,575	136	0.5	30	0.1	20,615	72.1	6,648	23.3	1,146	4.0
New Mexico*	21,698	199	0.9	51	0.2	17,398	80.2	3,696	17.0	354	1.6
New York*	124,703	269	0.2	129	0.1	92,777	74.4	26,393	21.2	5,135	4.1
North Carolina	26,473	219	0.8	84	0.3	13,044	49.3	12,131	45.8	995	3.8
North Dakota*	636	17	2.7	DS	DS	378	59.4	198	31.1	42	6.6
Ohio*	109,726	580	0.5	129	0.1	89,294	81.4	17,310	15.8	2,413	2.2
Oklahoma	10,486	205	2.0	DS	DS	4,125	39.3	5,113	48.8	1,035	9.9
Oregon*	28,724	205	0.7	DS	DS	26,616	92.7	716	2.5	1,181	4.1
Pennsylvania*	118,829	378	0.3	180	0.2	90,849	76.5	25,763	21.7	1,659	1.4
Puerto Rico*	3,839	15	0.4	0	0.0	3,436	89.5	269	7.0	119	3.1
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	129	1.7	48	0.6	4,545	59.2	2,786	36.3	169	2.2
South Dakota	555	44	7.9	DS	DS	237	42.7	232	41.8	37	6.7
Tennessee	18,499	199	1.1	26	0.1	11,998	64.9	5,612	30.3	664	3.6
Texas	17,812	699	3.9	269	1.5	4,866	27.3	10,724	60.2	1,254	7.0
Utah	6,152	61	1.0	22	0.4	3,652	59.4	2,164	35.2	253	4.1
Vermont*	10,256	22	0.2	DS	DS	3,553	34.6	6,568	64.0	111	1.1
Virginia	15,612	169	1.1	49	0.3	6,564	42.0	8,346	53.5	484	3.1
Virgin Islands*	14	0	0.0	0	0.0	11	78.6	DS	DS	DS	DS
Washington*	51,226	322	0.6	28	0.1	42,504	83.0	7,629	14.9	743	1.5
West Virginia*	26,103	129	0.5	20	0.1	21,955	84.1	3,770	14.4	229	0.9
Wisconsin	25,771	115	0.4	29	0.1	19,662	76.3	5,378	20.9	587	2.3
Wyoming	657	25	3.8	DS	DS	335	51.0	254	38.7	37	5.6

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average of the population in the states included in the table.

To identify beneficiaries with an OUD, we used National Drug Codes; diagnosis codes; and select procedure, place of service, type of bill, and revenue center codes on Medicaid claims.

## Appendix Table D.5 (continued)

We used eligibility group and age to identify beneficiaries who were eligible for Medicaid on the basis of disability. Beneficiaries with unknown eligibility were considered "not disabled" for this analysis. Results for the aged group (65 and older) are not broken out by eligibility on the basis of disability because most of these beneficiaries are in an eligibility group that indicates that they are dually eligible for Medicare and Medicaid.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.6. SUD treatment service types *not* billed for Medicaid beneficiaries with an OUD, by state**

Service	Count of states and territories that <i>do not</i> have claims for the service	States and territories that <i>do not</i> have claims for the service
Case management	8	Alabama, Delaware,* Louisiana,* Missouri, Nebraska, Puerto Rico,* South Dakota, Virgin Islands*
Community support	1	Virgin Islands*
Consultation	3	Montana,* North Dakota,* Virgin Islands*
Counseling	0	—
Detoxification	1	Virgin Islands*
Emergency services	0	—
Inpatient care	0	—
Intervention services	1	Virgin Islands*
MAT	0	—
Medication management	4	Nebraska, North Dakota,* South Dakota, Virgin Islands*
Observation care	1	Virgin Islands*
Partial hospitalization	20	Alaska,* District of Columbia,* Idaho, Illinois,* Kansas, Louisiana,* Maine, Mississippi, Missouri, Nebraska, New Hampshire,* North Carolina, South Carolina, South Dakota, Utah, Vermont,* Virgin Islands,* Washington,* Wisconsin, Wyoming
Peer support	21	Alabama, Arkansas,* California,* Connecticut,* District of Columbia,* Hawaii,* Illinois,* Louisiana,* Maine, Maryland,* Montana,* Nebraska, North Dakota,* Oklahoma, Puerto Rico,* South Dakota, Texas, Vermont,* Virginia, Virgin Islands,* Wisconsin
Physician services	0	—
Pharmacotherapy	1	Virgin Islands*
Screening and assessment	0	—
Treatment program	6	Alaska,* District of Columbia,* Oklahoma, Puerto Rico,* Virgin Islands,* Wyoming
Other services	1	Virgin Islands*

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Note: "Other" services include services without sufficient detail to be categorized and services that did not fit into any of the other categories.

\*The state expanded Medicaid for adults by January 1, 2018.

**Appendix Table D.7.i. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type**

State	Total number of Medicaid beneficiaries with OUD	Case management		Community support		Consultation		Counseling		Detoxification		Emergency services	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>106,348</b>	<b>7.6</b>	<b>45,956</b>	<b>3.3</b>	<b>142,834</b>	<b>10.2</b>	<b>550,379</b>	<b>39.1</b>	<b>122,773</b>	<b>8.7</b>	<b>508,802</b>	<b>36.2</b>
Alabama	9,001	0	0.0	19	0.2	1,059	11.8	1,051	11.7	601	6.7	4,266	47.4
Alaska*	6,231	716	11.5	1,809	29.0	183	2.9	1,110	17.8	489	7.8	2,098	33.7
Arizona*	45,540	23,474	51.5	1,007	2.2	3,960	8.7	19,632	43.1	3,278	7.2	16,425	36.1
Arkansas*	3,706	DS	DS	28	0.8	397	10.7	372	10.0	120	3.2	1,571	42.4
California*	120,938	7,140	5.9	1,475	1.2	21,735	18.0	51,367	42.5	6,015	5.0	44,182	36.5
Colorado*	23,132	535	2.3	66	0.3	16	0.1	3,085	13.3	188	0.8	9,503	41.1
Connecticut*	38,364	23	0.1	29	0.1	9,326	24.3	11,702	30.5	1,290	3.4	12,709	33.1
Delaware*	11,624	0	0.0	60	0.5	54	0.5	6,205	53.4	1,714	14.7	3,867	33.3
District of Columbia*	3,460	437	12.6	12	0.3	315	9.1	1,098	31.7	12	0.3	1,633	47.2
Florida	31,099	99	0.3	6,302	20.3	6,406	20.6	2,797	9.0	909	2.9	14,029	45.1
Georgia	11,298	102	0.9	324	2.9	249	2.2	1,827	16.2	467	4.1	4,307	38.1
Hawaii*	4,000	DS	DS	18	0.5	345	8.6	1,018	25.5	DS	DS	1,456	36.4
Idaho	3,356	151	4.5	16	0.5	403	12.0	410	12.2	23	0.7	1,306	38.9
Illinois*	40,077	932	2.3	687	1.7	11,171	27.9	16,566	41.3	4,117	10.3	13,899	34.7
Indiana*	37,359	2,436	6.5	47	0.1	499	1.3	10,866	29.1	3,956	10.6	8,342	22.3
Iowa*	7,431	34	0.5	360	4.8	884	11.9	2,913	39.2	231	3.1	3,216	43.3
Kansas	3,098	83	2.7	26	0.8	DS	DS	681	22.0	53	1.7	736	23.8
Kentucky*	53,471	9,002	16.8	564	1.1	1,954	3.7	30,547	57.1	3,413	6.4	18,227	34.1
Louisiana*	23,630	0	0.0	708	3.0	2,507	10.6	4,056	17.2	3,172	13.4	10,830	45.8
Maine	9,581	113	1.2	157	1.6	1,653	17.3	4,049	42.3	88	0.9	2,147	22.4
Maryland*	65,778	DS	DS	41	0.1	2,165	3.3	39,407	59.9	2,081	3.2	22,157	33.7
Massachusetts*	78,367	22	0.0	6,523	8.3	10,595	13.5	31,622	40.4	9,610	12.3	30,332	38.7
Michigan*	49,293	3,929	8.0	2,948	6.0	2,038	4.1	24,689	50.1	7,069	14.3	18,904	38.4
Minnesota*	26,289	572	2.2	300	1.1	1,520	5.8	4,327	16.5	1,277	4.9	10,981	41.8
Mississippi	2,925	DS	DS	DS	DS	88	3.0	660	22.6	20	0.7	1,120	38.3
Missouri	15,164	0	0.0	3,646	24.0	1,090	7.2	5,124	33.8	811	5.3	5,744	37.9
Montana*	6,359	141	2.2	11	0.2	0	0.0	2,407	37.9	447	7.0	2,327	36.6
Nebraska	1,395	0	0.0	28	2.0	14	1.0	209	15.0	49	3.5	481	34.5
Nevada*	12,677	359	2.8	76	0.6	300	2.4	2,676	21.1	923	7.3	4,486	35.4
New Hampshire*	7,789	309	4.0	283	3.6	1,175	15.1	2,437	31.3	354	4.5	1,979	25.4

Appendix Table D.7.i (continued)

State	Total number of Medicaid beneficiaries with OUD	Case management		Community support		Consultation		Counseling		Detoxification		Emergency services	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	28,575	429	1.5	170	0.6	1,543	5.4	7,625	26.7	3,415	12.0	9,711	34.0
New Mexico*	21,698	68	0.3	532	2.5	1,705	7.9	7,111	32.8	469	2.2	6,974	32.1
New York*	124,703	DS	DS	95	0.1	1,771	1.4	43,377	34.8	13,897	11.1	47,877	38.4
North Carolina	26,473	DS	DS	179	0.7	2,019	7.6	10,358	39.1	429	1.6	9,726	36.7
North Dakota*	636	18	2.8	DS	DS	0	0.0	225	35.4	DS	DS	263	41.4
Ohio*	109,726	38,173	34.8	8,733	8.0	14,919	13.6	67,144	61.2	16,964	15.5	48,362	44.1
Oklahoma	10,486	574	5.5	709	6.8	504	4.8	2,121	20.2	161	1.5	2,687	25.6
Oregon*	28,724	4,197	14.6	108	0.4	24	0.1	16,268	56.6	4,210	14.7	10,662	37.1
Pennsylvania*	118,829	4,880	4.1	4,278	3.6	23,088	19.4	47,734	40.2	18,013	15.2	37,591	31.6
Puerto Rico*	3,839	0	0.0	43	1.1	34	0.9	1,781	46.4	340	8.9	449	11.7
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	183	2.4	155	2.0	441	5.7	2,011	26.2	513	6.7	2,882	37.5
South Dakota	555	0	0.0	19	3.4	12	2.2	72	13.0	DS	DS	246	44.3
Tennessee	18,499	495	2.7	382	2.1	371	2.0	5,091	27.5	1,692	9.1	7,134	38.6
Texas	17,812	261	1.5	348	2.0	728	4.1	3,652	20.5	992	5.6	6,988	39.2
Utah	6,152	292	4.7	504	8.2	17	0.3	959	15.6	121	2.0	1,774	28.8
Vermont*	10,256	1,003	9.8	313	3.1	2,177	21.2	3,924	38.3	625	6.1	2,532	24.7
Virginia	15,612	387	2.5	187	1.2	41	0.3	4,470	28.6	913	5.8	3,912	25.1
Virgin Islands*	14	0	0.0	0	0.0	0	0.0	DS	DS	0	0.0	DS	DS
Washington*	51,226	3,189	6.2	901	1.8	6,387	12.5	17,096	33.4	4,914	9.6	19,802	38.7
West Virginia*	26,103	1,258	4.8	42	0.2	2,552	9.8	15,813	60.6	511	2.0	6,610	25.3
Wisconsin	25,771	292	1.1	565	2.2	2,340	9.1	8,563	33.2	1,817	7.1	9,084	35.2
Wyoming	657	40	6.1	123	18.7	60	9.1	74	11.3	DS	DS	276	42.0

**Appendix Table D.7.ii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type**

State	Total number of Medicaid beneficiaries with OUD	Inpatient care		Intervention		MAT		Medication management		Observation care		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>395,168</b>	<b>28.1</b>	<b>73,601</b>	<b>5.2</b>	<b>839,698</b>	<b>59.7</b>	<b>32,978</b>	<b>2.3</b>	<b>60,803</b>	<b>4.3</b>	<b>138,431</b>	<b>9.8</b>
Alabama	9,001	3,315	36.8	36	0.4	5,004	55.6	284	3.2	181	2.0	853	9.5
Alaska*	6,231	1,410	22.6	301	4.8	4,335	69.6	405	6.5	237	3.8	2,071	33.2
Arizona*	45,540	16,023	35.2	6,407	14.1	22,517	49.4	11,644	25.6	2,811	6.2	16,702	36.7
Arkansas*	3,706	1,802	48.6	31	0.8	1,422	38.4	DS	DS	182	4.9	22	0.6
California*	120,938	30,822	25.5	1,845	1.5	78,468	64.9	1,951	1.6	2,487	2.1	1,643	1.4
Colorado*	23,132	5,734	24.8	1,535	6.6	12,338	53.3	100	0.4	1,717	7.4	268	1.2
Connecticut*	38,364	7,822	20.4	815	2.1	29,504	76.9	36	0.1	993	2.6	1,971	5.1
Delaware*	11,624	3,597	30.9	569	4.9	8,729	75.1	28	0.2	268	2.3	1,535	13.2
District of Columbia*	3,460	1,413	40.8	69	2.0	2,114	61.1	DS	DS	120	3.5	283	8.2
Florida	31,099	13,406	43.1	390	1.3	12,051	38.8	421	1.4	2,928	9.4	4,511	14.5
Georgia	11,298	4,060	35.9	152	1.3	4,570	40.4	68	0.6	699	6.2	973	8.6
Hawaii*	4,000	1,051	26.3	55	1.4	2,000	50.0	DS	DS	189	4.7	14	0.4
Idaho	3,356	1,098	32.7	23	0.7	1,292	38.5	DS	DS	123	3.7	56	1.7
Illinois*	40,077	16,547	41.3	1,491	3.7	15,492	38.7	1,791	4.5	2,315	5.8	1,237	3.1
Indiana*	37,359	10,880	29.1	947	2.5	25,780	69.0	1,838	4.9	1,132	3.0	2,192	5.9
Iowa*	7,431	2,596	34.9	65	0.9	4,403	59.3	DS	DS	632	8.5	218	2.9
Kansas	3,098	1,115	36.0	76	2.5	931	30.1	DS	DS	131	4.2	45	1.5
Kentucky*	53,471	13,890	26.0	2,671	5.0	35,569	66.5	73	0.1	1,598	3.0	8,409	15.7
Louisiana*	23,630	9,598	40.6	237	1.0	12,339	52.2	93	0.4	640	2.7	53	0.2
Maine	9,581	1,114	11.6	411	4.3	7,659	79.9	1,503	15.7	196	2.0	56	0.6
Maryland*	65,778	12,691	19.3	700	1.1	50,665	77.0	DS	DS	3,836	5.8	11,333	17.2
Massachusetts*	78,367	21,376	27.3	7,957	10.2	49,416	63.1	200	0.3	4,693	6.0	1,160	1.5
Michigan*	49,293	11,117	22.6	3,334	6.8	22,922	46.5	24	0.0	1,940	3.9	2,704	5.5
Minnesota*	26,289	8,536	32.5	677	2.6	15,394	58.6	17	0.1	1,828	7.0	2,349	8.9
Mississippi	2,925	1,138	38.9	52	1.8	1,659	56.7	DS	DS	188	6.4	140	4.8
Missouri	15,164	5,138	33.9	69	0.5	7,931	52.3	163	1.1	758	5.0	2,833	18.7
Montana*	6,359	1,715	27.0	60	0.9	4,404	69.3	DS	DS	331	5.2	1,934	30.4
Nebraska	1,395	420	30.1	DS	DS	690	49.5	0	0.0	47	3.4	29	2.1
Nevada*	12,677	4,472	35.3	970	7.7	4,702	37.1	1,094	8.6	692	5.5	2,675	21.1
New Hampshire*	7,789	1,050	13.5	356	4.6	5,893	75.7	26	0.3	147	1.9	166	2.1



Appendix Table D.7.ii (continued)

State	Total number of Medicaid beneficiaries with OUD	Inpatient care		Intervention		MAT		Medication management		Observation care		Other	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	28,575	8,103	28.4	548	1.9	18,848	66.0	157	0.5	1,710	6.0	646	2.3
New Mexico*	21,698	5,262	24.3	315	1.5	15,886	73.2	134	0.6	708	3.3	2,003	9.2
New York*	124,703	43,350	34.8	4,987	4.0	59,589	47.8	3,138	2.5	4,309	3.5	1,192	1.0
North Carolina	26,473	8,064	30.5	1,522	5.7	11,706	44.2	DS	DS	1,177	4.4	1,133	4.3
North Dakota*	636	255	40.1	DS	DS	287	45.1	0	0.0	56	8.8	34	5.3
Ohio*	109,726	31,135	28.4	2,695	2.5	70,534	64.3	179	0.2	6,448	5.9	26,234	23.9
Oklahoma	10,486	3,163	30.2	111	1.1	3,125	29.8	33	0.3	227	2.2	1,047	10.0
Oregon*	28,724	6,156	21.4	1,300	4.5	18,356	63.9	111	0.4	1,052	3.7	7,505	26.1
Pennsylvania*	118,829	26,622	22.4	3,308	2.8	76,238	64.2	5,440	4.6	4,312	3.6	6,649	5.6
Puerto Rico*	3,839	765	19.9	80	2.1	2,572	67.0	55	1.4	85	2.2	17	0.4
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	2,314	30.1	208	2.7	3,737	48.7	42	0.5	282	3.7	1,416	18.4
South Dakota	555	229	41.3	DS	DS	186	33.5	0	0.0	37	6.7	DS	DS
Tennessee	18,499	8,252	44.6	669	3.6	6,510	35.2	1,591	8.6	860	4.6	813	4.4
Texas	17,812	6,878	38.6	187	1.0	8,544	48.0	242	1.4	1,447	8.1	1,073	6.0
Utah	6,152	1,401	22.8	DS	DS	2,213	36.0	DS	DS	142	2.3	178	2.9
Vermont*	10,256	1,801	17.6	443	4.3	8,465	82.5	DS	DS	143	1.4	435	4.2
Virginia	15,612	3,374	21.6	23	0.1	9,546	61.1	16	0.1	338	2.2	149	1.0
Virgin Islands*	14	DS	DS	0	0.0	DS	DS	0	0.0	0	0.0	0	0.0
Washington*	51,226	10,590	20.7	13,010	25.4	34,550	67.4	49	0.1	1,456	2.8	16,328	31.9
West Virginia*	26,103	4,968	19.0	1,869	7.2	20,037	76.8	21	0.1	718	2.8	1,799	6.9
Wisconsin	25,771	7,322	28.4	10,025	38.9	18,366	71.3	DS	DS	1,217	4.7	1,333	5.2
Wyoming	657	218	33.2	DS	DS	210	32.0	11	1.7	40	6.1	12	1.8

**Appendix Table D.7.iii. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service type**

State	Total number of Medicaid beneficiaries with OUD	Partial hospitalization		Peer support		Physician services		Pharmacotherapy		Screening/assessment		Treatment program	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>4,742</b>	<b>0.3</b>	<b>26,109</b>	<b>1.9</b>	<b>623,591</b>	<b>44.3</b>	<b>76,042</b>	<b>5.4</b>	<b>390,650</b>	<b>27.8</b>	<b>176,383</b>	<b>12.5</b>
Alabama	9,001	DS	DS	0	0.0	3,390	37.7	661	7.3	989	11.0	21	0.2
Alaska*	6,231	0	0.0	56	0.9	4,284	68.8	996	16.0	2,075	33.3	0	0.0
Arizona*	45,540	DS	DS	7,654	16.8	20,467	44.9	2,002	4.4	20,316	44.6	4,286	9.4
Arkansas*	3,706	DS	DS	0	0.0	928	25.0	70	1.9	354	9.6	DS	DS
California*	120,938	DS	DS	0	0.0	26,907	22.2	5,543	4.6	6,312	5.2	5,693	4.7
Colorado*	23,132	DS	DS	DS	DS	12,219	52.8	1,275	5.5	3,222	13.9	33	0.1
Connecticut*	38,364	646	1.7	0	0.0	12,804	33.4	2,120	5.5	12,423	32.4	6,333	16.5
Delaware*	11,624	612	5.3	1,072	9.2	7,535	64.8	871	7.5	3,085	26.5	1,528	13.1
District of Columbia*	3,460	0	0.0	0	0.0	1,030	29.8	94	2.7	922	26.6	0	0.0
Florida	31,099	DS	DS	DS	DS	5,664	18.2	958	3.1	5,261	16.9	33	0.1
Georgia	11,298	94	0.8	34	0.3	4,146	36.7	215	1.9	1,643	14.5	139	1.2
Hawaii*	4,000	44	1.1	0	0.0	1,669	41.7	185	4.6	681	17.0	173	4.3
Idaho	3,356	0	0.0	18	0.5	1,503	44.8	85	2.5	500	14.9	DS	DS
Illinois*	40,077	0	0.0	0	0.0	14,399	35.9	581	1.4	14,183	35.4	DS	DS
Indiana*	37,359	242	0.6	87	0.2	15,754	42.2	1,518	4.1	9,967	26.7	586	1.6
Iowa*	7,431	353	4.8	25	0.3	4,017	54.1	256	3.4	3,414	45.9	1,315	17.7
Kansas	3,098	0	0.0	93	3.0	953	30.8	52	1.7	707	22.8	351	11.3
Kentucky*	53,471	29	0.1	6,794	12.7	33,983	63.6	3,921	7.3	20,288	37.9	8,020	15.0
Louisiana*	23,630	0	0.0	0	0.0	6,750	28.6	1,821	7.7	5,713	24.2	6,231	26.4
Maine	9,581	0	0.0	0	0.0	4,732	49.4	353	3.7	3,635	37.9	761	7.9
Maryland*	65,778	DS	DS	0	0.0	36,327	55.2	761	1.2	31,262	47.5	12,654	19.2
Massachusetts*	78,367	679	0.9	16	0.0	42,686	54.5	3,771	4.8	19,732	25.2	15,654	20.0
Michigan*	49,293	DS	DS	3,648	7.4	27,677	56.1	4,704	9.5	21,662	43.9	9,801	19.9
Minnesota*	26,289	24	0.1	35	0.1	13,371	50.9	1,910	7.3	10,607	40.3	8,098	30.8
Mississippi	2,925	0	0.0	110	3.8	1,284	43.9	277	9.5	475	16.2	11	0.4
Missouri	15,164	0	0.0	38	0.3	7,188	47.4	153	1.0	4,232	27.9	1,892	12.5
Montana*	6,359	24	0.4	0	0.0	4,393	69.1	369	5.8	1,456	22.9	617	9.7
Nebraska	1,395	0	0.0	0	0.0	381	27.3	75	5.4	197	14.1	85	6.1
Nevada*	12,677	68	0.5	309	2.4	4,743	37.4	813	6.4	3,850	30.4	346	2.7
New Hampshire*	7,789	0	0.0	185	2.4	3,555	45.6	360	4.6	1,633	21.0	1,291	16.6

Appendix Table D.7.iii (continued)

State	Total number of Medicaid beneficiaries with OUD	Partial hospitalization		Peer support		Physician services		Pharmacotherapy		Screening/assessment		Treatment program	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	28,575	448	1.6	DS	DS	11,050	38.7	1,163	4.1	10,006	35.0	3,554	12.4
New Mexico*	21,698	116	0.5	115	0.5	10,165	46.8	1,565	7.2	6,566	30.3	1,144	5.3
New York*	124,703	330	0.3	DS	DS	39,264	31.5	1,874	1.5	11,905	9.5	4,622	3.7
North Carolina	26,473	0	0.0	794	3.0	14,849	56.1	1,535	5.8	6,687	25.3	2,325	8.8
North Dakota*	636	31	4.9	0	0.0	348	54.7	34	5.3	160	25.2	106	16.7
Ohio*	109,726	16	0.0	2,229	2.0	66,574	60.7	16,434	15.0	44,144	40.2	26,576	24.2
Oklahoma	10,486	DS	DS	0	0.0	4,911	46.8	383	3.7	1,130	10.8	0	0.0
Oregon*	28,724	DS	DS	2,090	7.3	13,871	48.3	3,094	10.8	11,329	39.4	3,016	10.5
Pennsylvania*	118,829	77	0.1	131	0.1	51,674	43.5	2,456	2.1	37,265	31.4	35,815	30.1
Puerto Rico*	3,839	20	0.5	0	0.0	2,170	56.5	DS	DS	703	18.3	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	0	0.0	137	1.8	3,019	39.3	448	5.8	2,227	29.0	664	8.6
South Dakota	555	0	0.0	0	0.0	154	27.7	27	4.9	78	14.1	23	4.1
Tennessee	18,499	730	3.9	27	0.1	8,621	46.6	1,584	8.6	4,584	24.8	3,349	18.1
Texas	17,812	110	0.6	0	0.0	5,042	28.3	992	5.6	2,332	13.1	621	3.5
Utah	6,152	0	0.0	46	0.7	1,508	24.5	288	4.7	889	14.5	104	1.7
Vermont*	10,256	0	0.0	0	0.0	5,519	53.8	170	1.7	2,405	23.4	1,202	11.7
Virginia	15,612	49	0.3	0	0.0	5,449	34.9	329	2.1	1,592	10.2	279	1.8
Virgin Islands*	14	0	0.0	0	0.0	DS	DS	0	0.0	DS	DS	0	0.0
Washington*	51,226	0	0.0	243	0.5	26,151	51.1	3,394	6.6	15,526	30.3	5,156	10.1
West Virginia*	26,103	DS	DS	109	0.4	16,166	61.9	1,475	5.7	8,138	31.2	678	2.6
Wisconsin	25,771	0	0.0	0	0.0	12,044	46.7	2,006	7.8	12,081	46.9	1,197	4.6
Wyoming	657	0	0.0	14	2.1	303	46.1	21	3.2	107	16.3	0	0.0

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims.

We determined service types on the basis of National Drug Codes, procedure codes, and revenue codes.

The sum of the percentages within each state will not be 100 because many Medicaid beneficiaries treated for an OUD received more than one service.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.8. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by service setting**

State	Total number of Medicaid beneficiaries with OUD	Treated in an inpatient setting		Treated in an outpatient setting		Treated in a residential setting		Treated in a home-based setting		Treated in a community-based setting		Treated in an unknown setting	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>424,169</b>	<b>30.2</b>	<b>1,318,599</b>	<b>93.8</b>	<b>100,308</b>	<b>7.1</b>	<b>30,935</b>	<b>2.2</b>	<b>34,988</b>	<b>2.5</b>	<b>175,279</b>	<b>12.5</b>
Alabama	9,001	3,386	37.6	8,299	92.2	184	2.0	104	1.2	16	0.2	104	1.2
Alaska*	6,231	1,418	22.8	5,918	95.0	671	10.8	34	0.5	1,796	28.8	60	1.0
Arizona*	45,540	16,469	36.2	42,342	93.0	2,466	5.4	3,063	6.7	473	1.0	14,430	31.7
Arkansas*	3,706	1,768	47.7	3,010	81.2	138	3.7	22	0.6	23	0.6	53	1.4
California*	120,938	31,107	25.7	111,652	92.3	7,219	6.0	907	0.7	1,220	1.0	5,566	4.6
Colorado*	23,132	5,629	24.3	19,060	82.4	82	0.4	74	0.3	29	0.1	15,760	68.1
Connecticut*	38,364	8,882	23.2	37,743	98.4	711	1.9	586	1.5	DS	DS	20,456	53.3
Delaware*	11,624	3,155	27.1	11,250	96.8	2,348	20.2	39	0.3	36	0.3	90	0.8
District of Columbia*	3,460	1,291	37.3	3,074	88.8	560	16.2	14	0.4	DS	DS	17	0.5
Florida	31,099	14,039	45.1	25,649	82.5	406	1.3	375	1.2	6,191	19.9	81	0.3
Georgia	11,298	4,206	37.2	9,982	88.4	108	1.0	130	1.2	283	2.5	160	1.4
Hawaii*	4,000	1,064	26.6	3,718	93.0	150	3.8	DS	DS	15	0.4	0	0.0
Idaho	3,356	1,254	37.4	2,887	86.0	132	3.9	37	1.1	DS	DS	122	3.6
Illinois*	40,077	17,319	43.2	35,649	89.0	2,553	6.4	456	1.1	641	1.6	10,227	25.5
Indiana*	37,359	11,424	30.6	35,255	94.4	765	2.0	278	0.7	25	0.1	886	2.4
Iowa*	7,431	2,564	34.5	7,046	94.8	762	10.3	53	0.7	188	2.5	128	1.7
Kansas	3,098	1,137	36.7	2,742	88.5	326	10.5	46	1.5	13	0.4	77	2.5
Kentucky*	53,471	15,111	28.3	50,925	95.2	5,281	9.9	243	0.5	552	1.0	1,382	2.6
Louisiana*	23,630	9,109	38.5	21,115	89.4	8,552	36.2	150	0.6	25	0.1	203	0.9
Maine	9,581	1,148	12.0	9,497	99.1	29	0.3	93	1.0	143	1.5	246	2.6
Maryland*	65,778	13,022	19.8	64,256	97.7	9,013	13.7	179	0.3	38	0.1	4,695	7.1
Massachusetts*	78,367	31,113	39.7	75,539	96.4	7,102	9.1	1,923	2.5	6,092	7.8	1,831	2.3
Michigan*	49,293	12,170	24.7	46,060	93.4	10,198	20.7	1,184	2.4	2,045	4.1	4,981	10.1
Minnesota*	26,289	8,663	33.0	24,928	94.8	691	2.6	3,778	14.4	128	0.5	1,261	4.8
Mississippi	2,925	1,153	39.4	2,597	88.8	36	1.2	34	1.2	DS	DS	92	3.1
Missouri	15,164	5,392	35.6	14,389	94.9	140	0.9	353	2.3	3,589	23.7	2,007	13.2
Montana*	6,359	1,769	27.8	6,064	95.4	382	6.0	25	0.4	DS	DS	171	2.7
Nebraska	1,395	452	32.4	1,244	89.2	79	5.7	DS	DS	28	2.0	11	0.8
Nevada*	12,677	4,569	36.0	11,513	90.8	384	3.0	178	1.4	51	0.4	3,431	27.1
New Hampshire*	7,789	1,133	14.5	7,499	96.3	748	9.6	219	2.8	110	1.4	1,106	14.2

Appendix Table D.8 (continued)

State	Total number of Medicaid beneficiaries with OUD	Treated in an inpatient setting		Treated in an outpatient setting		Treated in a residential setting		Treated in a home-based setting		Treated in a community-based setting		Treated in an unknown setting	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
New Jersey*	28,575	8,917	31.2	26,842	93.9	359	1.3	1,076	3.8	165	0.6	286	1.0
New Mexico*	21,698	5,478	25.2	20,858	96.1	301	1.4	200	0.9	476	2.2	68	0.3
New York*	124,703	48,805	39.1	119,756	96.0	2,426	1.9	1,312	1.1	58	0.0	4,447	3.6
North Carolina	26,473	8,283	31.3	24,589	92.9	740	2.8	915	3.5	110	0.4	1,133	4.3
North Dakota*	636	239	37.6	540	84.9	60	9.4	DS	DS	DS	DS	238	37.4
Ohio*	109,726	32,224	29.4	106,169	96.8	15,964	14.5	4,177	3.8	6,566	6.0	17,224	15.7
Oklahoma	10,486	3,257	31.1	9,493	90.5	201	1.9	158	1.5	682	6.5	122	1.2
Oregon*	28,724	6,362	22.1	27,235	94.8	5,008	17.4	292	1.0	100	0.3	814	2.8
Pennsylvania*	118,829	28,282	23.8	110,267	92.8	780	0.7	4,888	4.1	245	0.2	52,466	44.2
Puerto Rico*	3,839	1,056	27.5	3,477	90.6	0	0.0	DS	DS	43	1.1	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	2,438	31.8	6,905	89.9	468	6.1	29	0.4	148	1.9	463	6.0
South Dakota	555	227	40.9	490	88.3	12	2.2	0	0.0	19	3.4	11	2.0
Tennessee	18,499	9,925	53.7	16,149	87.3	252	1.4	333	1.8	373	2.0	152	0.8
Texas	17,812	6,935	38.9	15,490	87.0	763	4.3	325	1.8	318	1.8	220	1.2
Utah	6,152	1,372	22.3	4,951	80.5	899	14.6	14	0.2	DS	DS	3,227	52.5
Vermont*	10,256	1,819	17.7	10,087	98.4	875	8.5	89	0.9	269	2.6	1,985	19.4
Virginia	15,612	3,544	22.7	14,687	94.1	101	0.6	113	0.7	169	1.1	241	1.5
Virgin Islands*	14	DS	DS	14	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Washington*	51,226	10,799	21.1	49,305	96.2	8,015	15.6	896	1.7	856	1.7	1,385	2.7
West Virginia*	26,103	5,494	21.0	25,054	96.0	654	2.5	1,218	4.7	DS	DS	225	0.9
Wisconsin	25,771	7,579	29.4	24,761	96.1	191	0.7	308	1.2	528	2.0	924	3.6
Wyoming	657	218	33.2	578	88.0	23	3.5	15	2.3	113	17.2	14	2.1

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims.

We defined service setting on the basis of the TAF file containing the claim; in the case of claims from the Other Services file, we used the claim’s type of bill, place of service, procedure codes, or revenue codes. We defined a setting as “unknown” when there was not enough information on the claim to categorize the service by setting.

The sum of the percentages within each state will not be 100 because many Medicaid beneficiaries treated for an OUD were treated in more than one setting.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.9.i. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

State	Total Number of Medicaid beneficiaries with OUD	Consultation			Counseling			Emergency services		
		Count of beneficiaries with service	Total count of claims	Average # per beneficiary	Count of beneficiaries with service	Total count of claims	Average # per beneficiary	Count of beneficiaries with service	Total count of claims	Average # per beneficiary
<b>United States</b>	<b>1,406,455</b>	<b>142,834</b>	<b>1,080,133</b>	<b>7.6</b>	<b>550,379</b>	<b>6,616,689</b>	<b>12.0</b>	<b>508,802</b>	<b>1,250,000</b>	<b>2.5</b>
Alabama	9,001	1,059	2,213	2.1	1,051	8,547	8.1	4,266	13,356	3.1
Alaska*	6,231	183	201	1.1	1,110	6,652	6.0	2,098	5,269	2.5
Arizona*	45,540	3,960	6,923	1.7	19,632	164,070	8.4	16,425	38,638	2.4
Arkansas*	3,706	397	1,518	3.8	372	916	2.5	1,571	3,330	2.1
California*	120,938	21,735	87,986	4.0	51,367	892,953	17.4	44,182	119,437	2.7
Colorado*	23,132	16	51	3.2	3,085	11,620	3.8	9,503	26,734	2.8
Connecticut*	38,364	9,326	93,428	10.0	11,702	122,996	10.5	12,709	33,417	2.6
Delaware*	11,624	54	71	1.3	6,205	76,862	12.4	3,867	8,712	2.3
District of Columbia*	3,460	315	1,729	5.5	1,098	13,920	12.7	1,633	4,576	2.8
Florida	31,099	6,406	38,445	6.0	2,797	5,240	1.9	14,029	34,234	2.4
Georgia	11,298	249	376	1.5	1,827	10,870	5.9	4,307	9,562	2.2
Hawaii*	4,000	345	6,359	18.4	1,018	12,697	12.5	1,456	3,724	2.6
Idaho	3,356	403	1,675	4.2	410	4,137	10.1	1,306	2,730	2.1
Illinois*	40,077	11,171	49,337	4.4	16,566	211,435	12.8	13,899	33,056	2.4
Indiana*	37,359	499	598	1.2	10,866	77,373	7.1	8,342	15,765	1.9
Iowa*	7,431	884	3,478	3.9	2,913	23,716	8.1	3,216	8,660	2.7
Kansas	3,098	DS	DS	DS	681	8,111	11.9	736	1,538	2.1
Kentucky*	53,471	1,954	2,584	1.3	30,547	340,218	11.1	18,227	38,688	2.1
Louisiana*	23,630	2,507	12,270	4.9	4,056	23,793	5.9	10,830	25,066	2.3
Maine	9,581	1,653	15,917	9.6	4,049	45,235	11.2	2,147	4,760	2.2
Maryland*	65,778	2,165	3,415	1.6	39,407	622,311	15.8	22,157	52,433	2.4
Massachusetts*	78,367	10,595	65,449	6.2	31,622	279,851	8.8	30,332	88,319	2.9
Michigan*	49,293	2,038	4,784	2.3	24,689	229,139	9.3	18,904	45,670	2.4
Minnesota*	26,289	1,520	2,600	1.7	4,327	14,973	3.5	10,981	31,203	2.8
Mississippi	2,925	88	101	1.1	660	3,944	6.0	1,120	2,599	2.3
Missouri	15,164	1,090	2,336	2.1	5,124	79,320	15.5	5,744	13,592	2.4
Montana*	6,359	0	0	.	2,407	20,950	8.7	2,327	6,099	2.6
Nebraska	1,395	14	62	4.4	209	1,255	6.0	481	1,049	2.2
Nevada*	12,677	300	577	1.9	2,676	27,673	10.3	4,486	12,295	2.7
New Hampshire*	7,789	1,175	4,596	3.9	2,437	14,738	6.0	1,979	3,836	1.9

Appendix Table D.9.i (continued)

State	Total Number of Medicaid beneficiaries with OUD	Consultation			Counseling			Emergency services		
		Count of beneficiaries with service	Total count of claims	Average # per beneficiary	Count of beneficiaries with service	Total count of claims	Average # per beneficiary	Count of beneficiaries with service	Total count of claims	Average # per beneficiary
New Jersey*	28,575	1,543	4,733	3.1	7,625	60,070	7.9	9,711	23,277	2.4
New Mexico*	21,698	1,705	6,987	4.1	7,111	55,386	7.8	6,974	18,074	2.6
New York*	124,703	1,771	2,215	1.3	43,377	529,457	12.2	47,877	138,751	2.9
North Carolina	26,473	2,019	6,495	3.2	10,358	78,078	7.5	9,726	20,559	2.1
North Dakota*	636	0	0	.	225	1,162	5.2	263	645	2.5
Ohio*	109,726	14,919	49,684	3.3	67,144	934,659	13.9	48,362	117,405	2.4
Oklahoma	10,486	504	1,878	3.7	2,121	31,347	14.8	2,687	4,795	1.8
Oregon*	28,724	24	46	1.9	16,268	416,494	25.6	10,662	25,344	2.4
Pennsylvania*	118,829	23,088	468,159	20.3	47,734	623,602	13.1	37,591	76,382	2.0
Puerto Rico*	3,839	34	37	1.1	1,781	7,727	4.3	449	643	1.4
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	441	890	2.0	2,011	16,188	8.0	2,882	6,360	2.2
South Dakota	555	12	12	1.0	72	402	5.6	246	503	2.0
Tennessee	18,499	371	512	1.4	5,091	23,327	4.6	7,134	14,280	2.0
Texas	17,812	728	1,647	2.3	3,652	23,533	6.4	6,988	15,797	2.3
Utah	6,152	17	31	1.8	959	16,969	17.7	1,774	3,589	2.0
Vermont*	10,256	2,177	14,184	6.5	3,924	45,622	11.6	2,532	5,264	2.1
Virginia	15,612	41	43	1.0	4,470	35,402	7.9	3,912	7,418	1.9
Virgin Islands*	14	0	0	.	DS	DS	DS	DS	DS	DS
Washington*	51,226	6,387	88,147	13.8	17,096	94,899	5.6	19,802	48,301	2.4
West Virginia*	26,103	2,552	20,526	8.0	15,813	195,405	12.4	6,610	11,965	1.8
Wisconsin	25,771	2,340	4,611	2.0	8,563	71,010	8.3	9,084	21,740	2.4
Wyoming	657	60	217	3.6	74	435	5.9	276	561	2.0

**Appendix Table D.9.ii. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

State	Total number of Medicaid beneficiaries with OUD	Inpatient care			MAT			Observation care			Partial hospitalization		
		Count of beneficiaries with service	Total count of days	Average # per beneficiary	Count of beneficiaries with service	Total count of days	Average # per beneficiary	Count of beneficiaries with service	Total count of days	Average # per beneficiary	Count of beneficiaries with service	Total count of days	Average # per beneficiary
<b>United States</b>	<b>1,406,455</b>	<b>395,168</b>	<b>4,474,510</b>	<b>11.3</b>	<b>839,698</b>	<b>12,858,310</b>	<b>153.1</b>	<b>60,803</b>	<b>216,644</b>	<b>3.6</b>	<b>4,742</b>	<b>68,516</b>	<b>14.4</b>
Alabama	9,001	3,315	50,889	15.4	5,004	963,514	192.5	181	677	3.7	DS	DS	DS
Alaska*	6,231	1,410	14,677	10.4	4,335	528,210	121.8	237	1,082	4.6	0	.	.
Arizona*	45,540	16,023	176,367	11.0	22,517	2,113,376	93.9	2,811	13,272	4.7	DS	DS	DS
Arkansas*	3,706	1,802	26,604	14.8	1,422	140,176	98.6	182	860	4.7	DS	DS	DS
California*	120,938	30,822	330,349	10.7	78,468	13,863,014	176.7	2,487	9,252	3.7	DS	DS	DS
Colorado*	23,132	5,734	62,237	10.9	12,338	1,281,352	103.9	1,717	8,282	4.8	DS	DS	DS
Connecticut*	38,364	7,822	111,888	14.3	29,504	6,400,840	216.9	993	2,007	2.0	646	5,732	8.9
Delaware*	11,624	3,597	49,314	13.7	8,729	1,642,541	188.2	268	1,129	4.2	612	11,328	18.5
District of Columbia*	3,460	1,413	18,618	13.2	2,114	412,288	195.0	120	708	5.9	0	.	.
Florida	31,099	13,406	161,301	12.0	12,051	689,040	57.2	2,928	16,288	5.6	DS	DS	DS
Georgia	11,298	4,060	52,102	12.8	4,570	608,741	133.2	699	2,934	4.2	94	924	9.8
Hawaii*	4,000	1,051	12,135	11.5	2,000	346,718	173.4	189	828	4.4	44	453	10.3
Idaho	3,356	1,098	4,721	4.3	1,292	183,572	142.1	123	230	1.9	0	.	.
Illinois*	40,077	16,547	229,611	13.9	15,492	1,895,776	122.4	2,315	5,525	2.4	0	.	.
Indiana*	37,359	10,880	93,193	8.6	25,780	3,722,067	144.4	1,132	3,615	3.2	242	4,006	16.6
Iowa*	7,431	2,596	28,405	10.9	4,403	573,656	130.3	632	2,442	3.9	353	6,784	19.2
Kansas	3,098	1,115	12,308	11.0	931	123,715	132.9	131	490	3.7	0	.	.
Kentucky*	53,471	13,890	131,491	9.5	35,569	5,648,004	158.8	1,598	6,087	3.8	29	378	13.0
Louisiana*	23,630	9,598	118,341	12.3	12,339	1,902,034	154.1	640	2,145	3.4	0	.	.
Maine	9,581	1,114	6,106	5.5	7,659	1,741,650	227.4	196	361	1.8	0	.	.
Maryland*	65,778	12,691	118,494	9.3	50,665	5,144,709	101.5	3,836	17,344	4.5	DS	DS	DS
Massachusetts*	78,367	21,376	252,489	11.8	49,416	8,990,998	181.9	4,693	10,837	2.3	679	5,579	8.2
Michigan*	49,293	11,117	99,112	8.9	22,922	4,540,678	198.1	1,940	6,926	3.6	DS	DS	DS
Minnesota*	26,289	8,536	120,541	14.1	15,394	2,728,102	177.2	1,828	8,176	4.5	24	228	9.5
Mississippi	2,925	1,138	11,621	10.2	1,659	267,834	161.4	188	929	4.9	0	.	.
Missouri	15,164	5,138	51,570	10.0	7,931	1,163,952	146.8	758	1,710	2.3	0	.	.
Montana*	6,359	1,715	15,745	9.2	4,404	690,571	156.8	331	1,060	3.2	24	484	20.2
Nebraska	1,395	420	4,273	10.2	690	86,339	125.1	47	180	3.8	0	.	.
Nevada*	12,677	4,472	59,344	13.3	4,702	631,910	134.4	692	2,662	3.8	68	474	7.0
New Hampshire*	7,789	1,050	9,615	9.2	5,893	817,547	138.7	147	419	2.9	0	.	.



Appendix Table D.9.ii (continued)

State	Total number of Medicaid beneficiaries with OUD	Inpatient care			MAT			Observation care			Partial hospitalization		
		Count of beneficiaries with service	Total count of days	Average # per beneficiary	Count of beneficiaries with service	Total count of days	Average # per beneficiary	Count of beneficiaries with service	Total count of days	Average # per beneficiary	Count of beneficiaries with service	Total count of days	Average # per beneficiary
New Jersey*	28,575	8,103	88,919	11.0	18,848	1,933,423	102.6	1,710	6,396	3.7	448	11,689	26.1
New Mexico*	21,698	5,262	25,578	4.9	15,886	2,802,792	176.4	708	1,015	1.4	116	503	4.3
New York*	124,703	43,350	710,478	16.4	59,589	9,321,616	156.4	4,309	16,933	3.9	330	7,029	21.3
North Carolina	26,473	8,064	92,426	11.5	11,706	1,289,835	110.2	1,177	5,536	4.7	0	.	.
North Dakota*	636	255	3,224	12.6	287	36,238	126.3	56	71	1.3	31	210	6.8
Ohio*	109,726	31,135	226,690	7.3	70,534	10,315,264	146.2	6,448	12,652	2.0	16	60	3.8
Oklahoma	10,486	3,163	34,751	11.0	3,125	450,023	144.0	227	779	3.4	DS	DS	DS
Oregon*	28,724	6,156	66,851	10.9	18,356	3,082,758	167.9	1,052	5,144	4.9	DS	DS	DS
Pennsylvania*	118,829	26,622	299,786	11.3	76,238	12,355,138	162.1	4,312	12,793	3.0	77	832	10.8
Puerto Rico*	3,839	765	7,648	10.0	2,572	454,333	176.6	85	312	3.7	20	59	3.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	2,314	23,941	10.3	3,737	603,884	161.6	282	1,424	5.0	0	.	.
South Dakota	555	229	3,127	13.7	186	23,449	126.1	37	193	5.2	0	.	.
Tennessee	18,499	8,252	88,376	10.7	6,510	653,911	100.4	860	3,095	3.6	730	10,011	13.7
Texas	17,812	6,878	75,629	11.0	8,544	1,146,259	134.2	1,447	6,361	4.4	110	1,004	9.1
Utah	6,152	1,401	13,023	9.3	2,213	248,724	112.4	142	501	3.5	0	.	.
Vermont*	10,256	1,801	21,359	11.9	8,465	2,084,863	246.3	143	584	4.1	0	.	.
Virginia	15,612	3,374	18,102	5.4	9,546	1,245,659	130.5	338	687	2.0	49	749	15.3
Virgin Islands*	14	DS	DS	DS	DS	DS	DS	0	.	.	0	.	.
Washington*	51,226	10,590	124,724	11.8	34,550	4,272,341	123.7	1,456	6,691	4.6	0	.	.
West Virginia*	26,103	4,968	46,425	9.3	20,037	3,544,855	176.9	718	2,457	3.4	DS	DS	DS
Wisconsin	25,771	7,322	67,265	9.2	18,366	2,851,543	155.3	1,217	4,497	3.7	0	.	.
Wyoming	657	218	2,727	12.5	210	23,271	110.8	40	66	1.7	0	.	.

**Appendix Table D.9.iii. Average number of OUD services received by Medicaid beneficiaries who received a given service in 2018, by service type**

State	Total Number of Medicaid beneficiaries with OUD	Physician services			Screening/assessment			Treatment program		
		Count of beneficiary with service	Total count of claims	Average # per beneficiary	Count of beneficiaries with service	Total count of claims	Average # per beneficiary	Count of Beneficiaries with service	Total count of days	Average # per beneficiary
<b>United States</b>	<b>1,406,455</b>	<b>623,591</b>	<b>4,095,734</b>	<b>6.6</b>	<b>390,650</b>	<b>971,371</b>	<b>2.5</b>	<b>176,383</b>	<b>5,487,368</b>	<b>31.1</b>
Alabama	9,001	3,390	13,838	4.1	989	1,336	1.4	21	1,333	63.5
Alaska*	6,231	4,284	29,340	6.8	2,075	3,366	1.6	0	.	.
Arizona*	45,540	20,467	91,934	4.5	20,316	42,124	2.1	4,286	153,263	35.8
Arkansas*	3,706	928	3,266	3.5	354	642	1.8	DS	DS	DS
California*	120,938	26,907	95,427	3.5	6,312	9,924	1.6	5,693	228,447	40.1
Colorado*	23,132	12,219	63,287	5.2	3,222	5,284	1.6	33	1,520	46.1
Connecticut*	38,364	12,804	81,559	6.4	12,423	22,364	1.8	6,333	101,671	16.1
Delaware*	11,624	7,535	51,465	6.8	3,085	5,451	1.8	1,528	41,899	27.4
District of Columbia*	3,460	1,030	5,900	5.7	922	2,588	2.8	0	.	.
Florida	31,099	5,664	17,608	3.1	5,261	8,475	1.6	33	268	8.1
Georgia	11,298	4,146	19,275	4.6	1,643	4,416	2.7	139	1,248	9.0
Hawaii*	4,000	1,669	7,874	4.7	681	1,004	1.5	173	5,970	34.5
Idaho	3,356	1,503	8,800	5.9	500	2,247	4.5	DS	DS	DS
Illinois*	40,077	14,399	56,983	4.0	14,183	27,977	2.0	DS	DS	DS
Indiana*	37,359	15,754	97,189	6.2	9,967	14,457	1.5	586	5,715	9.8
Iowa*	7,431	4,017	17,327	4.3	3,414	11,957	3.5	1,315	33,143	25.2
Kansas	3,098	953	2,901	3.0	707	1,049	1.5	351	10,349	29.5
Kentucky*	53,471	33,983	333,426	9.8	20,288	32,156	1.6	8,020	163,958	20.4
Louisiana*	23,630	6,750	23,994	3.6	5,713	9,018	1.6	6,231	169,523	27.2
Maine	9,581	4,732	31,289	6.6	3,635	15,012	4.1	761	19,569	25.7
Maryland*	65,778	36,327	217,631	6.0	31,262	49,281	1.6	12,654	385,742	30.5
Massachusetts*	78,367	42,686	466,346	10.9	19,732	35,617	1.8	15,654	400,399	25.6
Michigan*	49,293	27,677	129,460	4.7	21,662	70,810	3.3	9,801	258,218	26.3
Minnesota*	26,289	13,371	54,583	4.1	10,607	23,141	2.2	8,098	448,930	55.4
Mississippi	2,925	1,284	6,846	5.3	475	733	1.5	11	80	7.3
Missouri	15,164	7,188	32,979	4.6	4,232	7,072	1.7	1,892	41,113	21.7
Montana*	6,359	4,393	52,755	12.0	1,456	2,152	1.5	617	11,174	18.1
Nebraska	1,395	381	1,555	4.1	197	272	1.4	85	4,367	51.4
Nevada*	12,677	4,743	16,877	3.6	3,850	10,468	2.7	346	6,677	19.3
New Hampshire*	7,789	3,555	23,004	6.5	1,633	2,834	1.7	1,291	22,258	17.2

Appendix Table D.9.iii (continued)

State	Total Number of Medicaid beneficiaries with OUD	Physician services			Screening/assessment			Treatment program		
		Count of beneficiary with service	Total count of claims	Average # per beneficiary	Count of beneficiaries with service	Total count of claims	Average # per beneficiary	Count of Beneficiaries with service	Total count of days	Average # per beneficiary
New Jersey*	28,575	11,050	53,080	4.8	10,006	64,600	6.5	3,554	91,834	25.8
New Mexico*	21,698	10,165	56,211	5.5	6,566	14,409	2.2	1,144	28,737	25.1
New York*	124,703	39,264	173,503	4.4	11,905	22,040	1.9	4,622	136,828	29.6
North Carolina	26,473	14,849	124,667	8.4	6,687	11,689	1.7	2,325	52,931	22.8
North Dakota*	636	348	2,540	7.3	160	304	1.9	106	1,771	16.7
Ohio*	109,726	66,574	535,205	8.0	44,144	74,736	1.7	26,576	844,913	31.8
Oklahoma	10,486	4,911	23,058	4.7	1,130	1,435	1.3	0	.	.
Oregon*	28,724	13,871	62,577	4.5	11,329	18,473	1.6	3,016	136,367	45.2
Pennsylvania*	118,829	51,674	364,938	7.1	37,265	101,883	2.7	35,815	1,356,290	37.9
Puerto Rico*	3,839	2,170	11,268	5.2	703	880	1.3	0	.	.
Rhode Island*	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	3,019	21,029	7.0	2,227	5,501	2.5	664	17,933	27.0
South Dakota	555	154	444	2.9	78	104	1.3	23	1,384	60.2
Tennessee	18,499	8,621	45,298	5.3	4,584	7,414	1.6	3,349	75,598	22.6
Texas	17,812	5,042	17,809	3.5	2,332	3,851	1.7	621	10,675	17.2
Utah	6,152	1,508	5,889	3.9	889	2,165	2.4	104	5,884	56.6
Vermont*	10,256	5,519	46,531	8.4	2,405	3,808	1.6	1,202	24,621	20.5
Virginia	15,612	5,449	34,552	6.3	1,592	3,525	2.2	279	2,851	10.2
Virgin Islands*	14	DS	DS	DS	DS	DS	DS	0	.	.
Washington*	51,226	26,151	205,888	7.9	15,526	34,360	2.2	5,156	148,056	28.7
West Virginia*	26,103	16,166	186,801	11.6	8,138	10,970	1.3	678	14,502	21.4
Wisconsin	25,771	12,044	68,320	5.7	12,081	165,810	13.7	1,197	19,359	16.2
Wyoming	657	303	1,408	4.6	107	187	1.7	0	.	.

Source: Mathematica’s analysis of the 2018 TAF release 1, Medicaid beneficiaries 12 years and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims.

We counted certain service types by days (inpatient care, observation care, partial hospitalization, and treatment program), whereas we counted other service types by claims (consultation, counseling, emergency services, MAT, physician services, screening/assessment). A claim roughly represents a single service, such as a physician service or screening/assessment.

We did not count claims with missing dates of service, procedure codes, or other information. The services presented in the table are for a SUD; if the claim did not have a SUD diagnosis code, we did not count the service.

Variation across states in the number of services beneficiaries received may be a result of billing practices, policies or programs (for instance, if a state covers specific services), or data quality issues.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

## Appendix Table D.9.iii (continued)

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.10. Number and percentage of Medicaid beneficiaries treated for an OUD in 2018, by delivery system**

State	Total number of Medicaid beneficiaries with OUD	Total with a managed care SUD claim		Total with a FFS SUD claim	
		Number	Percent	Number	Percent
<b>United States</b>	<b>1,406,455</b>	<b>1,051,460</b>	<b>74.8</b>	<b>709,278</b>	<b>50.4</b>
Alabama	9,001	17	0.2	9,001	100.0
Alaska*	6,231	0	0.0	6,231	100.0
Arizona*	45,540	44,050	96.7	2,396	5.3
Arkansas*	3,706	0	0.0	3,706	100.0
California*	120,938	64,867	53.6	103,428	85.5
Colorado*	23,132	4,491	19.4	21,219	91.7
Connecticut*	38,364	0	0.0	38,364	100.0
Delaware*	11,624	11,217	96.5	1,810	15.6
District of Columbia*	3,460	1,384	40.0	2,234	64.6
Florida	31,099	28,628	92.1	4,539	14.6
Georgia	11,298	4,539	40.2	7,071	62.6
Hawaii*	4,000	4,000	100.0	17	0.4
Idaho	3,356	680	20.3	3,081	91.8
Illinois*	40,077	34,117	85.1	15,430	38.5
Indiana*	37,359	33,982	91.0	7,225	19.3
Iowa*	7,431	7,020	94.5	1,320	17.8
Kansas	3,098	3,085	99.6	42	1.4
Kentucky*	53,471	53,001	99.1	995	1.9
Louisiana*	23,630	22,763	96.3	1,240	5.2
Maine	9,581	0	0.0	9,581	100.0
Maryland*	65,778	31,059	47.2	63,418	96.4
Massachusetts*	78,367	60,214	76.8	50,404	64.3
Michigan*	49,293	45,650	92.6	17,300	35.1
Minnesota*	26,289	22,411	85.2	12,708	48.3
Mississippi	2,925	2,566	87.7	948	32.4
Missouri	15,164	3,738	24.7	14,873	98.1
Montana*	6,359	0	0.0	6,359	100.0
Nebraska	1,395	1,391	99.7	25	1.8
Nevada*	12,677	8,622	68.0	4,826	38.1
New Hampshire*	7,789	5,643	72.4	3,959	50.8
New Jersey*	28,575	20,713	72.5	19,146	67.0
New Mexico*	21,698	20,913	96.4	1,068	4.9
New York*	124,703	108,415	86.9	69,001	55.3
North Carolina	26,473	15,089	57.0	22,452	84.8
North Dakota*	636	DS	DS	635	99.8
Ohio*	109,726	101,489	92.5	62,080	56.6
Oklahoma	10,486	0	0.0	10,486	100.0
Oregon*	28,724	26,341	91.7	8,109	28.2
Pennsylvania*	118,829	116,013	97.6	14,793	12.4
Puerto Rico*	3,839	3,839	100.0	0	0.0
Rhode Island*	DQ	DQ	DQ	DQ	DQ
South Carolina	7,677	6,355	82.8	2,454	32.0
South Dakota	555	0	0.0	555	100.0
Tennessee	18,499	16,941	91.6	2,150	11.6
Texas	17,812	15,361	86.2	4,186	23.5

Appendix Table D.10 (continued)

State	Total number of Medicaid beneficiaries with OUD	Total with a managed care SUD claim		Total with a FFS SUD claim	
		Number	Percent	Number	Percent
Utah	6,152	3,293	53.5	5,158	83.8
Vermont*	10,256	0	0.0	10,256	100.0
Virginia	15,612	12,933	82.8	3,937	25.2
Virgin Islands*	14	0	0.0	14	100.0
Washington*	51,226	46,650	91.1	11,274	22.0
West Virginia*	26,103	19,550	74.9	23,626	90.5
Wisconsin	25,771	18,430	71.5	23,491	91.2
Wyoming	657	0	0.0	657	100.0

Source: Mathematica's analysis of the 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims.

We categorized SUD claims as covered under managed care if they were managed care encounter records or if they had a managed care plan ID.

We categorized claims as paid for by FFS if they were FFS claims without a managed care plan ID. Beneficiaries could have one or both types of claims during the year.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.

**Appendix Table D.11. Progression of care for Medicaid beneficiaries treated for an OUD who received services in 2018 in an inpatient or a residential setting**

State	Number of beneficiaries with OUD who received services in an inpatient or a residential setting	Received at least one outpatient or home- or community-based SUD service within 30 days of discharge		Received more than one outpatient or home- or community-based service within 30 days of discharge	
		Number	Percent	Number	Percent
<b>United States</b>	<b>453,935</b>	<b>246,496</b>	<b>54.3</b>	<b>196,909</b>	<b>43.4</b>
Alabama	3,275	1,526	46.6	980	29.9
Alaska*	1,785	1,013	56.8	779	43.6
Arizona*	16,139	8,545	52.9	7,045	43.7
Arkansas*	1,761	441	25.0	239	13.6
California*	32,742	13,588	41.5	10,735	32.8
Colorado*	5,316	1,174	22.1	571	10.7
Connecticut*	8,596	5,958	69.3	5,049	58.7
Delaware*	4,297	3,016	70.2	2,516	58.6
District of Columbia*	1,431	588	41.1	436	30.5
Florida	13,440	3,994	29.7	2,578	19.2
Georgia	4,063	1,223	30.1	726	17.9
Hawaii*	1,098	493	44.9	337	30.7
Idaho	1,222	349	28.6	214	17.5
Illinois*	17,470	8,222	47.1	5,331	30.5
Indiana*	11,269	5,174	45.9	3,699	32.8
Iowa*	2,841	1,671	58.8	1,339	47.1
Kansas	1,252	463	37.0	275	22.0
Kentucky*	16,851	8,910	52.9	6,641	39.4
Louisiana*	11,892	5,042	42.4	4,109	34.6
Maine	1,094	746	68.2	623	56.9
Maryland*	18,122	11,698	64.6	10,182	56.2
Massachusetts*	31,363	22,990	73.3	20,514	65.4
Michigan*	18,464	10,169	55.1	7,714	41.8
Minnesota*	8,475	4,998	59.0	4,089	48.2
Mississippi	1,103	384	34.8	214	19.4
Missouri	5,216	2,700	51.8	2,105	40.4
Montana*	1,910	1,054	55.2	818	42.8
Nebraska	458	136	29.7	71	15.5
Nevada*	4,571	2,034	44.5	1,472	32.2
New Hampshire*	1,642	902	54.9	646	39.3
New Jersey*	8,521	4,425	51.9	3,806	44.7
New Mexico*	5,234	2,802	53.5	2,062	39.4
New York*	47,243	32,488	68.8	28,134	59.6
North Carolina	8,205	3,699	45.1	2,594	31.6
North Dakota*	248	98	39.5	66	26.6
Ohio*	38,890	25,849	66.5	21,883	56.3
Oklahoma	3,176	978	30.8	526	16.6
Oregon*	9,633	5,750	59.7	4,757	49.4
Pennsylvania*	27,055	13,485	49.8	10,181	37.6
Puerto Rico*	997	398	39.9	267	26.8

Appendix Table D.11 (continued)

State	Number of beneficiaries with OUD who received services in an inpatient or a residential setting	Received at least one outpatient or home- or community-based SUD service within 30 days of discharge		Received more than one outpatient or home- or community-based service within 30 days of discharge	
		Number	Percent	Number	Percent
Rhode Island*	DQ	DQ	DQ	DQ	DQ
South Carolina	2,581	1,013	39.2	738	28.6
South Dakota	223	69	30.9	45	20.2
Tennessee	9,509	4,390	46.2	2,809	29.5
Texas	6,950	2,290	32.9	1,492	21.5
Utah	1,964	840	42.8	666	33.9
Vermont*	2,254	1,620	71.9	1,275	56.6
Virginia	3,381	1,132	33.5	779	23.0
Virgin Islands*	DS	0	.	0	.
Washington*	15,848	9,202	58.1	7,517	47.4
West Virginia*	5,359	2,335	43.6	1,745	32.6
Wisconsin	7,288	4,357	59.8	3,470	47.6
Wyoming	218	75	34.4	50	22.9

Source: Mathematica's analysis of 2018 TAF release 1, Medicaid beneficiaries ages 12 and older who have full or comprehensive benefits.

Notes: The U.S. average is an overall average across the population in the states included in the table.

To identify beneficiaries with an OUD, we used diagnosis codes, National Drug Codes, and select procedure codes on Medicaid claims.

\*The state expanded Medicaid for adults by January 1, 2018.

DS = Data suppressed for confidentiality reasons because the group included fewer than 11 beneficiaries. If the size of a group that a state did not report because of confidentiality can be identified by using other numbers from that state, we did not report a second group within that state. Slightly different totals across the tables are a function of differences in the need to suppress data from one table to the next.

DQ = Not reported because of a severe data quality issue. Rhode Island had such a severe data quality issue in 2018 that the state was not included in the table. For additional information on data quality issues, please see Appendix B.



**This page left blank for double-sided printing.**

**APPENDIX E:**

**COMPOSITION OF ENROLLMENT CATEGORIES**

**This page left blank for double-sided printing.**

**Appendix Table E.1. Composition of enrollment categories**

Enrollment category	Eligibility group from the TAF data dictionary
Adult	Parents and other caretaker relatives
	Transitional medical assistance
	Extended Medicaid due to earnings
	Extended Medicaid due to spousal support
	Former foster care children
	Optional coverage of parents and other caretaker relatives
	Individuals electing COBRA continuation coverage
	Individuals above 133% of FPL under age 65
	Certain individuals needing treatment for breast or cervical cancer
	Individuals eligible for family planning services
	Individuals with tuberculosis
	Medically needy parents and other caretakers
	Family planning services (expansion group)
Other expansion group	
Children	Deemed newborns
	Infants and children under 19
	Children with Title IV-E adoption assistance, foster care, or guardianship care
	Reasonable classifications of individuals under age 21
	Children with non-IV-E adoption assistance
	Independent foster care adolescents
	Optional targeted low-income children
	Medically needy children under age 18
Medically needy children age 18 through 20	
Pregnant	Pregnant women
	Medically needy pregnant women
Aged, blind, disabled	Individual receiving SSI
	ABD individuals in 209(b) states
	Individuals receiving mandatory state supplements
	Individuals who are essential spouses
	Institutionalized individuals continuously eligible since 1973
	Individuals who lost eligibility for SSI/SSP Due to an Increase in OASDI benefits in 1972
Individuals who would be eligible for SSI/SSP	

Appendix Table E.1 (continued)

Enrollment category	Eligibility group from the TAF data dictionary
Aged, blind, disabled (cont'd)	Blind or disabled individuals eligible in 1973
	Disabled widows and widowers ineligible for SSI due to increase in OASDI
	Disabled widows and widowers ineligible for SSI due to early receipt of social security
	Working disabled under 1619 (b)
	Disabled adult children
	Qualified Medicare beneficiaries
	Qualified disabled and working individuals
	Specific low-income Medicare beneficiaries
	Qualifying individuals
	ABD eligible but not receiving cash assistance
	Individuals eligible for cash assistance except for institutionalization
	Individuals receiving HCBS under institutional rules
	Optional state supplemental recipients- 1634 states, and SSI criteria states with 1616 agreements
	Optional state supplement recipients- 209(b) states, and SSI criteria states without 1616 agreements
	Institutionalized individuals eligible under a special income level
	Individuals participating in a PACE program under institutional rules
	Individuals receiving hospice care
	Qualified disabled children under age 19
	Poverty level aged or disabled
	Work incentives eligibility group
	Ticket to work basic group
	Ticket to work medical improvements group
	Family Opportunity Act children with disabilities
	Individuals eligible for HCBS
Individuals eligible for HCBS- special income level	
Medically needy ABD	
Medically needy blind or disabled individuals eligible in 1973	
Individuals with mental health conditions (expansion group)	
VIII Group adults	Adult group—individuals at or below 133% FPL, 19-64, newly eligible for all states
	Adult group—individuals at or below 133% FPL, 19-64, not newly eligible for non 1905z(3) states
	Adult group—individuals at or below 133% FPL, not newly eligible parent/caretaker relative(s) in 1905z(3) states
	Individuals at or below 133% FPL, not newly eligible non-parent/caretaker relative(s) in 1905z(3) states

**APPENDIX F:**

**MEDICAID AND CHIP PAYMENT AND ACCESS COMMISSION (MACPAC)  
PUBLIC LETTER ON ENROLLMENT CATEGORIES FOR THE SUPPORT  
FOR PATIENTS AND COMMUNITY ACT T-MSIS SUD DATA BOOK**

**This page left blank for double-sided printing.**



Advising Congress on  
Medicaid and CHIP Policy

## Commissioners

Penny Thompson, MPA, *Chair*  
 Stacey Lampkin, FSA, MAAA, MPA,  
*Vice Chair*  
 Melanie Bella, MBA  
 Brian Burwell  
 Martha Carter, DHSc, MBA, APRN,  
 CNM  
 Frederick Cerise, MD, MPH  
 Kisha Davis, MD, MPH  
 Toby Douglas, MPP, MPH  
 Leanna George  
 Darin Gordon  
 Christopher Gorton, MD, MHSA  
 Charles Milligan, JD, MPH  
 Sheldon Retchin, MD, MSPH  
 William Scanlon, PhD  
 Peter Szilagyi, MD, MPH  
 Alan Weil, JD, MPP  
 Katherine Weno, DDS, JD

Anne L. Schwartz, PhD,  
*Executive Director*

March 21, 2019

The Honorable Alex M. Azar II Secretary  
 U.S. Department of Health and Human Services 200 Independence  
 Avenue, SW  
 Washington, DC 20201

Dear Secretary Azar:

Section 1015 of the SUPPORT for Patients and Communities Act (the SUPPORT Act, P.L. 115-271) requires the Secretary of the U.S. Department of Health and Human Services (HHS) to publish a report with comprehensive data on the prevalence of substance use disorders in the Medicaid population and the services provided under Medicaid for the treatment of such disorders. Among other data, the report must include the number and percentage of individuals in each of the major Medicaid enrollment categories who have been diagnosed with a substance use disorder and whether those individuals are enrolled under the Medicaid state plan or a waiver.

Section 1015(a)(2)(A) of the SUPPORT Act charges the Medicaid and CHIP Payment and Access Commission (MACPAC) with defining in a public letter the major Medicaid enrollment categories for purposes of this report.

Accordingly, we recommend that HHS use the following eligibility groups in the report:

- children age 0–18, excluding those eligible on the basis of a disability;
- adults eligible under Section 1902(a)(10)(A)(i)(VIII) of the Social Security Act as added in the Patient Protection and Affordable Care Act (P.L. 111-148, as amended);
- other adults age 19–64, such as parents and other caretaker relatives, excluding those eligible on the basis of a disability;
- individuals over age 65;
- adults age 19–64 who are eligible on the basis of a disability;
- children age 0–18 who are eligible on the basis of a disability;
- pregnant women; and,
- individuals dually eligible for Medicaid and Medicare who receive full Medicaid benefits.

•••  
 Medicaid and CHIP Payment  
 and Access Commission

1800 M Street NW  
 Suite 650 South  
 Washington, DC 20036

[www.macpac.gov](http://www.macpac.gov)  
 202-350-2000  
 202-273-2452



If data are available, MACPAC also suggests including a number of special populations that may be particularly affected by the opioid epidemic. For example, children who qualify for Medicaid on the basis of child welfare assistance generally have a high prevalence of behavioral health conditions (MACPAC 2015). Similarly, full-benefit dually eligible beneficiaries under age 65 experience higher rates of behavioral health conditions than such beneficiaries over age 65 (MACPAC and MedPAC 2018). Older adolescents represent an additional category for consideration, as buprenorphine may be prescribed to patients age 16 and older with opioid use disorders. Finally, federal guidance issued in 2018 noted the critical role played by Medicaid in the care of infants with neonatal abstinence syndrome. Although not characterized as a substance use disorder, neonatal abstinence syndrome results from exposure to opioids and affects thousands of infants whose care is paid for by Medicaid (CMS 2018).

We recognize that T-MSIS data are still being validated and there may be gaps in the data available at this time, making it challenging to report on all of the eligibility categories we recommend. Even so, we encourage HHS to report on these eligibility categories in its inaugural data book, note instances where data are incomplete, and build the content of subsequent editions as data improvements are made.

If you have any questions or would like to discuss our recommendations, please feel free to contact me or have your staff contact Anne Schwartz, executive director, at 202-350-2000.

Sincerely,



Penny Thompson  
Chair

cc: The Honorable Seema Verma, Administrator, Centers for Medicare & Medicaid Services

## References

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2018. CMCS informational bulletin regarding “Neonatal abstinence syndrome: A critical role for Medicaid in the care of infants.” June 11, 2018. <https://www.medicaid.gov/federal-policy-guidance/downloads/cib060818.pdf>

Medicaid and CHIP Payment and Access Commission (MACPAC). 2015. Chapter 4: Behavioral health in the Medicaid program—people, use, and expenditures. In *Report to Congress on Medicaid and CHIP*. June 2015. Washington, DC: MACPAC. <https://www.macpac.gov/publication/behavioral-health-in-the-medicaid-program%E2%80%95people-use-and-expenditures/>

Medicaid and CHIP Payment and Access Commission and Medicare Payment Advisory Commission (MACPAC and MedPAC). 2018. *Data book: Beneficiaries dually eligible for Medicare and Medicaid*. Washington, DC: MACPAC and MedPAC. <https://www.macpac.gov/publication/data-book-beneficiaries-dually-eligible-for-medicare-and-medicaid-3/>



Medicaid and CHIP Payment  
and Access Commission

[www.macpac.gov](http://www.macpac.gov)

**APPENDIX G:**  
**STATUTE-TO-TABLES CROSSWALK**

**This page left blank for double-sided printing.**

## Appendix Table G.1. Crosswalk between statutory language in the SUPPORT for Patients and Communities Act and the SUD Data Book contents<sup>60</sup>

Statute section	Corresponding SUD Data Book table
<p>A. The number and percentage of individuals enrolled in the State Medicaid plan or waiver of such plan in each of the major enrollment categories (as defined in a public letter from the Medicaid and CHIP Payment and Access Commission to the Secretary) who have been diagnosed with a substance use disorder and whether such individuals are enrolled under the State Medicaid plan or a waiver of such plan, including the specific waiver authority under which they are enrolled, to the extent available.</p>	<p>Table A.1 Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by disorder</p> <p>Table A.2. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by disorder</p> <p>Table A.3. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category</p> <p>Table A.4. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by major enrollment category</p> <p>Table A.5. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status</p> <p>Table A.6. Distribution of Medicaid beneficiaries treated for a SUD in 2018, by age group and disability status</p> <p>Table A.7. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018 who were dually eligible, and beneficiaries who were dually eligible and treated for a SUD</p>
<p>B. A list of the substance use disorder treatment services by each major type of service, such as counseling, medication-assisted treatment, peer support, residential treatment, and inpatient care, for which beneficiaries in each State received at least 1 service under the State Medicaid plan or a waiver of such plan.</p>	<p>Table B.1. SUD treatment services used by Medicaid beneficiaries</p> <p>Table B.2. SUD treatment service types not billed, by state</p>
<p>C. The number and percentage of individuals with a substance use disorder diagnosis enrolled in the State Medicaid plan or waiver of such plan who received substance use disorder treatment services under such plan or waiver by each major type of service under subparagraph (B) within each major setting type, such as outpatient, inpatient, residential, and other home-based and community-based settings.</p>	<p>Table C.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service type</p> <p>Table C.2. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by service setting</p>
<p>D. The number of services provided under the State Medicaid plan or waiver of such plan per individual with a substance use disorder diagnosis enrolled in such plan or waiver for each major type of service under subparagraph (B).</p>	<p>Table D.1. Average number of SUD services received by Medicaid beneficiaries who received a given service in 2018, by service type</p>
<p>E. The number and percentage of individuals enrolled in the State Medicaid plan or waiver, by major enrollment category, who received substance use disorder treatment through—</p> <ul style="list-style-type: none"> <li>(i) a Medicaid managed care entity (as defined in section 1932(a)(1)(B) of the Social Security Act (42 U.S.C. 1396u–2(a)(1)(B))), including the number of such individuals who received such assistance through a prepaid inpatient health plan or a prepaid ambulatory health plan;</li> <li>(ii) a fee-for-service payment model; or</li> <li>(iii) an alternative payment model, to the extent available.</li> </ul>	<p>Table E.1. Number and percentage of Medicaid beneficiaries treated for a SUD in 2018, by delivery system</p>

<sup>60</sup> Tables that are split between multiple pages are given lower-case Roman numerals at the end of the table number to indicate whether the “component table” is the first component (i), second component (ii), and so on.

Appendix Table G.1 (continued)

Statute section	Corresponding SUD Data Book table
F. The number and percentage of individuals with a substance use disorder who receive substance use disorder treatment services in an outpatient or home-based and community-based setting after receiving treatment in an inpatient or residential setting, and the number of services received by such individuals in the outpatient or home-based and community-based setting	Table F.1. Progression of care for Medicaid beneficiaries treated for a SUD who received services in an inpatient or a residential setting in 2018