

Medicaid and CHIP Business Information Systems (MACBIS)

T-MSIS Behavioral Health (BH) Data Book: Treatment of BH Conditions in Medicaid and CHIP, 2024

Version 1.0

Date: November 5th, 2026

As Required by the
Consolidated Appropriations Act (CAA), 2024 (P.L. 118-42)

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U.S. Department of Health and Human Services



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1. Introduction and Key Findings

On March 9, 2024, the Consolidated Appropriations Act, 2024 (CAA, 2024; P.L. 118-42) was signed into law. Section 202 of Division G, Title I, Subtitle B of the CAA, 2024 added a new Section 1948 to Title XIX of the Social Security Act. It requires the publication of "data reported by States through the Transformed Medicaid Statistical Information System (T-MSIS) (or a successor system) relating to substance use disorder and mental health services provided to individuals enrolled under a State plan under this title or a State child health plan under title XXI (or under a waiver of such plans)," which is hereafter referred to as the Transformed Medicaid Statistical Information System (T-MSIS) Behavioral Health (BH) Data Book.[1] The first T-MSIS BH Data Book was published on August 22, 2025, 18 months after the passage of the law. The CAA, 2024 requires the U.S. Department of Health and Human Services (HHS) to issue an updated version of the BH Data Book no later than January 1 of each calendar year thereafter, alongside an accompanying interactive component to it.

The T-MSIS BH Data Book continues the work of Section 1015 of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act, P.L. 115-271 (2018) (SUPPORT Act), which required annual T-MSIS Substance Use Disorder (SUD) Data Books covering years 2017 through 2021. The CAA, 2024 expanded on the reporting requirements of the SUPPORT Act by requiring the inclusion of (1) information on people treated for mental health (MH) conditions as well as people treated for SUD; (2) information on people enrolled in the Children's Health Insurance Program (CHIP); and (3) several new reporting sections, as described below in Sections G through M. This third annual BH Data Book reports the number of Medicaid and CHIP[2] beneficiaries treated for a SUD or MH condition and the services they received during calendar year 2024.

In 2024, the National Survey on Drug Use and Health found that less than 20.0% of the 48.4 million people aged 12 and older with a SUD received treatment, and of those with a SUD who did not receive any SUD treatment, 93.3% of children (aged 12 to 17) and 95.6% of adults (aged 18 and older) did not perceive any need for treatment (Substance Abuse and Mental Health Services Administration [SAMHSA] 2025). Treatment for mental illness was more common, but not everyone sought care. Only 52.1% of the 61.5 million adults (aged 18 and older) with any mental illness received MH treatment, and of those who did not, 79.0% did not perceive a need for treatment (SAMHSA 2025).

The purpose of the T-MSIS BH Data Book is to provide readily accessible information on Medicaid and CHIP beneficiaries treated for a SUD, a MH condition, or co-occurring SUD and MH conditions to understand trends within these populations and inform policy decisions. This document is the third annual T-MSIS BH Data Book and includes, to the extent possible, the required content as set forth in Section 202 of the CAA, 2024:

A. The number and percent of individuals enrolled under the State plan under Medicaid or CHIP 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)[3] who have

[1] Refer to the text of the CAA, 2024, including sections that corresponds to the BH Data Book.

[2] Throughout this document, "Medicaid and CHIP" refers to State plans under title XIX or a State child health plan under title XXI (or under a waiver of such plans).

[3] In a March 21, 2019 letter to the Secretary of the U.S. Department of Health and Human Services, MACPAC defined several enrollment categories for stratifying Medicaid and CHIP data: children, excluding those eligible on the basis of a disability; adults aged 19 to 64, excluding those eligible on the basis of a disability; adults

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been diagnosed with—(i) a substance use disorder; (ii) a mental health condition; or (iii) a co-occurring substance use disorder and mental health condition.

B. With respect to individuals enrolled in Medicaid or CHIP who have received a diagnosis of: i) a substance use disorder; (ii) a mental health condition; or (iii) a co-occurring substance use disorder and mental health condition, a list of the substance use disorder and mental health treatment services, including, to the extent such data are available, specific adult and pediatric services by each major type of service, such as counseling, intensive home-based services, intensive care coordination, crisis services tailored to children and youth, peer support services, family-to-family support, inpatient hospitalization, medication-assisted treatment (MAT), residential treatment, and other appropriate services as identified by the Secretary, for which beneficiaries in each State received at least 1 service under Medicaid or CHIP.

C. With respect to each diagnosis described above, the number and percent of individuals enrolled in Medicaid or CHIP who have such diagnoses and received services for such diagnosis under such Medicaid or CHIP state plans by each major type of treatment service listed under subparagraph (B) within each major setting type, such as outpatient, inpatient, residential, and other home-based and community-based settings.[4]

D. The number of services provided under Medicaid and CHIP per individual enrolled who has a diagnosis described in subparagraph (A) for each such diagnosis and each major type of treatment service listed under subparagraph (B).

E. The number and percent of individuals enrolled under Medicaid or CHIP by major enrollment category,[5] who have a diagnosis described in subparagraph (A) and received substance use disorder or mental health treatment through—(i) a Medicaid managed care entity (as defined in section 1932(a)(1)(B)), including the number of such individuals who received such assistance through a prepaid inpatient health plan (as defined by the Secretary) or a prepaid ambulatory health plan (as defined by the Secretary); or (ii) a fee-for-service payment model; or (iii) an alternative payment model, to the extent available.[6]

F. The number and percent of individuals enrolled under Medicaid or CHIP who have a diagnosis described in subparagraph (A) and received services for a mental health condition or a substance use disorder in an outpatient or community-based or home-

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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), pregnant women, children eligible on the basis of a disability, adults aged 19 to 64 who are eligible on the basis of a disability, and dually eligible beneficiaries. MACPAC recommended reporting on some special populations that cannot currently be supported by the data because the number of beneficiaries in the enrollment categories is too small or due to data quality issues. The special populations not included in this BH Data Book are children who qualify for Medicaid on the basis of child welfare assistance, dually eligible beneficiaries (Medicare and Medicaid) younger than 65, and older adolescents. In addition, the quality of the 2024 TAF data are insufficient to support the reporting of beneficiaries by state Medicaid plan or waiver authority. Refer to Letter to Secretary Azar on Medicaid Enrollment Categories per the SUPPORT Act.

[4] We present tabulations by service setting and type separately to avoid data quality and sample size issues related to examining cross-tabulations of multiple variables simultaneously.

[5] We present tabulations by enrollment category (Tables A.3, A.4, A.10, A.11, A.17, and A.18) and delivery system (Tables E.1 and E.2). separately to avoid data quality and sample size issues related to examining cross-tabulations of multiple variables simultaneously.

[6] We do not present results for alternative payment models because it is not possible to identify alternative payment models in the TAF data.

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based setting after receiving mental health or substance use disorder services in an inpatient or residential setting, and the number of mental health or substance use disorder services received by such individuals in the outpatient or community-based or home-based setting.[7]

G. The number and percent of inpatient admissions in which services for a mental health condition or substance use disorder were provided to an individual enrolled under Medicaid or CHIP that occurred within 30 days after discharge from a hospital or residential facility in which services for a mental health condition or substance use disorder previously were provided to such individual, disaggregated by each diagnosis described in subparagraph (A) and type of facility, to the extent such information is available.

H. The number of emergency department visits by an individual enrolled under Medicaid or CHIP who has a diagnosis described in subparagraph (A) within 7 days of such individual being discharged from an inpatient stay at a hospital during which services for a mental health condition or substance use disorder were provided, or from a mental health facility, an independent psychiatric wing of an acute care hospital, an intermediate care facility for individuals with intellectual disabilities, or a residential treatment facility, disaggregated by each diagnosis described in subparagraph (A) and type of facility, to the extent such information is available.

I. The number and percent of individuals who are enrolled under the State plan under Medicaid or CHIP and received an assessment for a mental health condition, and (J) The number and percent of individuals who are enrolled under the State plan under Medicaid or CHIP and received an assessment for a substance use disorder.

J. The number of mental health services provided to individuals enrolled under Medicaid or CHIP who received an assessment described in subparagraph (I) in the 30 days post-assessment.

K. The number of substance use disorder treatment services provided to individuals enrolled under Medicaid or CHIP who received an assessment described in subparagraph (J) in the 30 days post-assessment.

L. Prescription National Drug Code (NDC) codes,[8] fill dates, and number of days' supply of any covered outpatient drug (as defined in section 1927(k)(2)) that was dispensed to an individual enrolled under Medicaid or CHIP with an episode described in subparagraph (G) or (H) during any period that occurs after the individual's discharge date defined in subparagraph (G) or (H) (as applicable), and before the admission date applicable under subparagraph (G) or the date of the emergency department visit applicable under subparagraph (H) that were—(i) to treat a mental health condition; or (ii) to treat a substance use disorder.

[7] Although the statute calls for a count of the number of outpatient or home- or community-based services after beneficiaries have received services in an inpatient or a residential setting, this quantity could not 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.

[8] Given the large volume of unique medications used to treat a mental health condition or substance use disorder, we aggregated medications into drug classes (MAT, antidepressants, anti-psychotics, mood stabilizers, stimulants, anti-anxiety medications, and other MH medications) to meet the requirement for reporting by NDCs.

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2. Data

Each month, states report data on Medicaid and CHIP enrollment, service utilization, payment, providers, and other information through T-MSIS.[9] The volume, complexity, and frequency of updates to T-MSIS data make the files challenging to use for analysis. To support the use of these data, the Centers for Medicare & Medicaid Services (CMS) creates a series of data sets optimized for analytics and basic research, known as T-MSIS Analytic Files (TAF).

The information in this BH Data Book is derived from five research-optimized files in an internal version of the final 2024 TAF: annual Demographic and Eligibility (DE), inpatient (IP), long-term care (LT), other services (OT), and pharmacy (RX) files. The internal version of the TAF contains at least 12 months of claims run-out for every month of data, with early months in the calendar year having more run-out, and later months having less. There may be differences between the data used in the BH Databook and the final TAF Research-Identifiable Files (RIF) data publicly released later in 2026.[10, 11]

T-MSIS and the TAF represent a national data set for Medicaid and CHIP. T-MSIS data are continually improving in completeness and quality as states receive and respond to communications about data quality issues, including during the period when the analysis presented in this report was conducted. Some states and territories included in the analysis had data quality issues related to enrollment, claims volume, and diagnosis codes that could affect the validity of the results. These issues, which are organized by state in Reference Table R.3 in the accompanying Excel file, include the following:

- Missing information about Medicaid and CHIP enrollment or eligibility for full or comprehensive Medicaid or CHIP benefits, might result in inaccurate estimates of the number of Medicaid and CHIP beneficiaries eligible for SUD and MH services.
- An unexpectedly low volume of claims that link to enrollment records, which might result in an underestimate of the number of Medicaid and CHIP beneficiaries treated for a SUD or MH condition and the services they received.
- An unexpectedly low or high volume of claims compared with other states. A low volume of claims might lead to an underestimate of the number of beneficiaries treated for a SUD or MH condition and the services they received. The implications of a high volume of claims are less clear due to the various methods by which this can occur, including the submission of duplicate claims, the placement of claims in the incorrect file, or claim lines submitted as claim headers.
- Claims that are missing information, which can result in an underestimate of the number of Medicaid and CHIP beneficiaries treated for a SUD or MH condition and the services they received. It is particularly problematic when information is missing for key variables such as the diagnosis code, which is critical for identifying beneficiaries treated for a SUD or MH condition.

[9] Refer to the T-MSIS website.

[10] Refer to the Production of the TAF RIF methodology brief for more information about how TAFs transform into RIFs.

[11] Refer to the RIF Release Schedule (Appendix D - TAF RIF Releases) in the TAF RIF User Guide.

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More information on the completeness and quality of the TAF data is available online in the DQ Atlas (CMS n.d.).[12]

CMS continues to work with states to improve the quality of their underlying T-MSIS data and resolve priority issues.[13] States have access to data quality tools to help them identify, track, and prioritize potential data quality issues in T-MSIS, and CMS is providing one-on-one technical assistance to states to improve their data submissions to T-MSIS. CMS also releases guidance to clarify reporting requirements when states have identified challenges in reporting information.[14] We expect future annual BH Data Books to include more accurate results as states' T-MSIS submissions improve and as they continue to address data quality issues.

3. Methods

The results reported in this BH Data Book are based on beneficiaries enrolled in Medicaid or CHIP for at least one day in 2024 and receiving full or comprehensive benefits. This BH Data Book does not identify all Medicaid or CHIP beneficiaries who had a SUD or MH condition in 2024 because the algorithm used to identify such beneficiaries is based on claims data. It can therefore identify only those beneficiaries treated for a SUD, MH condition, or both as part of a Medicaid- or CHIP-funded service.

In general, we identified beneficiaries as being treated for a SUD in 2024 if they were age 12 or older[15] and had (1) at least one qualifying inpatient claim for a SUD, (2) two outpatient or long-term care claims for SUD treatment on different dates, (3) one emergency department service claim for a SUD, or (4) one pharmacy claim for MAT for a SUD. (Refer to B.4 in *Appendix B: Supplementary Technical Information* for details.)[16] The substance use categories include alcohol, cannabis, opioids,[17] stimulants, tobacco, polysubstance and other substance use disorders (caffeine, hallucinogen, sedatives, hypnotics, and anxiolytics, inhalants, and unspecified or unknown SUDs). These categories are consistent with those in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, Text Revision (DSM-V-TR; American Psychiatric Association [APA] 2022).

We identified beneficiaries, regardless of age, as being treated for a MH condition in 2024 if they had (1) at least one qualifying inpatient claim for a MH condition, (2) two outpatient or long-term care claims for MH treatment on different dates, or (3) one emergency department service claim for a MH condition. (Refer to B.5. in *Appendix B: Supplementary Technical Information* for

[12] Refer to the DQ Atlas.

[13] CMS tracks and publishes state data quality issues related to a set of critical and high-priority data quality checks under the T-MSIS Outcomes-Based Assessment framework. Refer to the T-MSIS website for more information.

[14] Refer to T-MSIS Technical Instructions for coding guidance.

[15] Age was calculated as of December 31, 2024. This age group is consistent with the age range used in the National Survey on Drug Use and Health.

[16] Claims related to SUD treatment included those with (1) a diagnosis code indicating a SUD or (2) a relevant NDC or procedure code for SUD treatment. Diagnosis codes indicating a SUD include codes for substance abuse, dependence, and use; codes for adverse effects and poisoning by substances; and a limited number of codes indicating physical harm as a result of a substance.

[17] In some cases, there may be significant overlap between people who use opioids to treat pain and those with an opioid use disorder (Jones and Mason 2022), and researchers' ability to use diagnosis codes to distinguish between pain management and opioid use disorder might be limited (Lagisetty et al. 2021). We included opioid dependence codes, which could indicate either people who are dependent on opioids to treat pain or people who misuse opioids, in our definition of being treated for a SUD.

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details.)[18, 19] MH condition categories include anxiety disorders, bipolar and related disorders, depressive disorders, disruptive, impulse-control, and conduct disorders, neurocognitive disorders, neurodevelopmental disorders, schizophrenia spectrum and other psychotic disorders, trauma- and stressor-related disorders, suicidal ideation, injury related to suicide or attempted suicide, and other mental health disorders (dissociative disorders, elimination disorders, feeding and eating disorders, obsessive-compulsive and related disorders, personality disorders, sleep-wake disorders, somatic symptom and related disorders, and unspecified or unknown MH conditions). These categories are consistent with the classification of disorders in the DSM-V-TR (APA 2022) and include most MH conditions identified in the DSM-V-TR.[20] We also provided a breakdown of beneficiaries treated for a MH condition with psychotic features or disturbances.[21]

We identified beneficiaries as being treated for co-occurring conditions (both a SUD and MH condition) if, in 2024, they had received treatment for both a SUD and a MH condition, as defined previously. (Refer to B.6 in *Appendix B: Supplementary Technical Information* for details.)

Once we identified beneficiaries who received treatment for a SUD, a MH condition, or co-occurring SUD and MH conditions, we grouped them into eight enrollment categories (non-expansion adults, children, CHIP, pregnant women, disability,[22] older adults, expansion adults, and unknown). We also provided a breakdown of beneficiaries who qualified for Medicaid based on disability and age group, and dual-enrollment status. We then examined the settings in which they received SUD and MH services, the types and volume of services received, and whether the services were delivered through a state's FFS system or managed care entity, which included a breakdown by plan type: comprehensive managed care organization, primary care case management, prepaid inpatient health plan, prepaid ambulatory health plan, and other.[23] Finally, we examined follow-up care among beneficiaries who received care in inpatient and residential settings and among beneficiaries who received an assessment for a SUD or a MH condition.

[18] Pharmacy claims were not used to identify MH conditions because, unlike SUD medications, medications prescribed for MH conditions are not specific enough to allow for identification of the particular condition being treated.

[19] Identification of beneficiaries treated for a MH condition was not limited by age, as people of all ages can be diagnosed with and treated for a MH condition.

[20] To identify diagnoses for a MH condition, we included all ICD-10 F diagnosis codes (mental, behavioral, and neurodevelopmental disorders, excluding those related to SUDs); additional diagnosis codes in the DSM-V-TR related to neurocognitive disorders and sleep-wake disorders; and additional ICD-10 R, T, and X codes related to suicidal ideation or injury related to suicide or attempted suicide. We used the DSM-V-TR and the Chronic Conditions Data Warehouse's chronic conditions algorithms to map diagnosis codes to condition categories.

[21] Beneficiaries were treated for a MH condition with psychotic features or disturbances if they had at least one qualifying claim with a diagnosis code that indicated psychotic features or disturbances during the year. These codes included those for a psychotic disorder, psychosis, or specific conditions (dementia, bipolar disorders, or major depressive disorder) present with psychotic features.

[22] The disability eligibility category refers to people eligible for Medicaid on the basis of being blind or disabled and includes those receiving Supplemental Security Income benefits. For a full list of the Medicaid eligibility groups in each enrollment category, refer to Reference Table R.1 in the accompanying Excel file.

[23] To determine the type of plan for services provided through managed care, we used the methodology from the CMC Plan Encounters topic in *DQ Atlas* to identify plans with active enrollees and determined the type of plan using the code for managed care plan type. Appendix B: Supplementary Technical Information for describes our methodology in detail.

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Use of overdose reversal medications increased compared to the 2023 T-MSIS Behavioral Health Data Book (published in December 2025), largely due to an expanded set of NDCs used to identify the measure. Therefore, overdose reversal medication figures in 2024 are not directly comparable to 2023.

The number of beneficiaries receiving treatment for a SUD, a MH condition, or both in this BH Data Book does not necessarily reflect the total number of people who need treatment for these conditions. Beneficiaries with a SUD or a MH condition often do not seek treatment because of factors such as the stigma of having a SUD, worries about treatment costs, and the difficulty of locating a treatment provider (Medicaid and CHIP Payment and Access Commission (MACPAC) 2017; SAMHSA 2025). Beneficiaries are failing to get treatment, not because such treatment is unavailable, but rather, because the beneficiaries do not perceive any need for it. Since this BH Data Book relies on information provided by states for Medicaid and CHIP beneficiaries treated for a SUD, a MH condition, or both, our methods are likely to underestimate the overall number of Medicaid beneficiaries with either or both conditions. Not all beneficiaries with these conditions seek and receive treatment and we are unable to identify beneficiaries with these conditions who do not seek care.

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Appendix A: References

The following table describes sources referenced in this document including the source publication name and/or URL, if applicable.

Table 1: References

Source	Publication Name, Location, or URL (if available)
American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision. Washington, DC: APA, 2022.	DSM-5-TR Manual
CMS. DQ Atlas. n.d. Accessed July 2026.	DQ Atlas Website
Jones, K.F., and D.J. Mason. "The False Dichotomy of Pain and Opioid Use Disorder." JAMA Health Forum, vol. 3, no. 4, 2022, p. e221406. doi: 10.1001/jamahealthforum.2022.1406. Accessed May 4, 2023.	JAMA Health Forum Article
Lagisetty, P., C. Garpestad, A. Larkin, C. Macleod, D. Antoku, S. Slat, J. Thomas, et al. "Identifying Individuals with Opioid Use Disorder: Validity of International Classification of Diseases Diagnostic Codes for Opioid Use, Dependence, and Abuse." Drug and Alcohol Dependence, vol. 221, April 1, 2021, p. 108583. doi: 10.1016/j.drugalcdep.2021.108583. Accessed May 4, 2023.	Pubmed Article
MACPAC. "Chapter 2: Medicaid and the Opioid Epidemic." In Report to Congress on Medicaid and CHIP. Washington, DC: MACPAC, June 2017. Accessed October 19, 2020.	MACPAC Report to Congress (PDF)
SAMHSA. "Key Substance Use and Mental Health Indicators in the United States: Results from the 2024 National Survey on Drug Use and Health." HHS Publication No. PEP25-07-007, NSDUH Series H-60. Rockville, MD: Center for Behavioral Health Statistics and Quality, SAMHSA, 2025. Accessed July 30, 2026.	SAMHSA NSDUH Report (PDF)

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Appendix B: Supplementary Technical Information

B.1 Data Sources

Since 2015,[24] states have been required to submit enrollment and claims data into the national Medicaid and CHIP data system, known as the Transformed Medicaid Statistical Information System (T-MSIS). T-MSIS collects the same enrollment and claims data from all states in the same format on a monthly basis, organized by submission date.

The T-MSIS Analytic Files, or TAF, are built directly from the T-MSIS data files submitted monthly by states. The TAF are more appropriate than the T-MSIS source data for analytic tasks, as the volume and complexity of the source data and the frequency of updates make these data difficult to use for analysis. Most important, the TAF reorganize the raw enrollment data, claims, and managed care encounters by date of enrollment and date of service rather than submission date.[25] This reorganization helps users identify beneficiaries during a specific period, such as a calendar year, and aligns service provision with a beneficiary's enrollment in Medicaid.

To create the tables in this BH 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 enrolled for at least one day during the calendar year.
- **Inpatient (IP) file**: Contains inpatient hospital institutional claims and encounters.
- **Long-term (LT) file**: Contains long-term care institutional claims and encounters, including claims from nursing facilities, intermediate care facilities that provide services for people with intellectual disabilities, MH facilities, and independent (freestanding) psychiatric wings of acute care hospitals.
- **Other services (OT) file**: Contains all claims and encounters for services not from an inpatient facility, long-term care facility, or pharmacy. These services include but are not limited to physician services; outpatient hospital services; dental care; other physician services, such as those provided by chiropractors, podiatrists, psychologists, and optometrists; clinic services; laboratory services; radiology services; home health care; 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.

B.2 Data Quality Issues

This analysis relied on an internal version of the final 2024 TAF enrollment and claims data. The TAF include the 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. The internal version of the final 2024 TAF data has at least 12 months of run-out for each month

[24] States began transitioning their reporting to T-MSIS as early as 2011; all states and the District of Columbia completed the transition to T-MSIS by 2015. T-MSIS cutover dates for each state are available in the Resources section of DQ Atlas, under the Overview and Availability of the TAF Data section (CMS n.d.). Refer to the TAF RIF Availability Chart.

[25] Find more information about the creation of TAF from T-MSIS at Resources About View - DQ Atlas.

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of the year. The run-out period is the time between the date of service and the time a fully adjudicated claim for that service appears in the data. Some claims, particularly those for complex services, take longer to appear in the data without additional adjustments and corrections being made; these types of claims, particularly when the service occurred toward the end of the calendar year, might not be fully represented in the data.[26]

The TAF were designed to present a comprehensive, current, and reliable picture of Medicaid and CHIP across the United States. Other states and territories included in the analysis had data quality issues related to enrollment, claims volume, and diagnosis codes that could affect the validity of the results. Reference Table R.3 in the accompanying Excel file lists these less-severe but still problematic data quality issues by state. We assessed four measures of data quality:

1. **Number of Medicaid and CHIP beneficiaries in the DE file**. To assess this number, we compared the TAF-based counts of Medicaid and CHIP beneficiaries who had full or comprehensive benefits with the states' reports from the Eligibility and Enrollment Performance Indicator (PI) data set.[27] To examine enrollment information in the DE file, we compared monthly counts of Medicaid and CHIP beneficiaries who had comprehensive benefits according to the 2024 DE file to monthly counts from the PI data. We evaluated the percentage 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% and less than or equal to 50%, 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%.
2. **Percentage of claims records that do not match to a Medicaid or CHIP beneficiary in the DE file**. To assess this percentage, we calculated the percentage of FFS claims and records of managed care encounters that did not have an associated enrollment record during the month of service, along with the percentage of Medicaid and CHIP beneficiaries who had a claim during the service month and no associated enrollment record. States in which more than 20% of service use records did not link to eligibility records during the month of service were deemed to be unusable data for this report. We had a high level of concern about state data in which between 10 and 20% of service use records did not link to eligibility records during the month of service.
3. **Volume of claims in three of the four claims files**. To assess this volume, we examined by state the number of claim headers, the number of claim lines, and the ratio of headers to lines compared with the national median. To examine unexpected claim volumes, we computed the total volume of header records, total volume of line records, and average number of lines per header. We compared these three measures to the national median for the IP, OT, and RX files. The LT file was excluded because we relied most heavily on the IP, OT, and RX files to identify Medicaid and CHIP beneficiaries treated for a SUD or MH condition and the services they received. Also, wide variation in the volume of LT claims might be a result of differences between benefit packages in some states, rather than a data quality issue. States in which any of the three measures

[26] Refer to the Time Required for Complete TAF Data PDF.

[27] PI data represent enrollment in full or comprehensive benefits in Medicaid or CHIP by state at a single point in time during the enrollment period, whereas the TAF data represent all enrolled beneficiaries for at least one day during the month.

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fell below 10% of the national median were deemed to have incomplete data unusable for analysis. We had a high level of concern about state data in which any measure was greater than or equal to 10% but less than 50%, or more than 200%, of the national median.

4. **Valid diagnosis codes**. To assess diagnosis codes for validity, 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 International Classification of Diseases, 10th Revision (ICD-10), Clinical Modification (ICD-10-CM) diagnosis code in the field for the primary diagnosis code.[28] 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 had another non-missing but invalid value.[29] States were categorized as of high concern if only 50 to 80% of their records had a valid ICD-10 primary diagnosis code. States in which less than 50% of the records had a valid ICD-10 primary diagnosis code were considered to have unusable data.

Refer to the DQ Atlas (CMS n.d.) for more information on these and other data quality measures.

B.3 Identifying beneficiaries with coverage for BH services

This BH Data Book includes people enrolled in Medicaid or CHIP for at least one day in 2024.[30] The BH Data Book focuses on Medicaid and CHIP beneficiaries eligible for full-scope or comprehensive benefits. We excluded Medicaid and CHIP beneficiaries eligible for only partial (also called limited or restricted) benefits because they are often not eligible for BH treatment services.

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

B.4 Identifying Beneficiaries Treated for a SUD

This BH Data Book includes people treated for a SUD who are aged 12 and older.[31] To be identified as being treated for a SUD, a beneficiary must have received SUD services. The counts of beneficiaries in this BH Data Book therefore represent a treated prevalence rate only; these counts underestimate the true rate of SUD prevalence because they exclude beneficiaries who might have had a SUD but did not receive care.

[28] In the OT file, the assessment was limited to a subset of claims that include outpatient hospital services, physician services, or clinic services. Refer to the Background and Methods Resource document for Diagnosis Code - OT methodology for more information.

[29] As of October 1, 2015, CMS no longer accepts ICD-9 diagnosis codes, but some states might still allow the use of select ICD-9 codes.

[30] This BH Data Book includes people eligible for Medicaid or CHIP coverage as well as those dually eligible for Medicare and Medicaid or CHIP.

[31] This age group is consistent with the age range used in the National Survey on Drug Use and Health. Refer to Key Substance Use and Mental Health Indicators in the United States: Results from the 2024 National Survey on Drug Use and Health.

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To identify beneficiaries treated for a SUD, we first identified claims related to SUD treatment[32] that had (1) any diagnosis code indicating a SUD[33] or (2) a relevant NDC or procedure code. We then determined whether a beneficiary met the claim count criteria to be identified as being treated for a SUD. In general, beneficiaries met the criteria if they had (1) one qualifying inpatient claim[34] for SUD treatment, (2) two outpatient or long-term care claims for SUD treatment on different days, (3) one emergency department claim for SUD treatment, or (4) one pharmacy claim for MAT.[35]

> **Data quality note**: Missing or invalid diagnosis codes make it difficult to identify Medicaid and CHIP beneficiaries with a SUD or any specific medical condition. In addition, a low volume of claims in the TAF can result in an underestimate of the number of Medicaid and CHIP beneficiaries with a SUD.

B.5 Identifying Beneficiaries Treated for a MH Condition

This BH Data Book includes people of all ages treated for a MH condition. To be identified as being treated for a MH condition, a beneficiary must have received MH services. As mentioned previously, the counts of beneficiaries presented in this BH Data Book represent a treated prevalence rate and underestimate the true prevalence, as they exclude beneficiaries who might have had a MH condition but did not receive care.

To identify beneficiaries treated for an MH condition, we first identified claims related to MH treatment[36] that had any diagnosis code indicating a MH condition.[37] We then determined whether the beneficiary met the claim count criteria to be identified as being treated a MH condition. To meet this criteria, the beneficiary must have had (1) one qualifying inpatient claim

[32] The BH Data Book does not include lab or transportation claims because they can cause beneficiaries to be incorrectly identified as being treated for a SUD.

[33] Diagnosis codes indicating a SUD include codes for substance abuse, dependence, and use; codes for adverse effects and poisoning by substances; and a limited number of codes indicating physical harm as a result of a substance. We included claims with a SUD diagnosis code in any diagnosis code position on the claim.

[34] Inpatient and long-term care claims were identified based on the type of bill code, billing provider taxonomy code, place of service code, and revenue code. This approach applies the methodology used when assigning TAF records to the federally assigned service category (FASC). By using the FASC to categorize claims instead of using their source file, we were able to categorize inpatient and long-term services more accurately. For example, some states erroneously reported long-term care claims to the IP file and IP claims to the LT file. In addition, the consistency of service categorization across states allows for more accurate reporting of the count of beneficiaries with a SUD on a state-by-state basis, as well as the services they receive.

[35] Claims for methadone from the RX file were excluded from the method to identify beneficiaries with a SUD, to avoid counting beneficiaries using methadone for reasons other than to treat a SUD, such as for pain relief. Beneficiaries with claims for methadone in the RX file are only identified as being treated for a SUD if they met any of the other criteria for identifying beneficiaries treated for a SUD. Claims with NDCs for methadone are included in the definition of MAT for the purpose of counting services for beneficiaries identified as being treated for a SUD.

[36] The BH Data Book does not include lab or transportation claims because they can cause beneficiaries to be incorrectly identified as being treated for a MH condition.

[37] MH condition categories include anxiety disorders, bipolar and related disorders, depressive disorders, disruptive, impulse-control, and conduct disorders, neurocognitive disorders, neurodevelopmental disorders, schizophrenia spectrum and other psychotic disorders, trauma- and stressor-related disorders, suicidal ideation, injury related to suicide or attempted suicide, and other mental health disorders (dissociative disorders, elimination disorders, feeding and eating disorders, obsessive-compulsive and related disorders, personality disorders, sleep-wake disorders, somatic symptom and related disorders, and unspecified or unknown MH conditions). We included claims with a MH diagnosis code in any diagnosis code position on the claim.

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for MH treatment, (2) two outpatient or long-term care claims for MH treatment on different days, or (3) one emergency department claim for MH treatment.

Among beneficiaries we identified as being treated for a MH condition, we also identified those treated for a MH condition with psychotic features or disturbances. Beneficiaries were identified as being treated for a MH condition with psychotic features or disturbances if they had at least one qualifying claim, in any setting, with a diagnosis code that indicated psychotic features or disturbances.[38]

B.6 Identifying Beneficiaries With Co-occurring SUD and MH Conditions

This BH Data Book includes people aged 12 and older treated for co-occurring SUD and MH conditions. To be identified as being treated for co-occurring SUD and MH conditions, a beneficiary must have received treatment for both a SUD and a MH condition during the year according to the criteria described in the previous two sections. Individuals treated for both a SUD and MH condition are also included in the population of beneficiaries treated for a SUD and the population of beneficiaries treated for a MH condition. Again, the counts of beneficiaries presented in this BH Data Book represent a treated prevalence rate and underestimate the true prevalence of co-occurring SUD and MH conditions, as they exclude beneficiaries who might have had co-occurring SUD and MH conditions but did not receive care.

B.7 Defining Enrollment Categories

We grouped Medicaid and CHIP beneficiaries treated for a SUD or MH condition into eight enrollment categories: (1) non-expansion adults, (2) expansion adults, (3) pregnant, (4) disability, (5) children, (6) CHIP, (7) older adults (65+), and (8) unknown. These groups are based on eligibility group, age, and restricted-benefits code in the TAF.[39] As required by the authorizing legislation for the BH Data Book, the reporting of these enrollment categories is largely consistent with those identified by MACPAC in its letter to HHS.[40] Because some beneficiaries change eligibility groups during the year (as children become adults and as adults age into the aged group), each beneficiary's categorization was based on the group that accounted for the beneficiary's final enrolled month in 2024. Beneficiaries for whom the eligibility group code was missing or for whom age, eligibility group code, and restricted-benefits code did not align with the categories were placed in the unknown category. We also created a

[38] Diagnosis codes that indicated a MH condition with psychotic features or disturbances were those for a psychotic disorder, psychosis, or specific conditions (dementia, bipolar disorders, or major depressive disorder) present with psychotic features.

[39] Refer to Reference Table R.1 in the accompanying Excel file for more information on the eligibility groups that define each enrollment category.

[40] In a March 21, 2019, letter to the HHS secretary, MACPAC defined several enrollment categories for stratifying the data: children, excluding those eligible on the basis of a disability; adults aged 19 to 64, 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), pregnant women, children eligible on the basis of a disability, adults aged 19 to 64 who are eligible on the basis of a disability, and dually eligible beneficiaries. MACPAC recommended reporting on some special populations that cannot currently be supported by the data because the number of beneficiaries in the enrollment categories is too small or due to data quality issues. The special populations not included in this BH Data Book are children who qualify for Medicaid on the basis of child welfare assistance, dually eligible beneficiaries (Medicare and Medicaid) younger than 65, and older adolescents. In addition, the quality of the 2024 TAF data is insufficient to support the reporting of beneficiaries by state Medicaid plan or waiver authority. Refer to the MACPAC Letter to Secretary Azar on Medicaid Enrollment Categories per the SUPPORT Act for the full text of the letter to the HHS secretary.

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breakdown of beneficiaries eligible for Medicaid on the basis of disability by age group. We identified beneficiaries as eligible for Medicaid on the basis of disability if they had an eligibility group code associated with disability for the final enrolled month in 2024.

> **Data quality note**: Missing eligibility information makes it impossible to group some beneficiaries into the major enrollment categories used for the BH Data Book. Conflicting information between the eligibility group and other Medicaid and CHIP enrollment information in the TAF, such as age, also affects the accuracy with which beneficiaries can be categorized.

B.8 Identifying Types of Settings for SUD and MH Treatment

We grouped treatment services into five types of settings: inpatient, residential, outpatient, home, and community based. Inpatient services were identified using the type of bill, billing provider taxonomy, and place of service codes that map to an inpatient setting, and revenue codes for inpatient psychiatric services. Residential services were identified using the type of bill code and billing provider taxonomy codes that map to a residential setting. Because 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 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 on the place of service to classify the treatment setting or on the procedure codes if the place of service code was missing. Home-based services were identified using type of bill and revenue codes that map to home health services, along with place of service codes for the home setting. For community-based services, we relied on procedure codes that map to community services. Outpatient services not already mapped to home or community-based services were categorized under the outpatient setting. By design, all services in the RX file are delivered in an outpatient (that is, pharmacy) setting.

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

B.9 Defining and Counting SUD and MH Treatment Services

Some tables in this BH Data Book include counts of beneficiaries who received certain SUD and MH treatment services (Tables C.1, C.3, and C.5) and, for a subset of those services, a count of services provided by service type (Tables D.1, D.2, D.3, K.1, and L.1).[41] The services we do not present in Tables D.1–D.3, K.1, and L.1 are case management, community support, crisis intervention/stabilization, health and behavior intervention, medication management, other SUD/MH services, peer support, SUD pharmacotherapy, and withdrawal management. These services are not included in these tables because differences in billing practices across states impede our ability to accurately count the number of services received across states. The counts were constructed only for beneficiaries who received these services. We counted claims for some services, whereas for others we counted the number of days. We used this method to account for variation in billing practices across both states and service types. To identify the SUD and MH treatment services, we relied on NDCs, procedure codes, and revenue codes and

[41] We did not count claims with missing dates of service, diagnosis codes, or procedure codes in the D tables or in the number of services provided following an assessment in Tables K.1 and L.1. The services in those tables are for enrollees being treated for a SUD or a MH condition; if the claim did not have a SUD or a MH condition diagnosis code or an NDC for a medication to treat a SUD or MH condition, we did not count the service.

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used diagnosis codes to identify them as being for a SUD or MH condition. Reference Table R.2 in the accompanying Excel file lists each service type and how each was counted.

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

B.10 Defining and counting SUD and MH follow-up care

Some tables in this BH Data Book include assessments of follow-up SUD and MH treatment services within a specified time after the provision of an initial treatment service (or index service; Tables F.1, G.1–G.3, H.1–H.3, K.1, and L.1). Similarly, some tables include assessments of beneficiaries who filled a prescription for, were administered, or were dispensed MH medication following an index service prior to an inpatient readmission or emergency department service (Tables M.1–M.4). When identifying index services, we limited the time period to that which would enable us to identify any follow-up services received within 2024. For tables that required follow-up within 30 days (Tables F.1, G.1–G.3, K.1, L.1, M.1, and M.2), we limited the index services to those provided from January 1, 2024, to December 1, 2024. For tables that required follow-up within seven days (Tables H.1–H.3, M.3, and M.4), we limited the index services to those provided from January 1, 2024, to December 24, 2024. For tables that assess follow-up care after discharge from an inpatient or residential setting (Tables G.1–G.3, H.1–H.3, M.1–M.4), we grouped claims related to the same index service for a beneficiary (a distinct inpatient or residential stay) based on overlapping dates of service among claims from the same setting type.

Tables G.1–G.3 and H.1–H.3 stratify the number of beneficiaries who had an inpatient readmission or emergency service following an index service by the type of facility in which the index service occurred. We identified the type of facility on each claim using the federally assigned service category (IP and LT claims), place of service code (OT claims), or billing provider taxonomy code (IP, LT, and OT claims). Reference Table R.4 in the accompanying Excel file lists the specific values used to define each facility type.

In all tables that report on follow-up care, we included counts of beneficiaries who received follow-up services during the specified period. In Tables M.1 through M.4, for MAT (Tables M.1 and M.3), and for each class of MH medication (Tables M.2 and M.4), we also included the average number of days dispensed between the index service and readmission or emergency department service for each follow-up care episode in which medication was dispensed. Tables M.2 and M.4 also include the average number of MH medication classes dispensed for each follow-up care episode. We used the number of follow-up care episodes as the denominator for those averages to provide a more interpretable estimate of medication use between a single index service and readmission or emergency department service, regardless of whether a beneficiary had multiple follow-up care episodes in the year.

B.11 Identifying the Care Delivery System

The BH Data Book reports on the number and percentage of beneficiaries receiving SUD or MH treatment services by the two major delivery systems that state Medicaid programs use:

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managed care or FFS (Table E.1).[42] Beneficiaries were counted as receiving SUD or MH treatment services through a managed care entity if they (1) had one or more managed care encounter records for SUD or MH treatment or (2) had a claim for SUD or MH treatment associated with a managed care plan identification number. Beneficiaries were counted as receiving SUD or MH treatment services through FFS if they had an FFS claim for SUD or MH treatment not associated with a managed care plan identification number. The BH Data Book also reports the number and percentage of beneficiaries receiving SUD or MH services through managed care, by plan type. To identify the plan type, we first identified plans with at least one enrolled beneficiary in at least one month in 2024. Among these plans, we determined the type of managed care plan using the managed care plan identification number and managed care plan type code.

The following types of managed care plans are included:

- **Comprehensive managed care (CMC)**: Comprehensive managed care organization, Health Insuring Organization, Integrated care for dually eligible beneficiaries
- **Primary care case management (PCCM)**: Traditional PCCM Provider arrangement, Enhanced PCCM Provider arrangement
- **Prepaid inpatient health plans (PIHP)**: Mental Health PIHP, SUD PIHP, MH, and SUD PIHP, LTSS PIHP, LTSS and MH PIHP, Medical-only PIHP (non-comprehensive, with inpatient hospital or institutional services)
- **Prepaid ambulatory health plans (PAHP)**: Mental Health PAHP, SUD PAHP, MH, and SUD PAHP, Dental PAHP, Transportation PAHP, Medical-only PAHP (non-comprehensive, with inpatient hospital or institutional services), Disease management PAHP, Pharmacy PAHP
- **Other delivery systems or plan types**: Program of All-Inclusive Care for the Elderly, Accountable Care Organization, Health/medical home, Other.
- **Unknown**: plans missing managed care plan type code or that did not have any enrolled beneficiaries

Data quality note: If a large percentage of claims that could not be linked to enrollment information disproportionately represent a particular claim type (such as managed care encounters), it could skew the estimates of the distribution of services across FFS and managed care.

B.12 Identifying Assessments of SUD- and MH-Related Need

Unlike the other tables in this BH Data Book, Tables I.1 & J.1 identify assessment services received by all Medicaid and CHIP beneficiaries with coverage for BH services, not just those identified as receiving treatment for a SUD or MH condition. To identify assessments, we used Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) procedure codes. Many assessments are not billed on administrative claims, and therefore measures of assessments using CPT and HCPCS codes will likely underestimate the actual delivery of assessments.[43] We classified assessments as either assessments specifically

[42] Beneficiaries could be counted as having services delivered through both managed care and FFS if they had separate claims that met each criterion.

[43] Many BH assessments are captured in electronic health records rather than in claims data. For more information, refer to Behavioral Health Care Integration: Challenges and Opportunities for Quality Measurement.

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to identify a MH-related need, a SUD-related need, or BH-related need more broadly (for example, a family assessment by a licensed BH professional) using the CPT or HCPCS code.[44] We further classified BH assessment claims as SUD or MH assessments if the claim included a SUD or MH diagnosis code, respectively. We included BH assessment claims regardless of whether they include a SUD or MH diagnosis code to capture all potential BH assessments.

Because many BH assessments codes are not specific to SUD or MH, Tables K.1 and L.1 do not represent all beneficiaries who received any BH-related assessments during 2024: Table K.1 includes services for beneficiaries who received only MH-specific assessments, and Table L.1 includes services for beneficiaries who received only SUD-specific assessments.

[44] Tables D.1, D.3, and D.5 include these three types of assessments as well as assessments without BH-related procedure codes that include a SUD or a MH condition diagnosis code. We did not include these non-BH–specific assessments in Tables I.1 & J.1 because they can be identified as being provided for a SUD or a MH condition only when the claim contains a diagnosis code.

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