

BEHAVIORAL HEALTH SERVICE USE AMONG INDIVIDUALS ENROLLED IN MEDICAID AND CHIP BEFORE AND DURING THE COVID-19 PUBLIC HEALTH EMERGENCY

KEY POINTS

- The COVID-19 public health emergency (PHE) was associated with a decline in the initiation of treatment for behavioral health (BH) conditions among Medicaid and Children’s Health Insurance Program (CHIP) enrollees. During the COVID-19 PHE, between March 2020 and December 2020, initiation of treatment decreased by 10% compared with the same period in 2019 (March-December), with approximately 184,800 fewer enrollees newly treated. This decrease was driven by fewer children initiating treatment for a BH condition during the PHE--about one-quarter less than the year before. Among adults, there was a small increase in those newly treated for a BH condition (3%).
- Those already receiving BH treatment may not continue treatment for a variety of reasons. During the PHE, there were small declines in the percentage of Medicaid and CHIP enrollees who continued BH treatment compared to before the PHE, but these changes were not substantial. Specifically, among enrollees who received BH treatment in 2019, 78% continued treatment in 2020 during the PHE. Before the PHE, 81% of those receiving BH treatment in 2018 continued to do so in 2019.
- Although fewer enrollees initiated or continued BH treatment overall during the PHE, the reductions were largest for children and Black and Hispanic enrollees.

BACKGROUND

In 2020, 53 million adults in the United States had a mental health condition and 40 million people ages 12 and older had a substance use disorder (SUD) [1]. The COVID-19 public health emergency (PHE) exacerbated mental health conditions and SUDs at a time when access to in-person care was restricted due to safety concerns [2]. The percentage of adults experiencing anxiety or depressive symptoms increased 14% from August 2020 to February 2021 alone [3]. Children also experienced increased rates of anxiety, depression, stress, and sleep disorders; children with pre-existing mental health conditions or social risk factors were particularly vulnerable to the mental health effects of the COVID-19 pandemic [4,5].

Medicaid and the Children's Health Insurance Program (CHIP) provide critical access to mental health and SUD treatment. However, during the COVID-19 PHE, Medicaid and CHIP enrollees had lower rates of outpatient mental health and SUD treatment compared to prior years [6], which could reflect challenges initiating treatment among people with new conditions, as well as disruptions in care for people receiving treatment before the PHE [3,6,7].

This brief examines the extent to which the PHE was associated with changes in the use of mental health and SUD services--hereafter referred to as behavioral health (BH) services--among two groups of Medicaid and CHIP enrollees: (1) those initiating treatment for BH conditions; and (2) those already receiving BH treatment (in the previous year). These two groups could have experienced an array of changes in BH services use

associated with the PHE. For example, those already receiving BH care before the PHE could have experienced disruptions in care when in-person services were restricted, whereas those who had not previously been in care may have experienced challenges finding providers who were accepting new clients during the PHE [2].

Our analytic approach compared BH service use in the period before the PHE with BH service use during the PHE. Specifically, for those newly treated for a BH condition, we compared BH service use in 2019 (before the PHE) with BH service use in 2020 (during the PHE). For those already receiving BH treatment (in the last year), we examined continuation of service use from 1 calendar year to the next. Specifically, we compared the extent to which there were differences in service continuation from 2018 to 2019 (before the PHE) compared with 2019 to 2020 (during the PHE). In addition to analyzing the overall association of the PHE with BH service use for all Medicaid and CHIP enrollees together, we compared changes in service use between subgroups, such as children versus adults, by race and ethnicity, and Medicaid/CHIP eligibility criteria.

METHODS

Data. We analyzed claims and enrollment data from the Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF). We used fee-for-services claims and managed care encounter data from 2017 to 2020 and enrollment data from 2018 to 2020. We used TAF data quality assessments reported on the Data Quality (DQ) Atlas to identify states to exclude from the analysis.^a Our analysis included all but three states (Alabama, Rhode Island, and Tennessee, due to challenges linking enrollment records to claims), and included the District of Columbia, Puerto Rico, and the Virgin Islands.

Study population. Our analysis focused on enrollees who received treatment for a BH condition either before or during the PHE (or both). Our analysis included enrollees who had full or comprehensive Medicaid or CHIP benefits for at least 6 consecutive months during our analytic period, were not dually eligible for Medicare, and were under age 65. We provide more details on the inclusion criteria for each of our two study populations below.

Box 1. Types of BH Conditions Included in Analysis	
Mental Health Disorders	Substance Abuse Disorders
<ul style="list-style-type: none"> ▪ Anxiety disorders (e.g., anxiety and post-traumatic stress disorders) ▪ Mood disorders (e.g., bipolar, depression, and other depressive disorders) ▪ Personality disorders ▪ Schizophrenia and other psychotic disorders ▪ Other mental health disorders (e.g., attention-deficit/hyperactivity disorder, sleeping and eating disorders) 	<ul style="list-style-type: none"> ▪ Alcohol use disorder ▪ Opioid use disorder ▪ Other drug use disorders (e.g., anxiolytic, cannabis, cocaine, hallucinogen, hypnotic, inhalant, sedative, and stimulant use disorders)

BH treatment and conditions. We used International Classification of Diseases tenth revision (ICD-10) diagnosis codes and National Drug Codes (NDCs) to identify enrollee’s claims for behavioral health services.^b The diagnoses codes and NDCs were derived from claims that included all emergency and hospital services,

^a The DQ Atlas is available at <https://www.medicaid.gov/dq-atlas/welcome>.

^b Diagnosis codes were not limited to primary diagnosis codes. For opioid use disorders, the Chronic Conditions Data Warehouse (CCW) algorithm uses NDCs, in addition to diagnosis codes, to classify enrollees according to a BH condition.

residential stays, outpatient services, telehealth services, and prescriptions for BH medications (including medication-assisted treatment for SUDs) captured in TAF data. **Box 1** summarizes the BH diagnostic groups included in the analysis. We used the CCW methodology to identify people with BH conditions in the claims--the standard approach used by the Centers for Medicare & Medicaid Services.^c

Analytic approach to study the association of the PHE with services use for newly treated enrollees. We studied two cross-sections of enrollees to assess changes in the initiation of BH services associated with the PHE. The first cross-section included those who received BH services between March 2019 and December 2019 (before the PHE) but who did not receive such services in the previous 2 years. The second cross-section included those who received BH services between March 2020 and December 2020 (during the PHE) who also did not receive such services in the previous 2 years.^d (More details on the inclusion criteria for the newly treated can be found in **Appendix A.**)

We then compared the number of enrollees in each cross-section who received BH services: if there were fewer newly treated during the PHE (the second cross-section) compared with before the PHE (the first cross-section), it would suggest that the PHE was associated with a reduction in the initiation of BH services. In our table of results, we show the number of newly treated each period as well as the percentage change in newly treated from before to during the PHE.

Analytic approach to study the association of the PHE with services use for enrollees already receiving BH treatment. To assess how continuation of BH treatment changed in association with the PHE, we studied two panels of enrollees already receiving BH treatment before the PHE. The first panel included those who received BH services between March 2018 and December 2018. The second panel included those who received BH services between March 2019 and December 2019.^e (More details on the inclusion criteria for those already receiving BH treatment can be found in **Appendix A.**)

Within each panel, we then followed whether enrollees continued treatment in the following calendar year. For the first panel, we studied receipt of BH services between March 2019 and December 2019, and for the second panel, between March 2020 and December 2020. Note that for the first panel, the study period was entirely before the PHE; for the second panel, the follow-up period was during the PHE.

To study how continuation of BH services changed in association with the PHE, we then compared the percentage of enrollees still receiving treatment in the second year across the two panels--if a smaller share of enrollees continued treatment during the PHE (the second panel) compared with before the PHE (the first panel), it would suggest that the PHE was associated with a reduction in the continuation of BH treatment among enrollees already receiving treatment.

^c For most BH conditions, the CCW algorithm requires "at least one inpatient claim or two other non-drug claims of any service type" during a 2-year reference period to identify enrollees considered to have a BH condition during a particular year. For example, an enrollee identified as having attention-deficit/hyperactivity disorder (ADHD) in 2020 had either one inpatient claim with an ADHD diagnosis code or two outpatient claims with an ADHD diagnosis code during 2019 or 2020. More information can be found here: <https://www2.ccwdata.org/web/guest/condition-categories>.

^d For the newly treated analytic sample, an individual Medicaid/CHIP enrollee could be in only one cross-section (not both).

^e For the analytic sample of those already receiving treatment, an individual Medicaid/CHIP enrollee could potentially be in both panels.

FINDINGS

Initiation of Behavioral Health Treatment

There was a 10% decrease in the number of enrollees who initiated treatment for a BH condition during the PHE compared with the year before the PHE: 1,920,542 enrollees initiated treatment for a BH condition between March 2019 and December 2019 compared with 1,735,781 enrollees between March 2020 and December 2020 (**Table 1**). This decline occurred despite an increase in the overall Medicaid and CHIP enrollees over the same period, which was driven in part by individuals being less likely to disenroll from Medicaid and CHIP during the PHE [8]. As a result, the percent of enrollees who were newly treated for a BH condition declined by 0.5 percentage points (from 3.6% to 3.1%) between the March-December 2019 period, and the March-December 2020 period.

Table 1. Medicaid and CHIP Enrollees in the United States Newly Treated for a BH Condition in the Year Before the PHE (March-December 2019) and in the First Year of the PHE (March-December 2020)

	Enrollees Before the COVID-19 PHE (March-December 2019)	Enrollees During the COVID-19 PHE (March-December 2020)
All Medicaid and CHIP enrollees with at least 6 months of consecutive enrollment	53,200,825	56,046,655
Medicaid and CHIP enrollees with at least 6 months of consecutive enrollment who were newly treated for a BH condition	1,920,542	1,735,781
Percentage of enrollees newly treated for a BH condition	3.6	3.1

Source: Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), 2018-2020 v5.

Notes: This table shows the number of Medicaid and CHIP enrollees enrolled for at least 6 consecutive months in the relevant measurement periods (first row). It also shows the number of Medicaid and CHIP enrollees enrolled for at least 6 months in the relevant measurement periods who had a new BH condition in the time period (second row), as well as the percentage of total enrollees they comprised. Alabama, Rhode Island, and Tennessee were excluded from the analysis due to issues linking claims to beneficiary records.

BH = Behavioral Health; CHIP = Children’s Health Insurance Program; PHE = Public Health Emergency.

There was a shift in the composition of enrollees initiating BH treatment during the PHE, with a sharp drop in the proportion of children newly treated for a BH condition during the PHE. The percentage of enrollees newly initiating BH treatment who were children dropped from 48% before the PHE to 41% during the PHE (**Table 2**). Differences in the findings for these age groups were also reflected in the eligibility categories: enrollees who were eligible for Medicaid/CHIP on the basis of being a child in a low-income household made up a lower proportion of the population initiating treatment for a behavioral health condition (going from 46% to 40%). In contrast, the number of enrollees eligible through adult pathways who were newly treated increased over the same time period for both non-expansion and expansion pathways, thus increasing their share of the population initiating treatment for a BH condition.

The association of the PHE with the composition of enrollees initiating BH treatment varied among the other population groups we studied, with White and female enrollees initiating relatively larger proportions of total treatment (**Table 2**). Of those initiating treatment for a BH condition before the PHE, 44% were male, declining to 40% during the PHE.

No major shift occurred in the composition of diagnostic categories of enrollees initiating BH treatment during the PHE. Overall, 89% of enrollees initiating treatment before and during the PHE were diagnosed with a mental health condition. Within types of mental health conditions, there was a 5 percentage point increase in the share of enrollees who initiated BH treatment diagnosed with an anxiety disorder, increasing from 35% to 40% of all newly treated enrollees. There was a corresponding decline of 5 percentage points in the share of enrollees initiating treatment diagnosed with the other mental health conditions category--which includes conditions such as ADHD, eating disorders, and sleeping disorders. There were no substantial changes in the share of enrollees initiating treatment for a SUD (less than a 1 percentage point increase). Within types of SUD conditions, such as alcohol or opioid use disorders, there also were no meaningful changes from before to during the PHE.

Table 2. BH Conditions and Demographic Characteristics of Medicaid and CHIP Enrollees in the United States Newly Treated for a BH Condition in the Year Before the PHE (March-December 2019) and in the First Year of the PHE (March-December 2020)

	Newly Treated BH Condition Before the COVID-19 PHE (March-December 2019)		Newly Treated BH Condition During the COVID-19 PHE (March-December 2020)		Change in Proportion of Enrollees Newly Treated (before versus during the COVID-19 PHE)
	Number of Enrollees	Percentage of Enrollees ^a	Number of Enrollees	Percentage of Enrollees ^b	
All enrollees newly treated for BH condition	1,920,542	100	1,735,781	100	0%
Age group^c					
0-18 years	928,838	48	710,430	41	-7%
19-64 years	991,704	52	1,025,351	59	7%
Sex^d					
Male	837,584	44	686,496	40	-4%
Female	1,082,955	56	1,049,283	61	4%
Geographic location^{d, e}					
Urban	1,504,062	78	1,350,054	78	-1%
Rural	409,866	21	380,435	22	1%
Race/ethnicity					
White	861,523	45	800,323	46	1%
Black	355,447	19	310,195	18	-1%
Hispanic	392,007	20	342,610	20	-1%
Asian	34,383	2	31,839	2	0%
Other	277,182	14	250,814	14	0%
Eligibility group^f					
Adult	283,946	15	306,002	18	3%
Adult expansion	501,534	26	522,050	30	4%
Children	878,037	46	691,798	40	-6%
Beneficiaries with disabilities	219,474	11	168,267	10	-2%
Pregnant	17,618	1	31,009	2	1%
Unknown	19,933	1	16,655	1	0%
Any mental health condition^g					
Anxiety disorders	667,046	35	693,168	40	5%
Mood disorders	716,863	37	665,232	38	1%
Other mental health disorders	747,936	39	595,752	34	-5%
Personality disorders	40,419	2	33,293	2	0%
Schizophrenia and other psychotic disorders	62,094	3	59,118	3	0%

Table 2 (continued)

	Newly Treated BH Condition Before the COVID-19 PHE (March-December 2019)		Newly Treated BH Condition During the COVID-19 PHE (March-December 2020)		Change in Proportion of Enrollees Newly Treated (before versus during the COVID-19 PHE)
	Number of Enrollees	Percentage of Enrollees ^a	Number of Enrollees	Percentage of Enrollees ^b	
Any substance use disorder^c	305,806	16	291,728	17	1%
Alcohol use disorder	115,671	6	111,011	6	0%
Opioid use disorder	95,024	5	90,246	5	0%
Other drug use disorders	209,037	11	196,633	11	0%

Source: Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), 2018-2020 v5.

Notes: Alabama, Rhode Island, and Tennessee were excluded from the analysis due to issues linking claims to beneficiary records.

- This is a column percentage. The denominator for the percentage of enrollees with each condition or in each demographic category is the total number of Medicaid and CHIP enrollees newly treated for a BH condition in the year before the PHE (March-December 2019) (n = 1,920,542).
- This is a column percentage. The denominator for the percentage of enrollees with each condition or in each demographic category is the total number of Medicaid and CHIP enrollees newly treated for BH conditions during the PHE (March-December 2020) (n = 1,735,781).
- Age was determined as of February 28, 2020, for the “before COVID-19 PHE” population and as of December 31, 2020, for the “during COVID-19 PHE” population.
- The sum of counts of enrollees in this subpopulation category does not equal the overall count of enrollees due to missing or unknown information for some enrollees.
- Geographic location uses the U.S. Department of Education’s Education Demographic and Geographic Estimates (EDGE) data to assign a geographic indicator based on the enrollee’s zip code. “Urban” includes enrollees who reside in areas designated as City, Suburban, Town (Fringe), and Rural (Fringe) by the EDGE data. “Rural” includes enrollees residing in areas designated as Town or Rural (Distant or Remote) by the EDGE data.
- Eligibility group was determined as of the last month available in 2019 for the “before COVID-19 PHE” population and the last month available in 2020 for the “during COVID-19 PHE” population.
- Enrollees may be counted in more than 1 category if they have more than 1 BH condition. Enrollees are classified according to mental health conditions and SUDs using the CCW methodology. For more information on the classification of enrollees by BH condition, see the **Methods** section of this brief.

BH = Behavioral Health; CHIP = Children’s Health Insurance Program; PHE = Public Health Emergency.

Continuation of Treatment Among Those Already Receiving Behavioral Health Care

For most populations, there was not a substantial difference or only a small decline in the percentage of people who continued BH treatment from 1 year to the next when comparing those who were continuing treatment before the PHE versus during the PHE. Before the PHE, 81% of enrollees who received BH treatment in 2018 were still receiving such treatment in 2019. During the PHE, 78% of enrollees who received BH treatment in 2019 received such treatment in 2020 (**Table 3**).

Table 3. Percentage and Count of Enrollees Continuing Treatment for a BH Condition between the First and Second Service Use Periods, by Whether the Group was Affected by the COVID-19 PHE

	Enrollees Before the COVID-19 PHE (March 2018-December 2019)		Enrollees During the COVID-19 PHE (March 2019-December 2020)	
	First Year (March-December 2018)	Second Year (March-December 2019)	First Year (March-December 2019)	Second Year (March-December 2020)
Enrollees continuing treatment for a BH condition (count)	8,623,161	6,991,321	9,678,205	7,595,748
Enrollees continuing treatment for a BH condition (percentage)	100	81	100	78

Source: Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), 2018-2020 v5.

Notes: This table shows the numbers of enrollees enrolled for at least 6 consecutive months with BH treatment in the previous year who received BH services in each time period (first row). It also shows the percentage of enrollees with service use in the first year who received services in each year (second row). (Note: by definition, 100% of enrollees in the sample received services the first year.) All enrollees have prior claims for treatment of a BH condition before the first year. Alabama, Rhode Island, and Tennessee were excluded from the analysis because of issues in linking claims to beneficiary records.

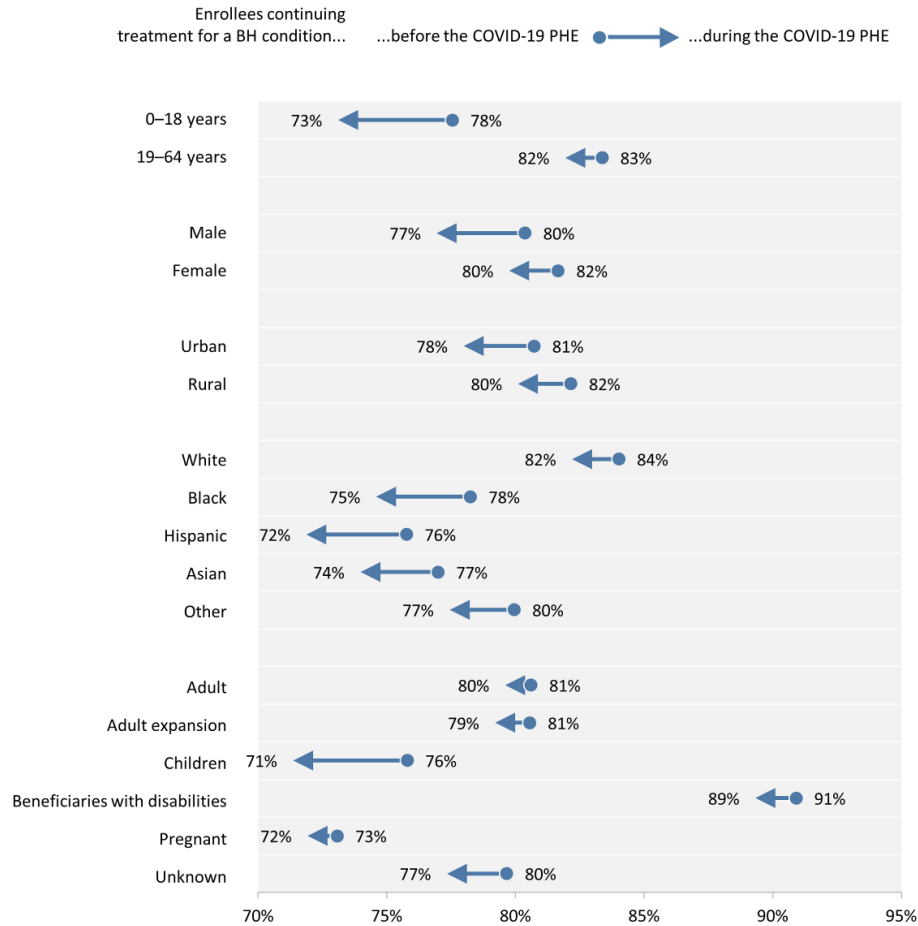
BH = Behavioral Health; PHE = Public Health Emergency.

The largest reductions in the continuation of BH treatment from before the PHE to during the PHE occurred for children (**Figure 1**). For example, before the PHE, 78% of enrollees ages 0-18 already receiving care for a BH condition were still receiving care the following year, declining to 73% during the PHE (5 percentage points less). In contrast, among enrollees ages 19-64, this difference was 1 percentage point (83% versus 82% continuing treatment in the second year before and after the PHE, respectively).

Among racial and ethnic groups, Black and Hispanic enrollees had the largest reductions in the continuation of BH treatment from before the PHE to during the PHE, though these reductions were modest. White enrollees already receiving BH treatment had higher rates of BH continuation than the other racial groups both before and after the PHE. They also had the smallest decline in the percentage of enrollees still receiving care in the follow-up year during the PHE (only 2 percentage points, from 84% before the PHE to 82% during the PHE). For Black and Hispanic enrollees already receiving BH treatment, there was a 3 and 4 percentage point decline respectively, in BH continuation. However, because Black and Hispanic enrollees had lower rates of continuation even before the PHE (78% and 76% respectively), they experienced an even larger relative decrease than did White enrollees.

When examining specific types of mental health and SUD conditions, the reduction in the percentage of enrollees continuing treatment during the PHE compared with before the PHE did not vary substantially across diagnostic groups (typically 2-3 percentage points) (**Table B-2**).

Figure 1. Percentage of Enrollees Already Receiving Treatment Before and During the COVID-19 PHE Who Continued BH Treatment for a Second Year, by Demographic Characteristics



Source: Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), 2018-2020 v5.

Note: This figure shows the percentage of enrollees with BH service use in the first year who were still receiving services in the second year. All enrollees included in the analysis have prior claims for treatment of a BH condition. Alabama, Rhode Island, and Tennessee were excluded from the analysis because of issues in linking claims to beneficiary records.

Age was determined as of February 28, 2020, for the “before COVID-19 PHE” population and as of December 31, 2020, for the “during COVID-19 PHE” population.

Geographic location uses the U.S. Department of Education’s EDGE data to assign a geographic indicator based on the enrollee’s zip code. “Urban” includes enrollees who reside in areas designated as City, Suburban, Town (Fringe), and Rural (Fringe) by the EDGE data. “Rural” includes enrollees residing in areas designated as Town or Rural (Distant or Remote) by the EDGE data.

Eligibility group was determined as of the last month available in 2019 for the “before COVID-19 PHE” population and the last month available in 2020 for the “during COVID-19 PHE” population.

BH = Behavioral Health; PHE = Public Health Emergency.

DISCUSSION

For certain groups of people enrolled in Medicaid and CHIP, the PHE was associated with a reduction in the initiation and continuation of BH treatment. Our analysis showed that children’s access to BH treatment may have been most interrupted during the PHE. We observed notable decreases in the number of children who initiated and continued BH treatment when comparing the periods before and during the PHE. In fact, the overall reduction in the number of enrollees initiating BH treatment was driven completely by children (adults

experienced a small increase). Other studies have documented similar findings in service reduction for children enrolled in Medicaid [6].

There are many reasons why children's initiation and continuation of BH services in Medicaid/CHIP may have decreased most during the PHE. Schools are one of the primary gateways into mental health services for children [9], and recent CMS guidance has highlighted how states, State Educational Agencies and schools can provide sustainable mental health services for children covered by Medicaid and CHIP [10]. School closures during the onset of the PHE could have resulted in fewer children being identified with BH conditions and referred to care. Primary care visits for children also declined during the PHE [6], which likely interfered with the delivery of mental health services and referrals to mental health providers. The modest increase in the initiation of BH treatment among adults could have been driven by the shift of services to telehealth, which could be particularly effective to facilitate BH care for adults--more so than children [11].

These findings underlie the need to continue monitoring service use among different population groups to see how they recover from the PHE, particularly in the face of federal policies enacted during the PHE, such as the expansion of telehealth or waivers of provider requirements, which could affect population groups differently and, in turn, disparities in BH treatment.

Limitations

Our analysis has several limitations. To identify enrollees treated for a BH condition, we used a set of diagnosis codes and NDCs related to BH as recorded in Medicaid claims. Claims data do not capture services that are not covered by Medicaid and may underrepresent people with undiagnosed BH conditions. Therefore, reported increases in BH conditions during the PHE, as seen in survey data of the general population [3], may not appear in this analysis. Furthermore, it is unknown whether the increase in reported BH conditions is as widespread in the Medicaid and CHIP population as in the general population.

This analysis required enrollees to have at least 6 months of consecutive Medicaid/CHIP enrollment during our analytic period and therefore may not be representative of individuals with enrollment gaps. If BH service use patterns among enrollees with enrollment gaps is different from those without such gaps, the results we observed may not carry over to individuals not consecutively enrolled. Additionally, if enrollees had gaps in enrollment during the 2-year lookback period in which the enrollee received BH treatment through other means (including through a different insurer or through self-pay), this study may misclassify them as newly initiating treatment.

Another limitation is that the quality of the data reported by states may affect the reliability of certain information. For example, some states included in our analysis have incomplete race and ethnicity data [12].^f Further, our measures capture whether enrollees received *any* treatment for a BH condition, but this analysis cannot determine whether people received *appropriate* treatment for the condition. At a minimum, an enrollee had a single BH service claim during the relevant measurement periods, but we did not attempt to determine whether the enrollee received the appropriate amount of treatment.

Finally, our descriptive analysis can shed light on the association of the PHE period with BH service use for different population groups, but the findings are not necessarily causal. We made pre-post comparisons for the period before the COVID-19 PHE with the period at the beginning of the PHE. However, other

^f More information on states' race and ethnicity data can be found in the DQ Atlas: <https://www.medicaid.gov/dq-atlas/landing/topics/single/map?topic=g3m16&tafVersionId=32>.

socioeconomic factors and structural changes in the health care system outside of the PHE might have influenced changes in service use over the study period.

CONCLUSION

The findings in this brief show that the PHE was associated with a decline in Medicaid and CHIP enrollees both initiating treatment for a BH condition and continuing their BH treatment. This decline occurred across most of the demographic groups we studied, but the reductions were largest for children and Black and Hispanic enrollees.

APPENDIX A: ENROLLEE INCLUSION CRITERIA

Identifying Enrollees Newly Treated for a Behavioral Health Condition

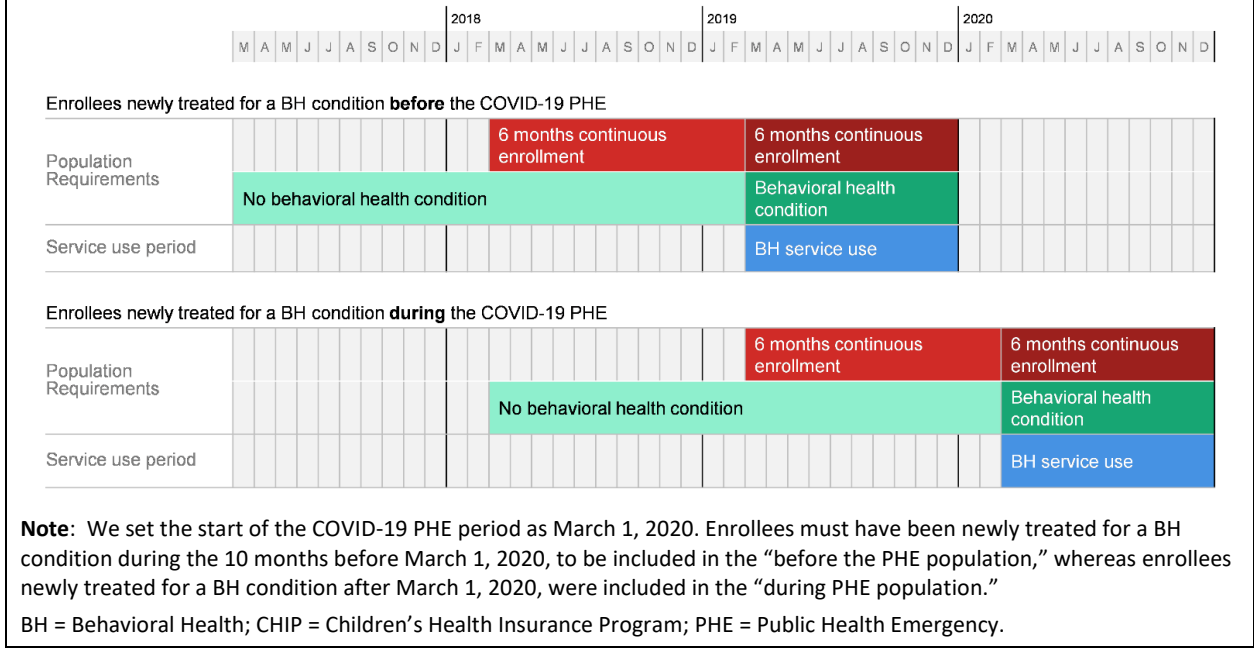
We defined the population of enrollees newly treated for a BH condition based on the timing of their first BH service, having no BH treatment before their service, and being enrolled continuously. We discuss each of these three criteria, which are summarized in **Figure A-1**.

1. **Time period for first BH service use.** There are two 10-month measurement periods we looked at regarding BH service use: (1) March-December 2019--the period prior to the PHE; and (2) March-December 2020--the initial period of the PHE.
2. **Lookback period for no previous BH treatment.** Once an enrollee was observed receiving BH treatment in one of the service use periods, we then looked at whether they had received such treatment in the 24 months before the start of the respective periods.⁸ We did so for both service use periods (before and during the PHE). We then excluded enrollees with prior BH treatment from the analysis sample.
3. **Medicaid/CHIP enrollment requirements.** For each service use period, enrollees were required to be enrolled for at least 6 consecutive months during the period *and* for at least 6 consecutive months in the 12 months before the start of the period.

Putting these criteria together, an individual was included in our population of enrollees newly treated for a BH condition *before* the PHE if they first received treatment for a BH condition between March 2019 and December 2019; had not received any services for a BH condition in the 2 prior years (March 2017 to February 2019); and had been enrolled in Medicaid or CHIP for at least 6 consecutive months between March 2018 and February 2019, as well as for at least 6 consecutive months between March 2019 and December 2019. Similarly, enrollees newly treated for a BH condition during the PHE must have first received a service for a BH condition between March 2020 and December 2020; not received services for a BH condition in the 2 prior years (March 2018 to February 2020); and been enrolled in Medicaid or CHIP for at least 6 consecutive months between March 2019 and February 2020, as well as for at least 6 consecutive months between March 2020 and December 2020. Note that these criteria preclude an enrollee from being in both the “before the PHE” population and the “during PHE” population of enrollees newly treated for a BH condition.

⁸ That is, for any enrollee with BH treatment in the “pre-COVID” service use period, we looked for any BH treatment from March 2017 to February 2019. Similarly, for any enrollee with BH treatment in the “COVID-19 PHE” period, we looked from March 2018 to February 2020.

Figure A-1. Criteria Used to Identify a Medicaid and CHIP Enrollee Newly Treated for a BH Condition, Before and During the COVID-19 PHE



Identifying Enrollees Already Receiving Behavioral Health Treatment

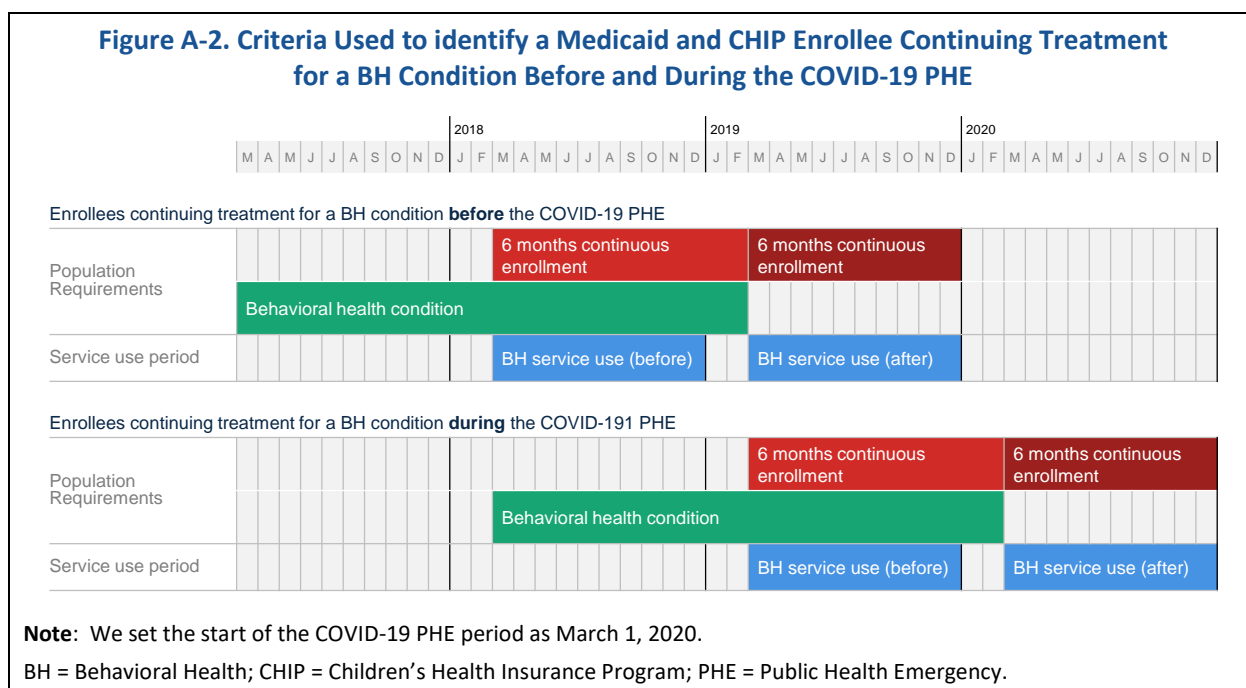
We defined the population of enrollees with BH treatment in the previous year based on similar criteria: receiving BH treatment during the BH service periods of interest (before or during the PHE), having prior BH treatment, and being continuously enrolled. We discuss each of these criteria, which are summarized in **Figure A-2**.

- Time period for BH service use.** Unlike for enrollees newly treated for a BH condition, there are two periods over which we assessed service use for both the period before COVID-19 and during the PHE. We required two periods so we could observe continuation in service use between the first and second periods, because our focus is on understanding the extent to which enrollees were still receiving treatment in the second period. Each service use period covered 10 months, running from March to December of the calendar year. To study the period before the PHE, the first service use period was in 2018 and the second in 2019. To study the period during the COVID-19 emergency, the first service use period was in 2019 and the second in 2020. (Note: the second service use period was after the onset of the PHE.) To be included in the sample, beneficiaries needed to have a BH service claim in the first service use period (that is, March 1 to December 31, 2018, for the before the PHE period, and March 1–December 31, 2019, for during the PHE).
- Lookback period for previous BH treatment.** Once an enrollee was observed receiving BH treatment in the first service period, we then looked at whether they had received such treatment in the 24 months before the start of the respective periods.^h We did so for both service use periods (before and during the PHE). We then excluded enrollees from the analysis sample if they did not have prior BH treatment in the previous 24 months.

^h That is, for any enrollee with BH treatment in the “pre-COVID” service use period, we looked for any BH treatment from March 2017 to February 2019. Similarly, for any enrollee with BH treatment in the “COVID-19 PHE” service use period, we looked at March 2018 to February 2020.

- Medicaid/CHIP enrollment requirements.** To be included in the analysis sample of enrollees for before the PHE, individuals must have been enrolled in Medicaid or CHIP for at least 6 consecutive months between March 2018 and February 2019, and also for at least 6 consecutive months between March and December 2019. Similarly, to be included in the analysis sample of enrollees for during the PHE, individuals must have been enrolled in Medicaid or CHIP for at least 6 consecutive months between March 2019 and February 2020, and also for at least 6 consecutive months between March and December 2020.

Putting these criteria together, to be included in our analysis sample of enrollees with BH treatment in the previous year for the period *before* the COVID-19 PHE, an individual must have received treatment for a BH condition between March and December 2018; received services for a BH condition in the 2 prior years (March 2017 to February 2019); and been enrolled in Medicaid or CHIP for at least 6 consecutive months between March 2018 and February 2019, and for 6 consecutive months between March 2019 and December 2019. Similarly, to be included in the analysis sample for during the PHE, an individual must have received a service for a BH condition between March 2019 and December 2019; received services for a BH condition in the 2 prior years (March 2018 to February 2020); and been enrolled in Medicaid or CHIP for at least 6 consecutive months between March 2019 and February 2020, and for 6 consecutive months between March 2020 and December 2020. Note that these criteria would allow an enrollee to be included in both the “before the PHE” and the “during PHE” populations of enrollees with a BH treatment in the previous year.



APPENDIX B: SUPPLEMENTAL DESCRIPTIVE STATISTICS

Table B-1. Number and Percentage of Medicaid and CHIP Enrollees in the United States Already Receiving Treatment for BH Conditions in the “before COVID-19” and “during COVID-19” Populations, by Conditions and Demographic Characteristics

	Population of Enrollees Already Receiving Treatment for a BH Condition Before the COVID-19 PHE		Population of Enrollees Already Receiving Treatment for a BH Condition During the COVID-19 PHE	
	Number of Enrollees	Percentage of Enrollees ^a	Number of Enrollees	Percentage of Enrollees ^b
All enrollees	8,623,161	100	9,678,205	100
Age group^c				
0-18 years	3,402,420	39	3,789,126	39
19-64 years	5,220,741	61	5,889,079	61
Sex^d				
Male	3,941,534	46	4,398,598	45
Female	4,681,622	54	5,279,592	55
Geographic location^{d, e}				
Urban	6,645,809	77	7,496,249	77
Rural	1,914,939	22	2,140,053	22
Race/ethnicity				
White	4,491,129	52	5,017,417	52
Black	1,494,456	17	1,653,486	17
Hispanic	1,354,897	16	1,548,420	16
Asian	127,169	1	142,382	1
Other	1,155,510	13	1,316,500	14
Eligibility group^f				
Adult	1,205,043	14	1,407,930	15
Adult expansion	2,468,404	29	2,821,630	29
Children	2,972,220	34	3,353,519	35
Beneficiaries with disabilities	1,841,945	21	1,925,683	20
Pregnant	58,442	1	79,731	1
Unknown	77,107	1	89,712	1
Any mental health condition	7,918,528	92	8,877,117	92
Anxiety disorders	3,717,973	43	4,321,228	45
Mood disorders	4,137,646	48	4,691,030	48
Other mental health disorders	3,833,526	44	4,286,056	44
Personality disorders	393,585	5	432,314	4
Schizophrenia and other psychotic disorders	789,753	9	859,211	9

Table B-1. (continued)

	Population of Enrollees Already Receiving Treatment for a BH Condition Before the COVID-19 PHE		Population of Enrollees Already Receiving Treatment for a BH Condition During the COVID-19 PHE	
	Number of Enrollees	Percentage of Enrollees ^a	Number of Enrollees	Percentage of Enrollees ^b
Any substance use disorder^c	2,010,866	23	2,289,689	24
Alcohol use disorder	768,258	9	882,135	9
Opioid use disorder	1,013,659	12	1,175,780	12
Other drug use disorders	1,527,461	18	1,750,443	18

Source: Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), 2018-2020 v5.

Notes: This table presents the number and percentage of Medicaid and CHIP enrollees with a BH condition in the “before COVID-19” and “during COVID-19” populations in the United States by BH condition and demographic characteristics. Alabama, Rhode Island, and Tennessee were excluded from the analysis due to issues in linking claims to beneficiary records.

- a. The denominator for the percentage of enrollees is the total number of Medicaid and CHIP enrollees in the “before COVID-19” population (n = 8,623,161).
- b. The denominator for the percentage of enrollees is the total number of Medicaid and CHIP enrollees in the “during COVID-19” population (n = 9,678,205).
- c. Age was determined as of February 28, 2019, for the “before COVID-19” population. Age was determined as of February 29, 2020, for the “during COVID-19” population.
- d. The sum of counts of enrollees in this subpopulation category does not equal the overall count of enrollees because of missing or unknown information for those enrollees.
- e. Geographic location uses the U.S. Department of Education’s EDGE data to assign a geographic indicator based on the beneficiary’s zip code. “Urban” includes enrollees who reside in areas designated as City, Suburban, Town (Fringe), and Rural (Fringe) by the EDGE data. “Rural” includes enrollees residing in areas designated as Town or Rural (Distant or Remote) by the EDGE data.
- f. Eligibility group was determined as of the last month available beginning with February 28, 2019, for the “before COVID-19” population. Eligibility group was determined as of the last month available beginning with February 29, 2020, for the “during COVID-19” population.

BH = Behavioral Health; CHIP = Children’s Health Insurance Program; PHE = Public Health Emergency.

Table B-2. Number and Percentage of Medicaid and CHIP Enrollees in the United States Potentially Continuing Treatment for BH Conditions Before and During the COVID-19 PHE, by Conditions and Demographic Characteristics

	Enrollees Already Receiving Treatment Before the PHE			Enrollees Already Receiving Treatment During the PHE		
	Total Number of Enrollees Who had Treatment in 2018	Number of enrollees who continued treatment for a second year in 2019	Percentage of enrollees who continued treatment for a second year in 2019	Total Number of Enrollees Who had Treatment in 2019	Number of enrollees who continued treatment for a second year in 2020	Percentage of enrollees who continued treatment for a second year in 2020
Overall	8,623,161	6,991,321	81	9,678,205	7,595,748	79
Age group^a						
0-18 years	3,402,420	2,638,535	78	3,789,126	2,770,214	73
19-64 years	5,220,741	4,352,786	83	5,889,079	4,825,534	82
Sex^b						
Male	3,941,534	3,168,106	80	4,398,598	3,384,451	77
Female	4,681,622	3,823,210	82	5,279,592	4,211,291	80
Geographic location^{c,d}						
Urban	6,645,809	5,365,089	81	7,496,249	5,846,244	78
Rural	1,914,939	1,573,231	82	2,140,053	1,714,310	80
Race/ethnicity						
White	4,491,129	3,773,503	84	5,017,417	4,124,482	82
Black	1,494,456	1,169,470	78	1,653,486	1,233,385	75
Hispanic	1,354,897	1,026,580	76	1,548,420	1,112,976	72
Asian	127,169	97,914	77	142,382	105,329	74
Other	1,155,510	923,854	80	1,316,500	1,019,576	77
Eligibility group^e						
Adult	1,205,043	971,399	81	1,407,930	1,120,781	80
Adult expansion	2,468,404	1,988,439	81	2,821,630	2,235,011	79
Children	2,972,220	2,252,797	76	3,353,519	2,393,018	71
Beneficiaries with disabilities	1,841,945	1,674,552	91	1,925,683	1,720,211	89
Pregnant	58,442	42,706	73	79,731	57,345	72
Unknown	77,107	61,428	80	89,712	69,382	77
Any mental health condition^e	7,918,528	6,481,891	80	8,877,117	7,032,599	79
Anxiety disorders	3,717,973	3,149,802	85	4,321,228	3,588,673	83
Mood disorders	4,137,646	3,495,945	84	4,691,030	3,872,138	83
Other mental health disorders	3,833,526	3,141,069	82	4,286,056	3,370,706	79
Personality disorders	393,585	345,348	88	432,314	372,378	86
Schizophrenia and other psychotic disorders	789,753	722,804	92	859,211	775,269	90
Any substance use disorder^e	2,010,866	1,660,894	83	2,289,689	1,855,437	81
Alcohol use disorder	768,258	628,542	82	882,135	706,242	80
Opioid use disorder	1,013,659	906,090	89	1,175,780	1,038,672	88
Other drug use disorders	1,527,461	1,273,738	83	1,750,443	1,433,740	82

Source: Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), 2018-2020 v5.

Notes: This table presents the number of Medicaid and CHIP enrollees continuing treatment before and during the PHE by BH condition and demographic characteristics. Alabama, Rhode Island, and Tennessee were excluded from the analysis due to issues in linking claims to beneficiary records.

- Age was determined as of February 28, 2019, for enrollees continuing treatment before the COVID-19 PHE and as of February 29, 2020, for enrollees continuing treatment during the COVID-19 PHE.
- The sum of counts of enrollees in this subpopulation category does not equal the overall count of enrollees because of missing or unknown information for those enrollees.
- Geographic location uses the U.S. Department of Education's EDGE data to assign a geographic indicator based on the beneficiary's zip code. "Urban" includes enrollees who reside in areas designated as City, Suburban, Town (Fringe), and Rural (Fringe) by the EDGE data. "Rural" includes enrollees residing in areas designated as Town or Rural (Distant or Remote) by the EDGE data.
- The sum of counts of enrollees in this subpopulation category does not equal the overall count of enrollees because of missing or unknown information for those enrollees.
- Eligibility group was determined as of the last month available beginning with February 28, 2019, for enrollees continuing treatment before the COVID-19 PHE and the last month available beginning with February 29, 2020, for enrollees continuing treatment during the COVID-19 PHE.

BH = Behavioral Health; CHIP = Children's Health Insurance Program; PHE = Public Health Emergency.

REFERENCES

1. Substance Abuse and Mental Health Services Administration. (2021). Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration; HHS Publication No. PEP21-07-01-003, NSDUH Series H-56. Available: <https://www.samhsa.gov/data/sites/default/files/reports/rpt39443/2021NSDUHFRRRev010323.pdf>.
2. U.S. Government Accountability Office. (2021). Behavioral Health: Patient Access, Provider Claims Payment, and the Effect of the COVID-19 Pandemic. Washington, DC: Government Accountability Office; GAO-21-437R. Available: <https://www.gao.gov/assets/gao-21-437r.pdf>.
3. A. Vahratian, S.J. Blumberg, E.P. Terlizzi, & J.S. Schiller. (2021). "Symptoms of anxiety or depressive disorder and use of mental health care among adults during the COVID-19 pandemic--United States, August 2020-February 2021." *MMWR Morb Mortal Wkly Rep*, vol. 70, pp. 490-494. doi: 10.15585/mmwr.mm7013e2.
4. M. Theberath, D. Bauer, W. Chen, M. Salinas, A.B. Mohabbat, J. Yang, et al. (2022). Effects of COVID-19 Pandemic on Mental Health of Children and Adolescents: A Systematic Review of Survey Studies. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8972920/>.
5. C.S.M. Ng, & S.S.L. Ng. (2022). "Impact of the COVID-19 pandemic on children's mental health: A systematic review." *Front Psychiatry*, vol. 3, 975936. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9622998/>.
6. Centers for Medicare & Medicaid Services. (2020). Medicaid & CHIP and the COVID-19 PHE: Preliminary Medicaid and CHIP Data Snapshot. Available: <https://www.medicaid.gov/state-resource-center/downloads/covid-19-medicaid-data-snapshot.pdf>.
7. K.M. Holland, C. Jones, A.M. Vivolo-Kantor, et al. (2021). "Trends in US emergency department visits for mental health, overdose, and violence outcomes before and during the COVID-19 pandemic." *JAMA Psychiatry*, vol. 78, no. 4, pp. 372-379. doi:10.1001/jamapsychiatry.2020.4402.
8. J. Tolbert, & M. Ammula. (2023). 10 Things to Know about the Unwinding of the Medicaid Continuous Enrollment Provision. Kaiser Family Foundation. Available: <https://www.kff.org/medicaid/issue-brief/10-things-to-know-about-the-unwinding-of-the-medicaid-continuous-enrollment-provision/#one>.
9. M.M. Ali, K. West, J.L. Teich, S. Lynch, R. Mutter, & J. Dubenitz. (2019). "Utilization of mental health services in education setting by adolescents in the United States." *J Sch Health*, vol. 89, no. 5, pp. 393-401. doi: 10.1111/josh.12753.
10. Centers for Medicare & Medicaid Services (2023). Delivering Services in School-Based Settings: A Comprehensive Guide to Medicaid Services and Administrative Claiming. Available: <https://www.medicaid.gov/medicaid/financial-management/downloads/sbs-guide-medicaid-services-administrative-claiming.pdf>.
11. G. Hoffnung, E. Feigenbaum, A. Schechter, D. Guttman, V. Zemon, & I. Schechter. (2021). "Children and telehealth in mental healthcare: What we have learned from COVID-19 and 40,000+ sessions." *Psychiatr Res Clin Pract*, vol. 3, pp. 106-114.
12. Centers for Medicare & Medicaid Services. (2023). DQ Atlas, Background and Methods Resource, Topic: Race and Ethnicity. Available: <https://www.medicaid.gov/dq-atlas/downloads/background-and-methods/TAF-DQ-Race-Ethnicity.pdf>.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Assistant Secretary for Planning and Evaluation

200 Independence Avenue SW, Mailstop 447D
Washington, D.C. 20201

For more ASPE briefs and other publications, visit:
aspe.hhs.gov/reports



ABOUT THE AUTHORS

Mir Ali, Ph.D., Timothy Creedon, Ph.D., Laura Jacobus-Kantor, Ph.D., and Judith Dey, Ph.D., work in the Office of Behavioral Health, Disability, and Aging Policy in the Office of the Assistant Secretary for Planning and Evaluation.

Lori Timmins, Ph.D., Joy Rooney, M.P.P., Hamed Lahijani, DHS.c., Alexandra Carpenter, Melissa Sanchez, M.P.P., Mike Rudacille, MS.c., Carol Irvin, Ph.D., and Jonathan Brown, Ph.D., work at Mathematica.

SUGGESTED CITATION

Timmins, L., Rooney, J., Lahijani, H., Carpenter, A., Sanchez, M., Rudacille, M., Irvin, C., Brown, J., Ali, M., Creedon, T., Jacobus-Kantor, L., & Dey, J. Behavioral Health Service Use Among Individuals Enrolled in Medicaid and CHIP Before and During the COVID-19 Public Health Emergency (Issue Brief). Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. December 30, 2024.

COPYRIGHT INFORMATION

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

Subscribe to ASPE mailing list to receive email updates on new publications:
aspe.hhs.gov/join-mailing-list

For general questions or general information about ASPE:
aspe.hhs.gov/about