



# Behavioral Health Treatment by Service Type and Race and Ethnicity for Children and Youth Involved with the Child Welfare System

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## KEY POINTS

- **Child and adolescent Medicaid and Children’s Health Insurance Program (CHIP) beneficiaries with child welfare involvement in 2019 (ages 3 through 17) were more likely to receive various behavioral health services than other children and youth in Medicaid and CHIP; they also experienced more service encounters per beneficiary, indicating a higher intensity of service receipt.** For example, 24.1 percent of beneficiaries in the child welfare population received practitioner services and 8.1 percent of other beneficiaries received these services. Similarly, child welfare beneficiaries with behavioral health conditions who received community support services experienced more than six service events per beneficiary, compared to about three per beneficiary for children and youth in other eligibility categories with behavioral health conditions.
- **Just over half of those Medicaid- and CHIP-enrolled children and youth involved in the child welfare system with behavioral health diagnoses received practitioner services and psychotherapy, counseling, and other psychiatric services.** Other common service types for these beneficiaries included screening, assessment, and other diagnostic services (45.0 percent); community support (26.0 percent); and case management (23.5 percent).
- **White children used behavioral health services at the highest rates compared to children from all other racial and ethnic groups, whereas Asian children received services at the lowest rates.** This was true in both the child welfare population and among other Medicaid and CHIP beneficiaries. For Asian beneficiaries, the odds of receiving screening, assessment, and other diagnostic services were 54 percent lower than White beneficiaries in the child welfare population and 82 percent lower than White children in other eligibility groups.
- **Racial and ethnic differentials in behavioral health service receipt are substantially less pronounced among Medicaid and CHIP beneficiaries in the child welfare population compared to other child and adolescent Medicaid and CHIP beneficiaries.**

## BACKGROUND

Children and youth involved with the child welfare system frequently have behavioral health conditions and are high users of behavioral health services compared to other children and youth on Medicaid (Radel et al., 2023). To ensure the needs of these vulnerable children and youth are addressed, Federal law requires that states establish policies and practices to ensure children in foster care receive appropriate health care, including mental health services (Title IV-B, Subpart 1 of the Social Security Act, section 422(b)(15)(A)). Among other requirements, this plan is expected to include a schedule for initial and follow-up screenings, a plan for

meeting children’s identified physical and mental health needs, and procedures regarding oversight of prescriptions for psychotropic medications (Fernandes-Alcantara et al., 2017). However, state and local child welfare agencies often struggle to ensure children in their care receive appropriate behavioral health services. In the most recently completed round of the federal monitoring visits, known as Child and Family Services Reviews, which assess states’ compliance with statutory requirements regarding child welfare services provided under Titles IV-B and IV-E of the Social Security Act, in 40 percent of cases examined practice was rated as “in need of improvement” with respect to meeting the mental and behavioral health needs of the child (U.S. Department of Health and Human Services, 2020). In addition, several reports over decades have found deficiencies in the provision and oversight of behavioral health services for this population, especially regarding the use of psychotropic medications for children in foster care (Huber & Grimm, 2004; U.S. Government Accountability Office, 2012; U.S. Department of Health and Human Services, 2018).

Many children and youth involved with the child welfare system have significant behavioral health needs and most receive their health care, including behavioral health care, through Medicaid, but few studies use Medicaid claims data to examine the specific types of behavioral health services used by this population and the intensity at which they receive these services. Further, given that children of color, particularly Black and American Indian or Alaska Native children and youth, are overrepresented in the child welfare system (Child Welfare Information Gateway, 2021; Detlaff & Boyd, 2020), a key question is whether disparities in behavioral health service use across racial and ethnic groups differ in the child welfare population compared to the overall child population. Racial and ethnic disparities in behavioral health service use in the general population are well documented, with children and youth of color more likely to have unmet needs (Rogers et al., 2022; Hoffmann et al., 2022; Medicaid and CHIP Payment and Access Commission [MACPAC], 2021; Cummings et al., 2019; Kataoka et al., 2002). Existing studies of the child welfare population suggest that similar disparities exist in the child welfare population—Black and Hispanic youth in the child welfare system have lower receipt of mental health services compared to White youth in the child welfare system (Raghavan et al., 2014; Gudiño et al., 2012; Garland et al., 2005; Leslie et al., 2005). However, because contact with the child welfare system can facilitate access to behavioral health services (Leslie et al., 2005), this topic merits further study.

Previous studies of behavioral health service used and racial and ethnic disparities in the child welfare population primarily used survey data, including the National Survey of Child and Adolescent Well-Being (Gudiño et al., 2012; Burns et al., 2004) and the Patterns of Youth Mental Health Care in Public Service Systems study (Garland et al., 2005). However, we use Medicaid and CHIP claims data to provide a more recent, comprehensive view of behavioral health service use and racial and ethnic differences for children who are Medicaid beneficiaries in the child welfare system. In this brief, we report national trends in receipt of key behavioral health service types for Medicaid beneficiaries in the child welfare population and other beneficiaries, characterize racial and ethnic differences in service use for the child welfare population compared to their non-child welfare peers, and discuss implications for future research and policy planning related to ongoing disparities among youth of color. We note, however, that our recent related analysis of psychotropic drug use among children involved with the child welfare system (Radel et al., 2023) found substantial state variation in service use, so national trends described here might not replicate uniformly at the state level.

## METHODS

This analysis focuses on the use of behavioral health services among child and adolescent Medicaid and CHIP beneficiaries involved with the child welfare system. It relies on data from the 2018–2020 Transformed Medicaid Statistical Information System Analytic Files (TAF). The analysis included 700,945 children and youth involved with the child welfare system and 30,661,754 children and youth in other Medicaid eligibility categories in 2019. The study population was limited to beneficiaries enrolled in Medicaid or CHIP for at least six consecutive months in all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands; eligible for

full or comprehensive benefits; and ages 3 to 17 years. Data for three states were subsequently excluded because of data quality issues: Alabama, Rhode Island, and Utah (see Appendix A for details on exclusions). We identified the child welfare population using the child’s most recent eligibility group code from the TAF Demographics and Eligibility (DE) File, which identifies children whose Medicaid eligibility derives from their participation in the Title IV-E Adoption Assistance, Foster Care, or Guardianship programs.

Metrics are reported by race and ethnicity and by behavioral health condition. We identified the behavioral health conditions using standardized data definitions laid out by the Centers for Medicare & Medicaid Services in the Chronic Conditions Data Warehouse (CCW).<sup>\*</sup> Behavioral health conditions include attention-deficit/hyperactivity disorder (ADHD), anxiety, behavior or conduct disorders, depressive disorders, mood disorders (including bipolar disorder), psychotic disorders, other mental health conditions, trauma disorders, Tourette’s and tic disorders, and substance use disorder (SUD). SUD conditions include alcohol use disorder, opioid use disorder, and other drug use disorders.

To describe service receipt, we examined the following metrics: (1) the percentage of beneficiaries who received each behavioral health service type in 2019 and (2) the number of events for each service type per 1,000 beneficiaries in 2019. We calculated the second metric for the five most frequently received behavioral health service types: practitioner services; psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. (Appendix A provides a table describing these service types.) We also examined the percentage of beneficiaries who received inpatient care and emergency services for behavioral health conditions.

Appendix A describes more complete methodological details.

## FINDINGS

### **CHILDREN AND YOUTH INVOLVED IN THE CHILD WELFARE SYSTEM ARE MORE LIKELY THAN OTHER MEDICAID/CHIP BENEFICIARIES TO BE OLDER AND BLACK OR AMERICAN INDIAN/ALASKA NATIVE**

Compared to other children and youth receiving Medicaid, Black and American Indian/Alaska Native children are overrepresented among our study population of Medicaid beneficiaries in the child welfare population. Black children comprise 23 percent of beneficiaries in the child welfare population, compared to 18 percent of other beneficiaries, and American Indian/Alaska Native children and youth make up 1.9 percent of beneficiaries in the child welfare population compared to 1.4 percent of other beneficiaries (Table 1). Latino and Asian children are underrepresented among child welfare beneficiaries in the Medicaid population, with Latino children making up 15 percent of child welfare beneficiaries versus 26 percent in other eligibility categories and Asian children comprising less than 1 percent of child welfare beneficiaries versus 3.1 percent in other eligibility categories. This is largely consistent with existing data demonstrating that Black and American Indian/Alaska Native youth are overrepresented and Hispanic or Latino and Asian youth are underrepresented in the child welfare system compared to the general population of children in the United States (Child Welfare Information Gateway, 2021; Detlaff & Boyd, 2020). Because the percentage of Hispanic children is lower in the child welfare population than among the general population of Medicaid-enrolled children, our study population of Medicaid beneficiaries in the child welfare population is disproportionately non-Hispanic White (44 percent of children and youth in the child welfare population versus 32 percent of other children and youth receiving Medicaid).

For the child welfare population, the largest age group is youth ages 12 to 17 years (43 percent of the child welfare population); for other beneficiaries, the largest age group is children ages 6 to 11 (41 percent of other beneficiaries). The child welfare population is also disproportionately rural: a smaller percentage of the child

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<sup>\*</sup> Available at <https://www2.ccwdata.org/web/guest>.

welfare population lives in urban areas compared to other beneficiaries (75 percent for beneficiaries in the child welfare population versus 80 percent for other beneficiaries); a larger percentage of the child welfare population lives in rural areas (24 percent for beneficiaries in the child welfare population versus 20 percent for other beneficiaries).

**Table 1. Demographic characteristics of beneficiaries, by child welfare status, 2019**

	Child welfare population %	Other beneficiaries %	Total %
<b>Total count of beneficiaries (N)</b>	700,945	30,661,754	31,362,699
<b>Age</b>			
3–5 years	17.2	21.1	21.0
6–11 years	39.4	41.0	41.0
12–17 years	43.4	37.9	38.0
<b>Race and ethnicity</b>			
White, non-Hispanic	43.5	31.7	32.0
Black, non-Hispanic	22.6	18.4	18.5
Hispanic or Latino	15.3	26.2	25.9
Asian, non-Hispanic	0.6	3.1	3.1
American Indian/Alaska Native, non-Hispanic	1.9	1.4	1.4
Other	0.9	1.00	1.00
<b>Sex</b>			
Male	51.3	51.2	51.2
Female	48.7	48.8	48.8
<b>Geography</b>			
Urban	75.4	79.7	79.6
Rural	24.3	19.7	19.8

Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. Each cell contains the percentage of beneficiaries within the subpopulation (column) in each demographic group in the year. Data quality issues excluded three states: Alabama, Rhode Island, and Utah.

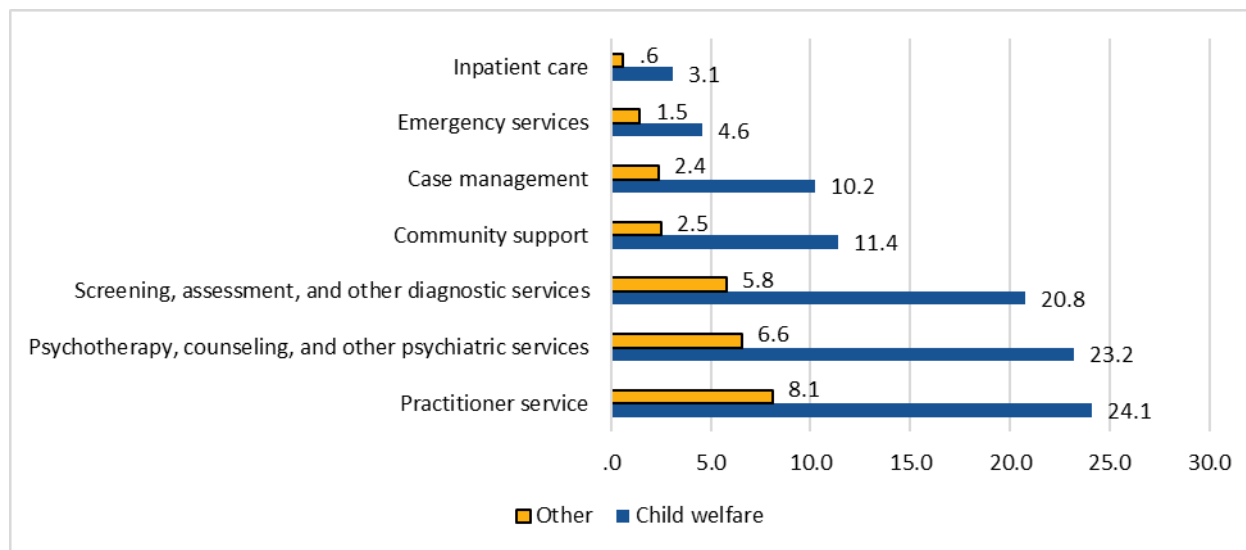
## CHILDREN AND YOUTH INVOLVED IN THE CHILD WELFARE SYSTEM RECEIVE MORE BEHAVIORAL HEALTH SERVICES THAN OTHER BENEFICIARIES

Among all children and youth in the child welfare population, the most commonly received service type was practitioner services (24.1 percent of child welfare beneficiaries), followed by psychotherapy, counseling, and other psychiatric services (23.2 percent of child welfare beneficiaries); screening, assessment, and other diagnostic services (20.8 percent of child welfare beneficiaries); community support (11.4 percent of child welfare beneficiaries); and case management (10.2 percent of child welfare beneficiaries) (Figure 1). The methods description in Appendix A defines the various service types.

Among children and youth in the child welfare population with behavioral health conditions, psychotherapy, counseling, and other psychiatric services was the most commonly received service type (received by 53.0 percent of child welfare beneficiaries), followed by practitioner services (52.6 percent of child welfare beneficiaries); screening, assessment, and other diagnostic services (45.0 percent of child welfare beneficiaries); community support (26.0 percent of child welfare beneficiaries); and case management (23.5 percent of child welfare beneficiaries) (Figure 2).

For children and youth in the child welfare population without behavioral health conditions, the five most common service types were the same as above except they included emergency services rather than case management (results not shown).

**Figure 1. Percentage of beneficiaries receiving each service type, by child welfare status and service type, 2019**



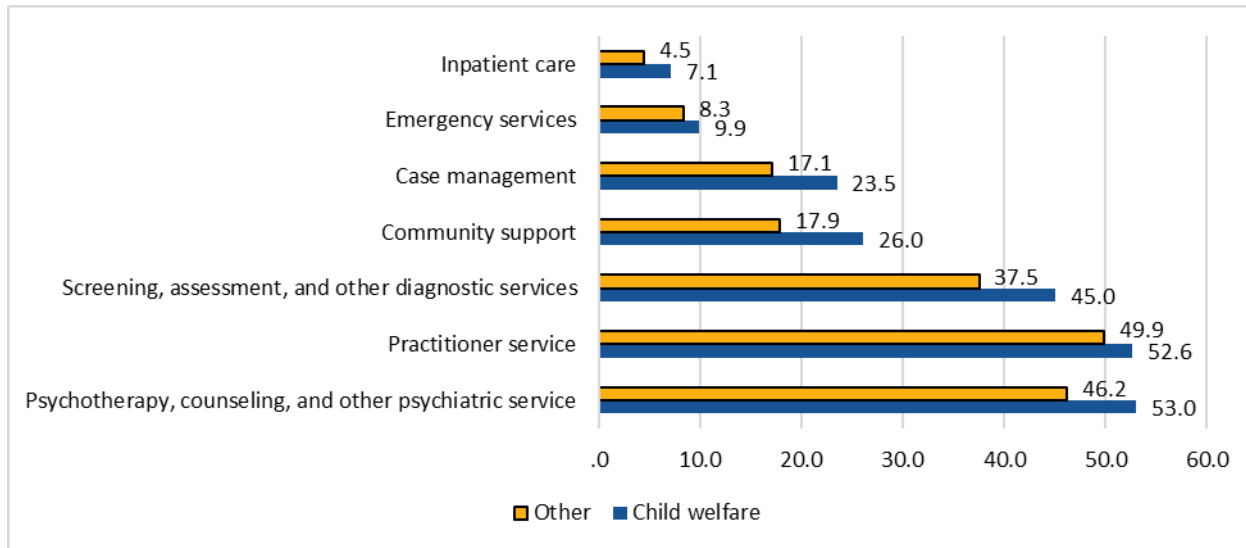
Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

Children and youth in the child welfare population were more likely to receive behavioral health services of each type than other beneficiaries (Figure 1). Importantly, higher rates of service receipt among those in the child welfare population were not simply due to differences in rates of behavioral health conditions. Among children and youth with behavioral health conditions, the differences in service receipt between the two populations narrows, but those in the child welfare population still receive all behavioral health service types at greater rates. For example, 53.0 percent of beneficiaries in the child welfare population with behavioral health conditions received psychotherapy, counseling, and other psychiatric service, whereas 46.2 percent of other beneficiaries with behavioral health conditions received this service (Figure 2). Similarly, 52.6 percent of beneficiaries in the child welfare population with behavioral health conditions received practitioner services, and 49.9 percent of other beneficiaries with behavioral health conditions received this service. This pattern remains consistent when limiting to beneficiaries with specific behavioral health diagnoses: children and youth in the child welfare population with trauma disorders (Appendix B, Figure B1), ADHD (Appendix B, Figure B2), and behavior or conduct disorders (Appendix B, Figure B3) were more likely than other beneficiaries to receive services of each type.

Children and youth in the child welfare population also received less common but more intensive services, such as inpatient care and emergency services for behavioral health conditions, at higher rates than others enrolled in Medicaid. Almost 10 percent of beneficiaries in the child welfare population with behavioral health conditions received emergency services in the year (9.9 percent), whereas 8.3 percent of other beneficiaries with behavioral health conditions received emergency services (Figure 2). Finally, 7.1 percent of children and youth in the child welfare population with behavioral health conditions received inpatient care, and 4.5 percent of other beneficiaries with behavioral health conditions received inpatient care.

**Figure 2. Percentage of beneficiaries with behavioral health conditions receiving each service type, by child welfare status and service type, 2019**



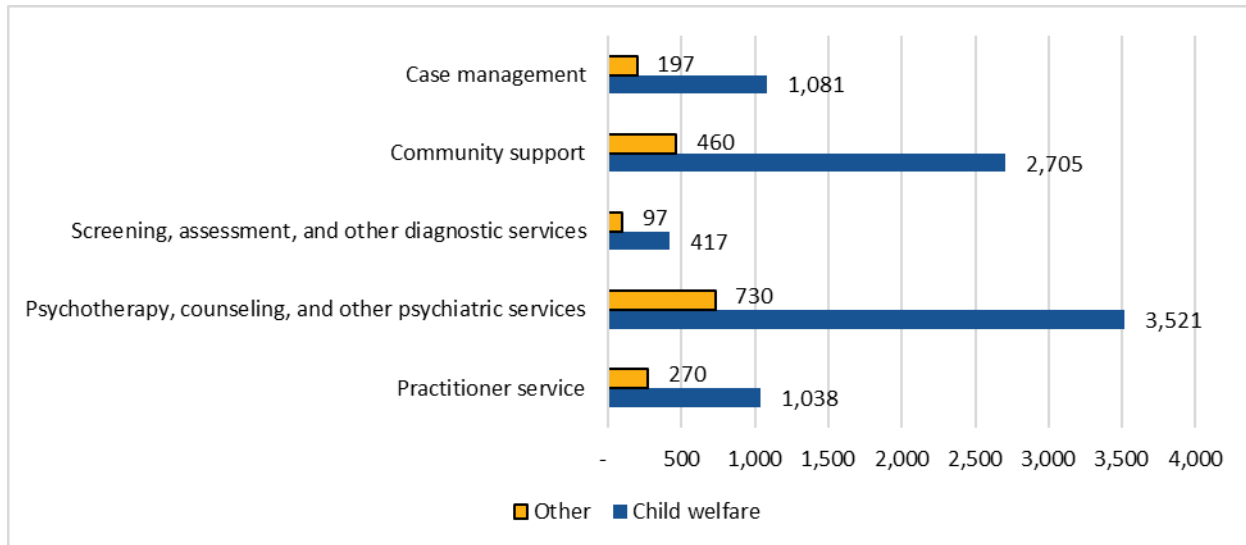
Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

### **CHILDREN AND YOUTH INVOLVED IN THE CHILD WELFARE SYSTEM RECEIVE A HIGHER INTENSITY OF BEHAVIORAL HEALTH SERVICES THAN OTHER BENEFICIARIES**

Not only do beneficiaries in the child welfare population receive all service types at higher rates compared to other beneficiaries, but beneficiaries in the child welfare population receive a higher intensity of services for all service types, measured by the number of service events per 1,000 beneficiaries for each service type (Figure 3 for all child welfare beneficiaries; Figure 4 for those with diagnosed behavioral health conditions; and Appendix B, Figures B4–B6 for those with trauma disorders, ADHD, and behavior or conduct disorders). Child welfare beneficiaries received psychotherapy, counseling and other psychiatric services and community support at the highest intensity compared to other service types, and these two service types have the largest gap in service intensity for child welfare and other beneficiaries. Beneficiaries in the child welfare population with behavioral health conditions received 6,271 community support service events per 1,000 child welfare beneficiaries, compared to 3,331 community support service events per 1,000 other beneficiaries with behavioral health conditions (Figure 4). Beneficiaries in the child welfare population with behavioral health conditions received 8,170 psychotherapy, counseling, and other psychiatric service events per 1,000 beneficiaries, compared to 5,295 psychotherapy, counseling, and other psychiatric service events per 1,000 other beneficiaries with behavioral health conditions (Figure 4).

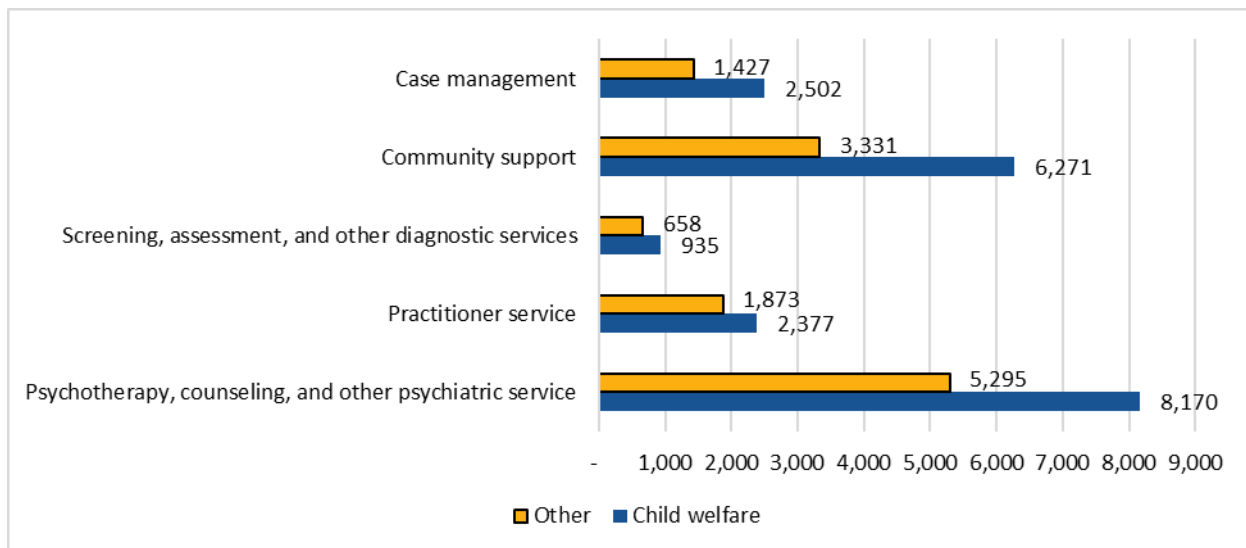
**Figure 3. Service events per 1,000 beneficiaries, by child welfare status and service type, 2019**



Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. This figure includes the five most frequently received behavioral health service types: practitioner services, psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

**Figure 4. Service events per 1,000 beneficiaries with behavioral health conditions, by child welfare status and service type, 2019**

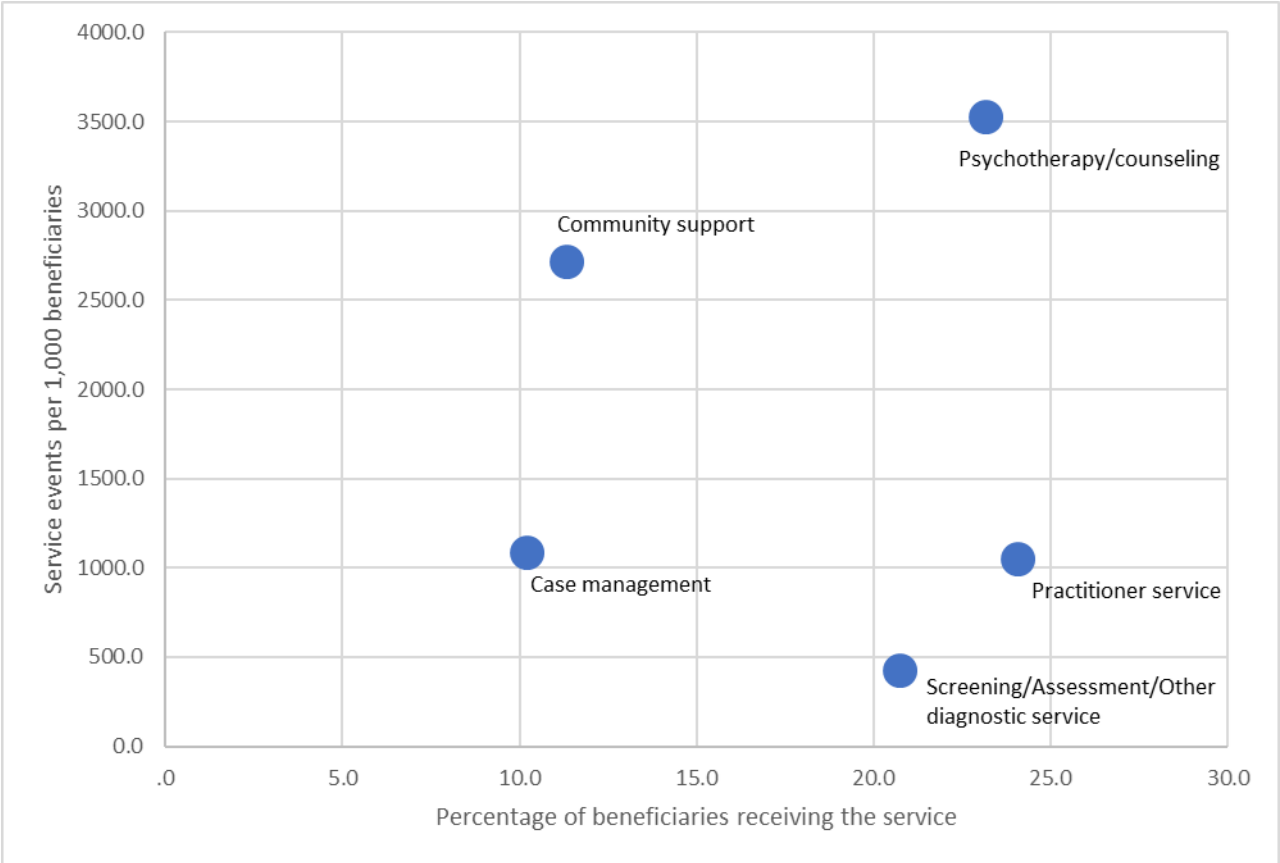


Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. This figure includes the five most frequently received behavioral health service types: practitioner services; psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

Figure 5 shows the percentage of beneficiaries in the child welfare population receiving each service on the horizontal axis and the rate of service events per 1,000 beneficiaries in the child welfare population on the vertical axis. This enables us to examine how key service types compare on these different dimensions of service use: how widespread use of each service type is and the frequency, or intensity, with which beneficiaries receive each service. Compared to the other four commonly received service types, a high percentage of beneficiaries in the child welfare population received psychotherapy or counseling (23.2 percent) and received the service at a high intensity (3,521 events per 1,000 beneficiaries). A high percentage of beneficiaries in the child welfare population received practitioner services and screening, assessment, and other diagnostic services (24.1 and 20.8 percent, respectively), but beneficiaries received these service types at a relatively low intensity (1,038 and 417 events per 1,000 beneficiaries, respectively). A relatively small percentage of beneficiaries in the child welfare population received community support (11.4 percent), but child welfare beneficiaries receiving this service type did so at a relatively high intensity (2,705 events per 1,000 beneficiaries).

**Figure 5. Percentage of beneficiaries in the child welfare population receiving each service type versus service events per 1,000 child welfare beneficiaries, 2019**



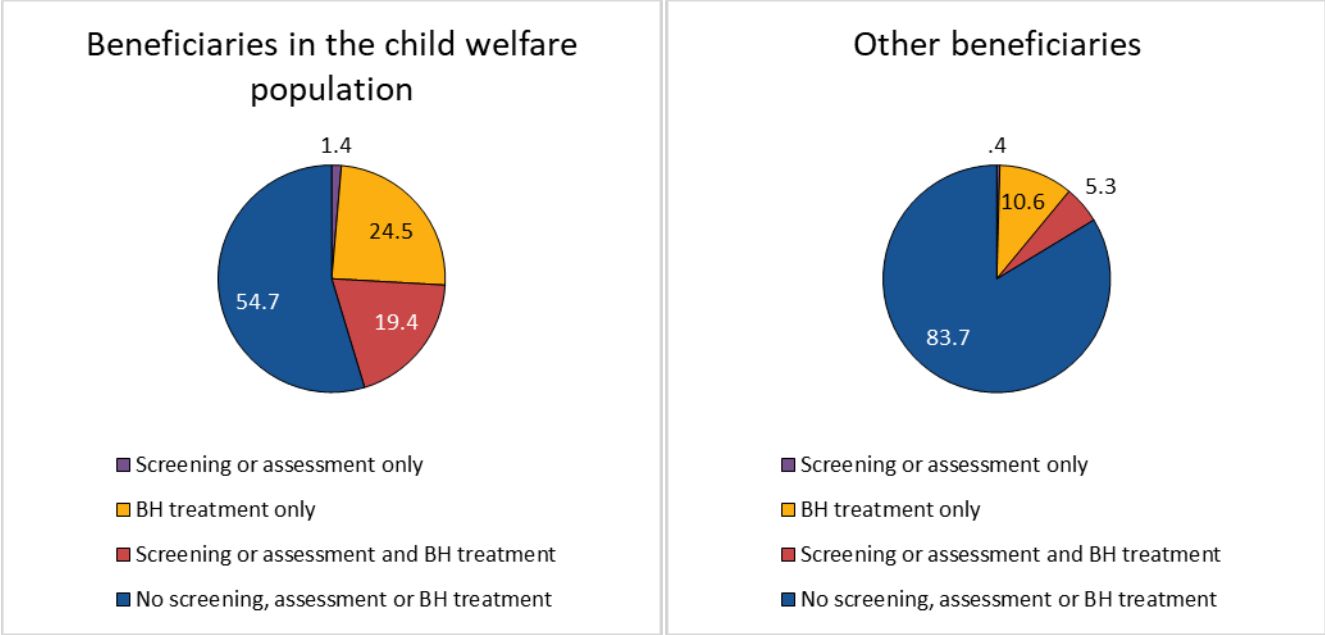
Source: TAF, v5, 2018–2020.

Note: This analysis includes beneficiaries in the child welfare population enrolled in full or comprehensive Medicaid or CHIP benefits for at least six consecutive months, with at least one of those months occurring in 2019. This figure includes the five most frequently received behavioral health service types: practitioner services; psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.



Most states require that children entering the child welfare system receive a behavioral health screening during their initial days in care (Allen, 2010) and other beneficiaries may receive behavioral health screening as part of early and periodic screening, diagnostic, and treatment (EPSDT) services. However, because of concerns that children and youth might be receiving screening and assessments but they might not be receiving the needed follow-up services (Huber & Grimm, 2004; Bunger et al., 2021), we examined the extent to which beneficiaries received screening or assessment only, behavioral health treatment only, or both in combination. As shown in Figure 6, of those who received any behavioral health service in 2019, a very small proportion of beneficiaries in both the child welfare population and the general Medicaid population received screening or assessment with no other behavioral health treatment. Among child welfare beneficiaries, 1.4 percent received screening or assessment only and 19.4 percent received both screening and assessment and behavioral health treatment, and 24.5 percent received behavioral health treatment only. It is important to note that beneficiaries who received behavioral health treatment only in 2019 might have received screening or assessment in a prior year. The pattern was similar among other beneficiaries, though far fewer of them received any behavioral health services.

**Figure 6. Percentage of beneficiaries receiving screening or assessment only, behavioral health treatment only, and screening or assessment and behavioral health treatment, by child welfare status, 2019**



Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

BH = behavioral health.

## **WHITE CHILDREN IN THE CHILD WELFARE SYSTEM ARE MORE LIKELY TO RECEIVE BEHAVIORAL HEALTH SERVICES THAN CHILDREN OF OTHER RACES; HOWEVER, RACIAL AND ETHNIC DIFFERENCES IN SERVICE RECEIPT ARE LESS PRONOUNCED AMONG CHILDREN INVOLVED IN THE CHILD WELFARE SYSTEM THAN AMONG OTHER BENEFICIARIES**

Among children and youth in the child welfare population and among other beneficiaries, and for most service types, White beneficiaries received services at a higher rate than other racial and ethnic groups and Asian beneficiaries received behavioral health services at the lowest rates (Table 2). For example, for American Indian/Alaska Native beneficiaries, the odds of receiving screening, assessment, and other diagnostic services were 9 percent lower than White beneficiaries in the child welfare population and 20 percent lower than White beneficiaries not in the child welfare population.

We generally observe the largest differentials in service receipt between Asian and White beneficiaries. The odds of receiving screening, assessment, and other diagnostic services were 54 percent lower for Asian beneficiaries than White beneficiaries in the child welfare population and 82 percent lower for Asian beneficiaries than White beneficiaries not in the child welfare population. For example, the odds of receiving the following services are lower for Asian beneficiaries than White beneficiaries in the child welfare population: practitioner services (55 percent lower); screening, assessment, and other diagnostic services (54 percent lower); psychotherapy, counseling, and other psychiatric services (49 percent lower); inpatient care (37 percent lower); emergency services (28 percent lower); and case management (27 percent lower).

There are some exceptions, however, in which beneficiaries of color are more likely to receive services than White beneficiaries:

- Black beneficiaries in the child welfare population have higher odds of receiving community support relative to White beneficiaries in the child welfare population.
- Hispanic beneficiaries in the child welfare population have higher odds of receiving case management and community support than White beneficiaries in the child welfare population.
- American Indian/Alaska Native beneficiaries in the child welfare population have higher odds of receiving emergency services than White beneficiaries in the child welfare population.

It is important to note, however, that racial and ethnic differentials in behavioral health service receipt are substantially less pronounced among beneficiaries in the child welfare population compared to other beneficiaries. In most cases, the differentials between White beneficiaries and beneficiaries from other racial and ethnic groups are significantly smaller for beneficiaries in the child welfare population than for other beneficiaries.

**Table 2. Racial and ethnic differences in receipt of services, by service type and child welfare status, 2019**

Service type	Black–White			Hispanic–White			Asian–White			AIAN–White			Other–White		
	CW (OR)	Other (OR)	Diff (OR)	CW (OR)	Other (OR)	Diff (OR)	CW (OR)	Other (OR)	Diff (OR)	CW (OR)	Other (OR)	Diff (OR)	CW (OR)	Other (OR)	Diff (OR)
Case management	0.99	0.78 <sup>*b</sup>	0.79 <sup>*b</sup>	1.09 <sup>*a</sup>	0.81 <sup>*b</sup>	0.75 <sup>*b</sup>	0.73 <sup>*b</sup>	0.25 <sup>*c</sup>	0.35 <sup>*c</sup>	1.02	1.42 <sup>*a</sup>	1.40 <sup>*a</sup>	0.50 <sup>*b</sup>	0.25 <sup>*c</sup>	0.50 <sup>*b</sup>
Community support	1.05 <sup>*a</sup>	0.81 <sup>*b</sup>	0.77 <sup>*b</sup>	1.33 <sup>*a</sup>	1.01 <sup>*a</sup>	0.76 <sup>*b</sup>	0.90	0.27 <sup>*c</sup>	0.30 <sup>*c</sup>	1.00	0.85 <sup>*b</sup>	0.86 <sup>*b</sup>	0.61 <sup>*b</sup>	0.37 <sup>*c</sup>	0.61 <sup>*b</sup>
Emergency services	0.94 <sup>*b</sup>	0.71 <sup>*b</sup>	0.75 <sup>*b</sup>	0.69 <sup>*b</sup>	0.59 <sup>*b</sup>	0.85 <sup>*b</sup>	0.72 <sup>*b</sup>	0.28 <sup>*c</sup>	0.39 <sup>*c</sup>	1.17 <sup>*a</sup>	1.08 <sup>*a</sup>	0.92	0.90	0.56 <sup>*b</sup>	0.63 <sup>*b</sup>
Inpatient	1.03	0.73 <sup>*b</sup>	0.71 <sup>*b</sup>	0.86 <sup>*b</sup>	0.57 <sup>*b</sup>	0.66 <sup>*b</sup>	0.63 <sup>*b</sup>	0.28 <sup>*c</sup>	0.44 <sup>*c</sup>	0.97	1.32 <sup>*a</sup>	1.36 <sup>*a</sup>	0.64 <sup>*b</sup>	0.50 <sup>*b</sup>	0.78
Screening, assessment, and other diagnostic services	0.88 <sup>*b</sup>	0.66 <sup>*b</sup>	0.75 <sup>*b</sup>	0.75 <sup>*b</sup>	0.49 <sup>*c</sup>	0.65 <sup>*b</sup>	0.46 <sup>*c</sup>	0.18 <sup>*c</sup>	0.39 <sup>*c</sup>	0.91 <sup>*b</sup>	0.80 <sup>*b</sup>	0.88 <sup>*b</sup>	0.74 <sup>*b</sup>	0.49 <sup>*c</sup>	0.66 <sup>*b</sup>
Psychotherapy, counseling, and other psychiatric service	0.82 <sup>*b</sup>	0.60 <sup>*b</sup>	0.74 <sup>*b</sup>	0.63 <sup>*b</sup>	0.43 <sup>*c</sup>	0.68 <sup>*b</sup>	0.51 <sup>*b</sup>	0.19 <sup>*c</sup>	0.36 <sup>*c</sup>	1.04	0.90 <sup>*b</sup>	0.86 <sup>*b</sup>	0.94	0.47 <sup>*c</sup>	0.50 <sup>*b</sup>
Practitioner service	0.80 <sup>*b</sup>	0.53 <sup>*b</sup>	0.66 <sup>*b</sup>	0.69 <sup>*b</sup>	0.51 <sup>*b</sup>	0.74 <sup>*b</sup>	0.45 <sup>*c</sup>	0.20 <sup>*c</sup>	0.44 <sup>*c</sup>	0.78 <sup>*b</sup>	0.67 <sup>*b</sup>	0.86 <sup>*b</sup>	0.67 <sup>*b</sup>	0.45 <sup>*c</sup>	0.67 <sup>*b</sup>

Source: TAF, v5, 2018–2020.

Notes: \*p-value < 0.01.

This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

CW columns report the ORs for the pairwise tests within the child welfare population. For example, the odds of receiving emergency services are 6 percent lower for Black beneficiaries in the child welfare population than White beneficiaries in the child welfare population. Other columns report the ORs for the pairwise tests among other beneficiaries. For example, the odds of receiving case management services are 22 percent lower for Black beneficiaries not in the child welfare population than White beneficiaries not in the child welfare population. The Diff columns report the ratio of ORs for the comparison between child welfare and other. For example, the OR for case management comparing Black beneficiaries to White beneficiaries is 21 percent lower in the non-child welfare population than in the child welfare population.

AIAN = American Indian/Alaska Native; CW = child welfare; Diff = difference; OR = odds ratio.

Color	Odds Ratio
<sup>a</sup> Dark blue	1.00–1.49 (that is, these beneficiaries are more likely to receive services than the reference population of White beneficiaries)
<sup>b</sup> Light orange	0.50–0.99 (that is, these beneficiaries are somewhat less likely to receive services than the reference group)
<sup>c</sup> Dark orange	0.00–0.49 (these beneficiaries are substantially less likely to receive services than the reference group)
No color	OR was not statistically significantly different from zero

## DISCUSSION

This analysis documents behavioral health service use patterns for beneficiaries in the child welfare population and places their service use in the context of other Medicaid and CHIP beneficiaries their age. The analysis focuses on the five most frequently received service types, plus inpatient care and emergency services. The types of services most frequently used are similar across the two populations. However, beneficiaries in the child welfare system are more likely to receive all service types and receive more visits for each service type, even when we limit our analyses to beneficiaries with diagnosed behavioral health conditions. This is not surprising, as child welfare agencies typically require assessments to determine the treatment needs of children and youth entering the child welfare system and engage the children and youth in a services plan to help meet these needs. Further, many children and youth in the child welfare system have complex behavioral health needs resulting from experiences of trauma through abuse or neglect and family separation as a result of removal and entry into foster or kinship care.

This analysis also documents that racial and ethnic differences in receipt of these key service types among beneficiaries in the child welfare population are akin to the disparities observed in the general population. Specifically, Black, Hispanic, Asian, and American Indian or Alaska Native beneficiaries in the child welfare population are less likely to receive most services compared to White beneficiaries in the child welfare population. Similar barriers to behavioral health care—stigma, lack of provider supply, lack of culturally and linguistically competent providers—likely contribute to racial and ethnic differences in service use in both child welfare beneficiaries and the population overall. Importantly, however, the differences in service use (between each racial and ethnic group and White beneficiaries) are narrower among child welfare beneficiaries than in the general population. For most groups and most service types, racial and ethnic differences were less pronounced among beneficiaries in the child welfare population compared to beneficiaries not in the child welfare population. This might be because racial and ethnic differences in diagnoses are smaller in the child welfare population than among other beneficiaries, or it could be because contact with the child welfare system facilitates access to behavioral health services across racial and ethnic groups (Stein et al., 2016; Singh & Gudiño, 2022).

Some key findings among individual racial and ethnic groups stand out. Asian beneficiaries not in the child welfare population are considerably less likely to receive all behavioral health service types than White beneficiaries, but among beneficiaries in the child welfare population, the gap between Asian and White beneficiaries is not as large and more closely approximates the gaps between White beneficiaries and other racial and ethnic groups. We also observe that, unlike any other racial and ethnic group, American Indian or Alaska Native beneficiaries are more likely than White beneficiaries to receive resource-intensive emergency services. This could potentially indicate that, like American Indian or Alaska Native beneficiaries in the general population, American Indian or Alaska Native beneficiaries in the child welfare population are also not receiving adequate outpatient services.

This analysis provides a unique look at Medicaid- and CHIP-funded services for children and youth in the child welfare system and helps us understand how the behavioral health system currently serves these beneficiaries with complex needs. These findings can be useful in helping state child welfare and Medicaid and CHIP agencies to identify opportunities to cooperatively inform decisions about service arrays and resource management. Future research should examine differences in service receipt across other demographic subgroups (for example, geography and gender). Further study might also examine service receipt by provider type (such as psychiatric physicians, nurse practitioners, psychologists, and social workers) or measures of quality of care (for example, receipt of minimally adequate behavioral health care) among beneficiaries within and outside the child welfare population to assess whether there are systematic differences in quality of care across the two populations.

## LIMITATIONS

This analysis provides important and novel findings related to patterns of Medicaid- and CHIP-funded behavioral health service use in the child welfare population across racial and ethnic groups, but there are limitations to the analysis.

First, it can be challenging to identify the child welfare population in Medicaid claims data. These analyses rely on the Medicaid eligibility code indicating the beneficiary's participation in the federal Title IV-E foster care, adoption, or guardianship programs. Eligibility group code data might be missing, inaccurate, or unusable for some states according to the DQ (Data Quality) Atlas.<sup>†</sup> Because no state has unusable eligibility group code data, we did not exclude any states based on this data quality assessment, but the data quality assessments the DQ Atlas uses might not capture the full nuance of the data element's quality for the purpose of this analysis. Further, TAF contains a single eligibility group code for each beneficiary. If a beneficiary is eligible for Medicaid or CHIP through multiple eligibility pathways, the state assigns them the eligibility group affording that beneficiary the highest level of medical coverage. For example, disabled children in foster care might qualify for Medicaid or CHIP through Supplemental Security Income eligibility, so, in the data, they would appear as Supplemental Security Income beneficiaries rather than child welfare beneficiaries. About 5 percent of children in foster care in 2019 received Supplemental Security Income benefits (Stoltzfus et al., 2021). As a result, we might not capture the entire child welfare population. In addition, using the eligibility group code to identify the child welfare population excludes many children in foster care who are not Title IV-E eligible. Most children in foster care who are not Title IV-E eligible receive Medicaid benefits through other eligibility categories (Child Welfare Information Gateway, 2022; MACPAC, 2015).

Second, adopted children and those in guardianships might have different patterns of service use than children in foster care, but this analysis aggregated these three groups because of the structure of TAF data. The current child welfare involvement of children and youth in foster care might amplify their access to and use of behavioral health services in ways that differ from adopted children and youth. Further, adoptive families might have different inclinations about the use of behavioral health services compared to children in foster care who might be receiving these services to comply with a child welfare service plan. Because children and youth in foster care and adoption might have different service use patterns, results here should not be taken as representative of either population alone.

Third, Medicaid claims might not fully represent the health care use of children and youth in adoptive families. For many adoptive families, Medicaid is secondary insurance to private family health care coverage (National Council for Adoption, 2020). Medicaid is the payer of last resort, so if a child has private coverage, Medicaid claims might not reflect their full service and medication use.

Fourth, racial and ethnic data are missing for some children in the analysis. We report racial and ethnic data for 84.8 and 81.8 percent of the child welfare and other populations, respectively. The missingness of data could affect comparisons. The DQ Atlas classifies racial and ethnic data as unusable for five states in 2019: Alaska, Kansas, Massachusetts, Rhode Island, and Tennessee. We retained the data for these states because we did not stratify the data by state; however, these states have substantial missing racial and ethnic data.

Fifth, the population we identified with behavioral health conditions might be an over- or under-estimate because most beneficiaries with such conditions will, by definition, have received treatment. The CCW

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<sup>†</sup>The DQ Atlas categorizes states as low, medium, or high concern and unusable or unclassified, based on (1) the percentage of beneficiaries missing an eligibility group code and (2) the number of large mandatory eligibility groups with no enrollment in the TAF. Two states are unclassified, 47 states have data of low or medium concern, and four states have data of high concern. Supporting data on the DQ Atlas provides the number of the 12 large mandatory groups (including Title IV-E Adoption Assistance, Foster Care, or Guardianship Care) with no enrollment for each state, but does not specify which of the 12 mandatory groups each state is missing. <https://www.medicaid.gov/dq-atlas/landing/topics/single/map?topic=g3m20&tafVersionId=25>.

algorithm requires “at least 1 inpatient claim or 2 other non-drug claims of any service type” with condition-specific diagnosis codes during a two-year look-back period.<sup>‡</sup> Our count of people with behavioral health conditions might be an overestimate if there are beneficiaries who received treatment and met CCW criteria but did not truly have these conditions. Alternatively, it might be an underestimate if there are beneficiaries who had a condition in the year but did not receive behavioral health services that met our CCW criteria. Further, the extent to which our identification of beneficiaries with behavioral health conditions is an over- or under-estimate might vary by racial and ethnic group. Because we use behavioral health treatment to identify people with behavioral health conditions, we cannot identify those who need behavioral health treatment but who do not receive any. When comparing across racial and ethnic groups, we cannot account for differences in underlying need in the population or differences in access to behavioral health services. It is likely that some racial and ethnic groups are more or less likely to receive treatment than others, even if they have the same condition or level of clinical need.

Finally, *p*-values will always be significant when there is a large enough sample size. In this analysis, almost all of the *p*-values for racial and ethnic differences in service use are significant. Statistical significance does not necessarily indicate a substantively important or clinically meaningful difference. In this case, odds ratios are more meaningful than *p*-values in drawing conclusions about differences in service use. When we assess the difference in the proportion of two groups that receive a specific service, we can calculate the exact ratio of the odds because the full population (all Medicaid beneficiaries) is fully observed. Whether an odds ratio is far enough from one to be considered a disparity is a subjective question based on subject matter expertise, not statistical properties.

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<sup>‡</sup> Available at <https://www2.ccwdata.org/web/guest>.

## REFERENCES

1. Allen, K. (2010). *Health screening and assessment for children and youth entering foster care: State requirements and opportunities*. Center for Health Care Strategies, Inc. [https://www.chcs.org/media/CHCS\\_CW\\_Foster\\_Care\\_Screening\\_and\\_Assessment\\_Issue\\_Brief\\_111910.pdf](https://www.chcs.org/media/CHCS_CW_Foster_Care_Screening_and_Assessment_Issue_Brief_111910.pdf)
2. Bunger, A.C., Maguire-Jack, K. Yoon, S., Mooney, D., West, K.Y., Hammond, G.C., & Kranich, C. (2021). Does mental health screening and assessment in child welfare improve mental health service receipt, child safety, and permanence for children in out-of-home care? An evaluation of the Gateway CALL demonstration. *Child Abuse & Neglect*, 122, 105351. <https://doi.org/10.1016/j.chiabu.2021.105351>
3. Burns, B.J., Phillips, S.D., Wagner, H.R., Barth, R.P., Kolko, D.J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(8), 960–970. doi: 10.1097/01.chi.0000127590.95585.65; PMID: 15266190
4. Child Welfare Information Gateway. (2022). *Health-care coverage for children and youth in foster care—and after*. U.S. Department of Health and Human Services, Administration for Children and Families, Children’s Bureau. <https://www.childwelfare.gov/pubs/issue-briefs/health-care-foster/>
5. Child Welfare Information Gateway. (2021). *Child welfare practice to address racial disproportionality and disparity*. U.S. Department of Health and Human Services, Administration for Children and Families, Children’s Bureau. <https://www.childwelfare.gov/resources/child-welfare-practice-address-racial-disproportionality-and-disparity/>
6. Cummings, J.R., Ji, X., Lally C., & Druss, B.G. (2019). Racial and ethnic differences in minimally adequate depression care among Medicaid-enrolled youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, 58(1), 128–138. doi: 10.1016/j.jaac.2018.04.025; Epub 2018 Oct 17; PMID: 30577928; PMCID: PMC8051617
7. Dettlaff, A.J., & Boyd, R. (2020). Racial disproportionality and disparities in the child welfare system: Why do they exist, and what can be done to address them? *The ANNALS of the American Academy of Political and Social Science*, 692(1), 253–274.
8. Fernandes-Alcantara, A.L., Caldwell, S.W., & Stoltzfus, E. (2017). *Child welfare: Oversight of psychotropic medication for children in foster care*. Congressional Research Service. <https://crsreports.congress.gov/product/pdf/R/R43466/8>
9. Garland, A.F., Lau, A.S., Yeh, M., McCabe, K.M., Hough, R.L., & Landsverk, J.A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry*, 162(7), 1336–1343. doi: 10.1176/appi.ajp.162.7.1336; PMID: 15994717
10. Gudiño, O.G., Martinez, J.I., & Lau, A.S. (2012). Mental health service use by youths in contact with child welfare: Racial disparities by problem type. *Psychiatric Services*, 63(10), 1004–1010. doi: 10.1176/appi.ps.201100427; PMID: 22855060; PMCID: PMC3876941
11. Hoffmann, J.A., Alegría, M., Alvarez, K., Anosike, A., Shah, P.P., Simon, K.M., & Lee, L.K. (2022). Disparities in pediatric mental and behavioral health conditions. *Pediatrics*, 150(4), e2022058227. doi: 10.1542/peds.2022-058227; PMID: 36106466; PMCID: PMC9800023
12. Huber, J., & Grimm, B. (2004). *Most states fail to meet the mental health needs of foster children*. National Center for Youth Law. <https://youthlaw.org/news/most-states-fail-meet-mental-health-needs-foster-children>
13. Kataoka, S.H., Zhang, L., & Wells, K.B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, 159, 1548–1555.
14. Leslie, L.K., Hurlburt, M.S., Landsverk, J., Barth, R., & Slymen, D.J. (2004). Outpatient mental health services for children in foster care: A national perspective. *Child Abuse and Neglect*, 28(6), 699–714. doi: 10.1016/j.chiabu.2004.01.004; PMID: 15193856 [not cited in text]
15. Leslie, L.K., Hurlburt, M.S., James S., et al. (2005). Relationship between entry into child welfare and mental health service use. *Psychiatric Services*, 56, 981–987.

16. Medicaid and CHIP Payment and Access Commission. (2021). *Access to behavioral health services for children and adolescents covered by Medicaid and CHIP*. Medicaid and CHIP Payment and Access Commission.
17. Medicaid and CHIP Payment and Access Commission. (2015). *MACPAC Report to Congress on Medicaid and CHIP*. Washington DC: Medicaid and CHIP Payment and Access Commission.  
<https://www.macpac.gov/publication/june-2015-report-to-congress-on-medicaid-and-chip/>
18. National Council for Adoption. (2020). *A guide to adoption subsidies and assistance for adoptive parents*. <https://adoptioncouncil.org/publications/a-guide-to-adoption-subsidies-and-assistance-for-adoptive-parents/>
19. Radel, L., Lieff, S., Ali, M., & West, K. (2023). *Behavioral health diagnoses and treatment services for children involved with the child welfare system*. Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services.
20. Raghavan, R., Brown, D.S., Allaire, B.T., Garfield, L.D., Ross, R.E., & Snowden, L.R. (2014). Racial/ethnic differences in Medicaid expenditures on psychotropic medications among maltreated children. *Child Abuse and Neglect*, 38(6), 1002–1010. doi: 10.1016/j.chiabu.2014.02.013; Epub 2014 Mar 16; PMID: 24646610; PMCID: PMC4061230
21. Rodgers, C.R.R., Flores, M.W., Bassey, O., Augenblick, J.M., & Cook, B.L. (2022). Racial/ethnic disparity trends in children’s mental health care access and expenditures from 2010–2017: Disparities remain despite sweeping policy reform. *Journal of the American Academy of Child & Adolescent Psychiatry*, 61(7), 915–925. doi: 10.1016/j.jaac.2021.09.420; Epub 2021 Oct 7; PMID: 34627995; PMCID: PMC8986880
22. Singh, M.N., & Gudiño, O.G. (2022). Discrepancies between foster care entry and mental health service use for Black and Latinx youth. *Journal of Clinical Child & Adolescent Psychology*, 2022 May 12, 1–15. doi: 10.1080/15374416.2022.2062760; Epub ahead of print; PMID: 35549619
23. Stein, R.E., Hurlburt, M.S., Heneghan, A.M., Zhang, J., Kerker, B., Landsverk, J., & Horwitz, S.M. (2016). For better or worse? Change in service use by children investigated by child welfare over a decade. *Academic Pediatrics*, 16(3), 240–246. doi: 10.1016/j.acap.2016.01.019; Epub 2016 Feb 4; PMID: 26851614; PMCID: PMC5560869
24. Stoltzfus, E., Davies, P.S., & Morton, W.R. (2021). *Children in foster care and Social Security Administration benefits: Frequently asked questions*. Report R46975. Washington, DC: Congressional Research Service. <https://sgp.fas.org/crs/misc/R46975.pdf>
25. U.S. Department of Health and Human Services, Administration for Children and Families, Children’s Bureau. (2020). *Child and family services reviews aggregate report, round 3: Fiscal years 2015–2018*. <https://www.acf.hhs.gov/cb/report/child-and-family-services-reviews-aggregate-report-round-3-fiscal-years-2015-2018>
26. U.S. Department of Health and Human Services, Office of Inspector General. (2018). *Treatment planning and medication monitoring were lacking for children in foster care receiving psychotropic medication*. OEI-07-15-00380. <https://oig.hhs.gov/oei/reports/oei-07-15-00380.pdf>
27. U.S. Government Accountability Office. (2012). *Children’s mental health: Concerns remain about appropriate services for children in Medicaid and foster care*. GAO-13-15. <https://www.gao.gov/assets/gao-13-15.pdf>



## APPENDIX A: METHODOLOGICAL DETAIL

This analysis focuses on behavioral health service use among child and adolescent Medicaid and Children’s Health Insurance Program (CHIP) beneficiaries in the child welfare population. It relies on data from the Transformed Medicaid Statistical Information System Analytic Files (TAF). The analysis used 2018–2020 data from the TAF annual Demographics and Eligibility (DE) file and the four claims files: inpatient (IP), long-term care (LT), other services (OT), and pharmacy (RX). The study team analyzed DE records from 2018 to 2020 to identify demographic and enrollment characteristics for 2019. The annual DE File includes demographic, eligibility, and enrollment information for all Medicaid and CHIP beneficiaries enrolled during the calendar year. We used claims records from 2018 to 2019 to identify behavioral health conditions<sup>5</sup> in 2019 and claims from 2019 to identify behavioral health service use. The claims files include fee-for-service claims; managed care encounters; and financial transaction records (including capitation payments, service tracking claims, and supplemental payments) paid for by Medicaid or CHIP.

The study population was limited to beneficiaries enrolled in Medicaid or CHIP for at least six consecutive months in all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands; eligible for full or comprehensive benefits; and ages 3 to 17 years. We identified the child welfare population using the child’s most recent eligibility group code from the DE File, which identifies children who received Title IV-E foster care maintenance payments or federal adoption or guardianship subsidies, and whose Medicaid eligibility therefore derived from their participation in the Title IV-E Adoption Assistance, Foster Care, or Guardianship programs. The analysis included 700,945 children and youth involved with the child welfare system and 30,661,754 children and youth in other Medicaid eligibility categories in 2019.

Metrics were reported by race and ethnicity (non-Hispanic White [White], non-Hispanic Black [Black], non-Hispanic Asian [Asian], non-Hispanic American Indian and Alaska Native [American Indian and Alaska Native], Hispanic or Latino, and other race and ethnicity). We also generated metrics separately for beneficiaries with behavioral health conditions, beneficiaries without behavioral health conditions, and beneficiaries with and without behavioral health conditions. Behavioral health conditions were identified using standardized data definitions laid out by the Centers for Medicare & Medicaid Services in the Chronic Conditions Data Warehouse (CCW).<sup>\*\*</sup> Behavioral health conditions include attention-deficit/hyperactivity disorder (ADHD), anxiety, behavior or conduct disorders, depressive disorders, mood disorders (including bipolar disorder), psychotic disorders, other MH health conditions, trauma disorders, Tourette’s and tic disorders, and substance use disorder (SUD). SUD conditions include alcohol use disorder, opioid use disorder, and other drug use disorders.

We examined the following metrics: (1) the percentage of beneficiaries who received each behavioral health service type in 2019 and (2) the number of events for each service type per 1,000 beneficiaries in 2019. We calculated the second metric only for the five most frequently received behavioral health service types: practitioner service; psychotherapy, counseling, and other psychiatric service; screening, assessment, and other diagnostic services; community support; and case management (described in Table 3). We also examined the percentage of beneficiaries who received IP care and emergency services for behavioral health conditions.

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<sup>5</sup> To identify beneficiaries with behavioral health conditions, we used the Centers for Medicare & Medicaid Services’ standardized approach for identifying people with behavioral health conditions in claims data, available from the Chronic Conditions Data Warehouse (CCW). For most behavioral health conditions, the CCW algorithm requires “at least 1 inpatient claim or 2 other non-drug claims of any service type” during a two-year reference period to identify beneficiaries considered to have a behavioral health condition during a particular year.

<sup>\*\*</sup> Available at <https://www2.ccwdata.org/web/guest>.

**Table A1. Behavioral health service type descriptions**

Service type	Description
Case management	Services intended to plan, coordinate, and facilitate access to treatment and support services with the goal of maintaining client engagement in treatment and supporting progress in recovery
Community support	Services provided in the community that support an individual’s self-management and rehabilitation, such as assertive community support, education and training, and supported employment
Emergency services	Services delivered in an emergency department
Inpatient care	Services delivered in an inpatient hospital setting
Practitioner service	Evaluation and management (E&M) services provided in a nonacute setting outside the context of a psychotherapy service during which medication management might be provided, if needed, or a medication management service provided independent of an E&M service
Psychotherapy, counseling, and other psychiatric services	Counseling or other psychiatric services that provide insight on mental illness and behavioral disturbances and use behavior modification, supportive interaction, and other techniques to provide therapeutic change
Screening, assessment, and other diagnostic services	Service intended to screen for, assess, or diagnose a patient’s behavioral health needs

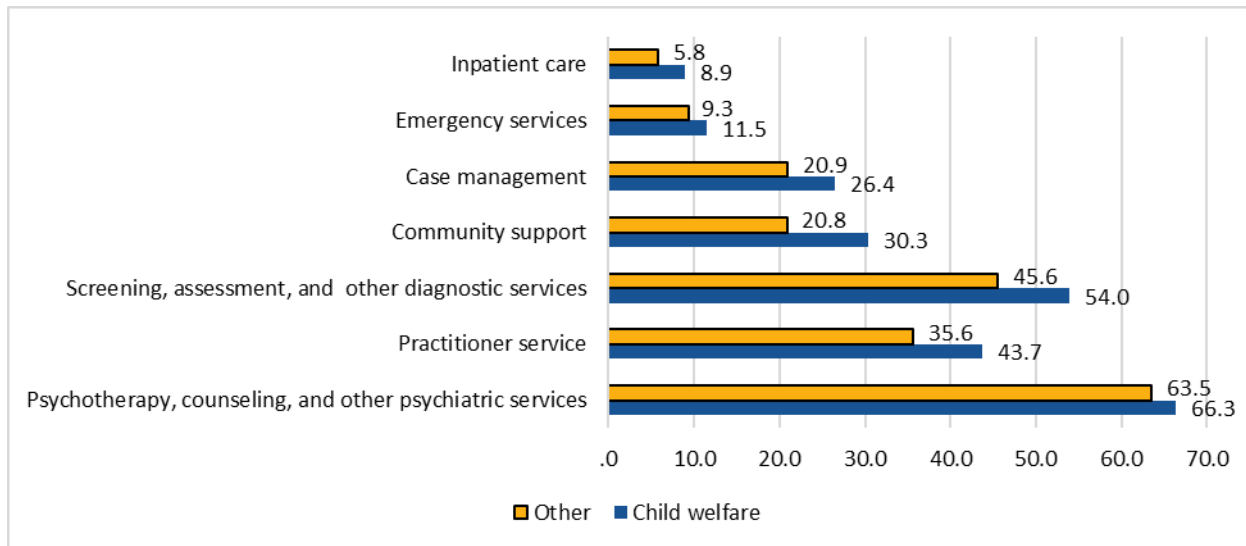
To examine differences by race and ethnicity, we fit a logistic regression model for each outcome with racial and ethnic group, population (child welfare and other), and their interaction as predictors. We then conducted z-tests on the model coefficients to determine whether the difference in proportions differed for each racial and ethnic group compared to White beneficiaries within each population (for child welfare and other beneficiaries separately). We also conducted z-tests on the interaction terms to determine whether the difference between each racial and ethnic group and White beneficiaries differed significantly for child welfare and other beneficiaries (for example, the Black–White difference for beneficiaries in the child welfare population versus the Black–White difference for other beneficiaries). Finally, we performed appropriate likelihood ratio tests to determine whether any disparities existed in the child welfare and other populations (that is, simultaneously testing that all differences were zero), and whether any difference in disparities existed between the two groups (whether all interactions were zero). We report odds ratios for each comparison, as well as the *p*-value for the associated hypothesis tests. Given that we examined claims for the entire population of child and adolescent Medicaid beneficiaries who met our enrollment criteria and have a large sample size, odds ratios provide more meaningful interpretations than *p*-values in drawing conclusions about clinically meaningful differences in service use.

To assess data quality, we used measures contained in the Data Quality (DQ) Atlas, the Centers for Medicare & Medicaid Services’ web-based tool that assesses the quality and usability of states’ Medicaid data.<sup>††</sup> We excluded states with unusable procedure codes on OT professional claims in 2019 (Utah) and states with unusable linkages of claims to beneficiary records in 2019 (Alabama and Rhode Island).

<sup>††</sup> Data for states are considered unusable based on DQ Atlas thresholds for the following topics: Total Medicaid and CHIP Enrollment; Claims Volume—IP, LT, and OT; Diagnosis Code—IP, OT; Procedure Codes—OT Professional; National Drug Code—RX; and race and ethnicity. For more information, see the DQ Atlas: <https://www.medicaid.gov/dq-atlas/welcome>.

## APPENDIX B: BEHAVIORAL HEALTH SERVICES AMONG BENEFICIARIES WITH TRAUMA DISORDERS, ATTENTION-DEFICIT/HYPERACTIVITY DISORDERS, AND BEHAVIOR OR CONDUCT DISORDERS

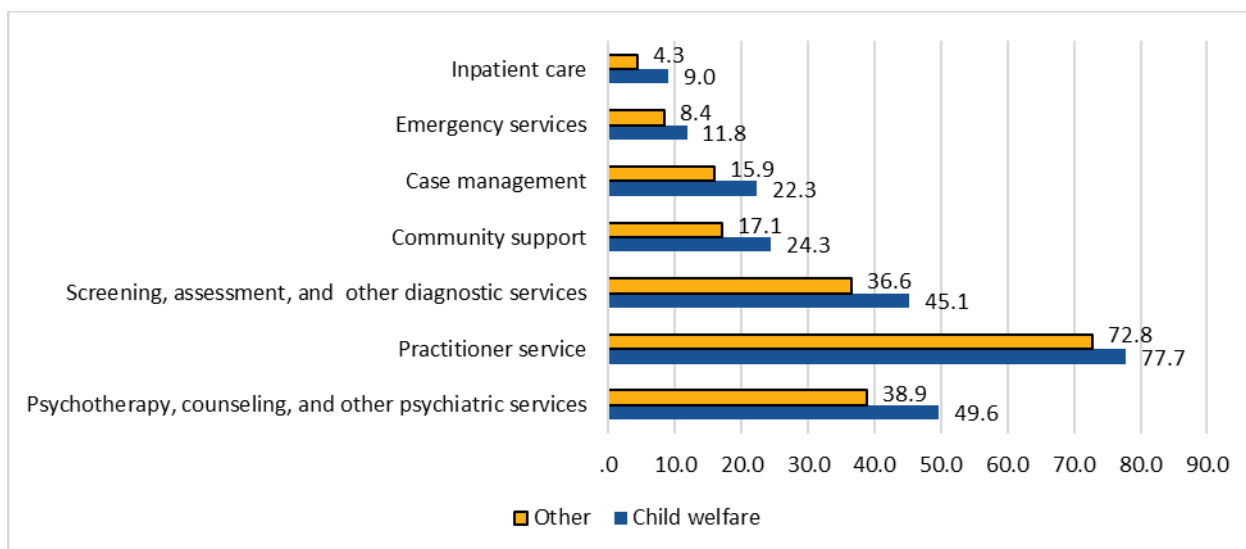
**Figure B1. Percentage of beneficiaries with trauma disorders receiving each service type, by child welfare status and service type, 2019**



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

Note: This analysis includes Medicaid and Children’s Health Insurance Program (CHIP) beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

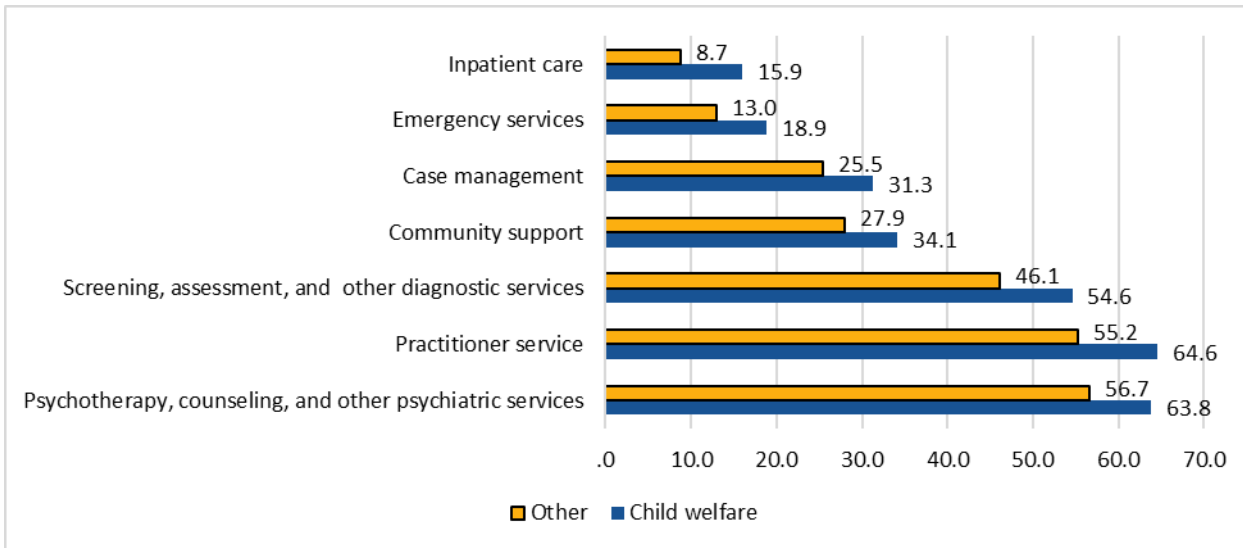
**Figure B2. Percentage of beneficiaries with attention-deficit/hyperactivity disorder receiving each service type, by child welfare status and service type, 2019**



Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

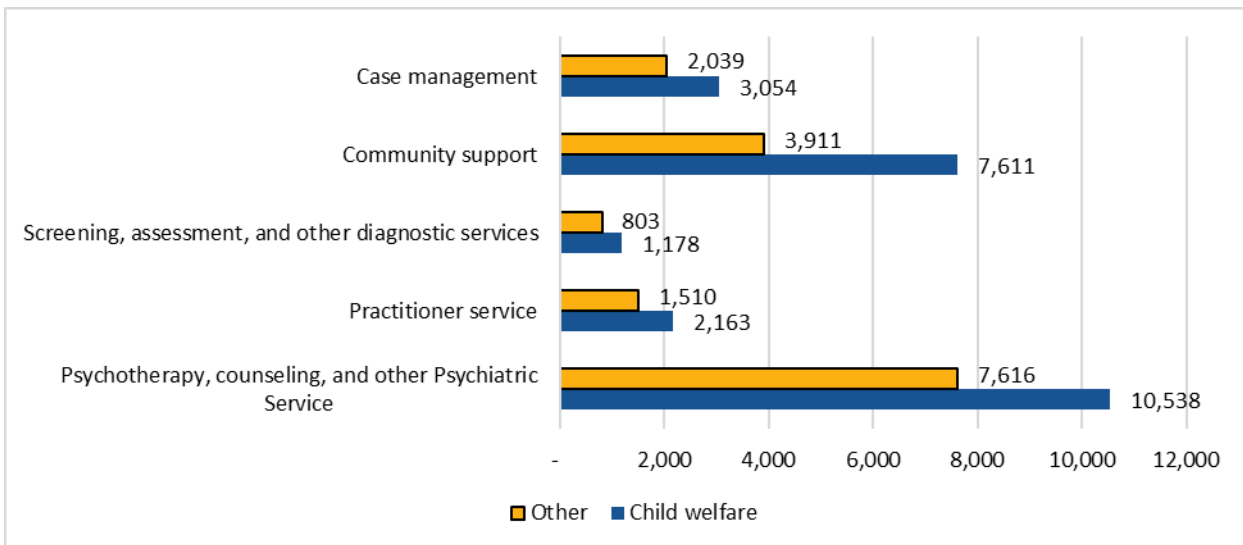
**Figure B3. Percentage of beneficiaries with behavior or conduct disorders receiving each service type, by child welfare status and service type, 2019**



Source: TAF, v5, 2018–2020.

Notes: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

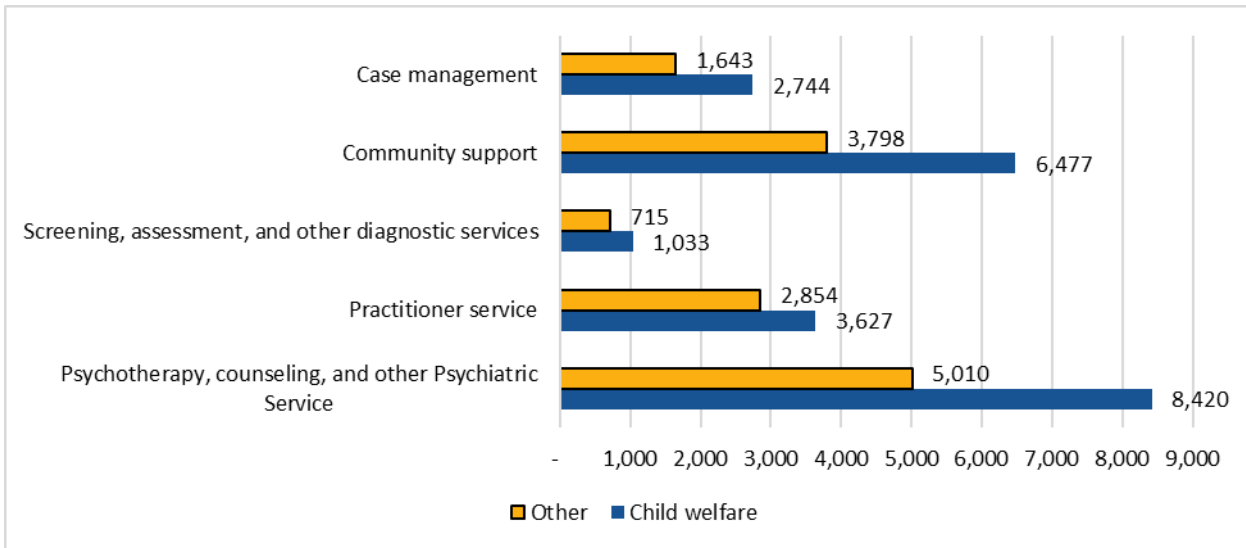
**Figure B4. Service events per 1,000 beneficiaries with trauma disorders, by child welfare status and service type, 2019**



Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. This figure includes the five most frequently received behavioral health service types: practitioner services; psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

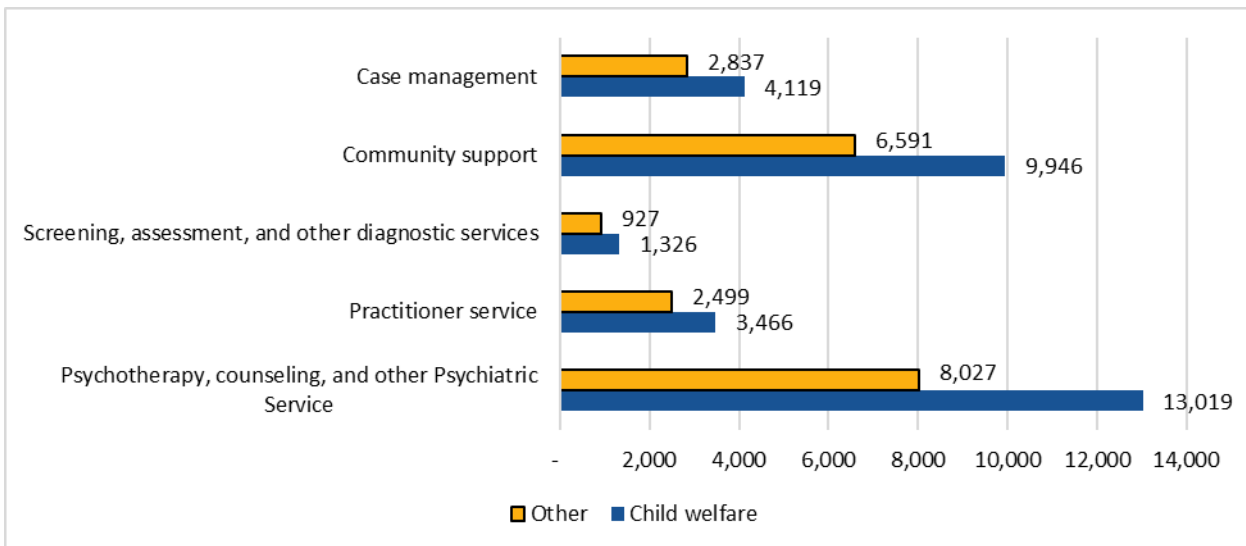
**Figure B5. Service events per 1,000 beneficiaries with attention-deficit/hyperactivity disorder, by child welfare status and service type, 2019**



Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. This figure includes the five most frequently received behavioral health service types: practitioner services; psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

**Figure B6. Service events per 1,000 beneficiaries with behavior or conduct disorders, by child welfare status and service type, 2019**



Source: TAF, v5, 2018–2020.

Note: This analysis includes Medicaid and CHIP beneficiaries enrolled in full or comprehensive benefits for at least six consecutive months, with at least one of those months occurring in 2019. This figure includes the five most frequently received behavioral health service types: practitioner services; psychotherapy, counseling, and other psychiatric services; screening, assessment, and other diagnostic services; community support; and case management. The following states were excluded due to data quality issues: Alabama, Rhode Island, and Utah.

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### SUGGESTED CITATION

Lieff, S, Couzens, C, Radel, L, Ali, M and West, K. (2024). Behavioral Health Treatment by Service Type and Race/Ethnicity for Children and Youth Involved with the Child Welfare System. Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services.

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