



# IDENTIFYING OPPORTUNITIES TO IMPROVE CHILDREN'S BEHAVIORAL HEALTH CARE: An Analysis of Medicaid Utilization and Expenditures

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## IN BRIEF

Children with behavioral health needs served by Medicaid require an array of services to support their health and well-being, but the current system often does not meet their needs, resulting in missed opportunities to improve outcomes. To better understand the patterns of service use and costs for these children, the Center for Health Care Strategies analyzed behavioral health care use and expense for children in Medicaid in all 50 states. This brief highlights key findings from the analysis, revealing that:

- Children using behavioral health care represented under **10 percent** of the overall Medicaid child population, but an estimated **38 percent** of total spending for children in Medicaid;
- Children in foster care and those on SSI/disability together represented **one-third** of the Medicaid child population using behavioral health care, but **56 percent** of total behavioral health service costs; and
- Almost **50 percent** of children in Medicaid who were prescribed psychotropic medications received no identifiable accompanying behavioral health treatment.

These findings point to significant opportunities for quality improvement in the organization, delivery, and financing of care for children with behavioral health needs in Medicaid. For complete study findings, access the full report, *Faces of Medicaid: Examining Children's Behavioral Health Service Utilization and Expenditures*, at [www.chcs.org](http://www.chcs.org).

**Children with significant behavioral health needs** typically require an array of services to support their physical, intellectual, and emotional well-being. These children, however, are often served through fragmented systems, leading to inefficient care, costly utilization, and poor health outcomes. As a significant source of funding for children's behavioral health care,<sup>1</sup> Medicaid programs can advance fundamental improvements in care coordination and delivery for these vulnerable children.

To identify ways to improve behavioral health care, the Center for Health Care Strategies (CHCS) conducted a nationwide analysis, *Faces of Medicaid: Examining Children's Behavioral Health Service Utilization and Expenditures (Faces of Medicaid)*. This study analyzes data from all 50 states to explore: (1) behavioral and physical health service use, expense, and diagnoses; (2) use of psychotropic medications; and (3) service use and expense for children in foster care and those with developmental disabilities. This analysis, which uses 2005 data (the most recent data available when the study began), provides a critical baseline for examining child behavioral health utilization and expenses for Medicaid populations. CHCS is pursuing a follow-up study using 2008 data to further explore trends in this area.

State policymakers and other key stakeholders can use the findings to inform quality improvement efforts in children's behavioral health systems, such as:

- **Expanding access to appropriate and effective behavioral health care**, particularly therapeutic interventions with an existing or emerging evidence base, and home- and community-based services;
- **Investing in care coordination** models that use a wraparound approach to facilitate delivery of needed supports and services for vulnerable populations; and
- **Ensuring collaboration across child-serving systems** to increase care coordination and improve oversight and monitoring of psychotropic medication use.



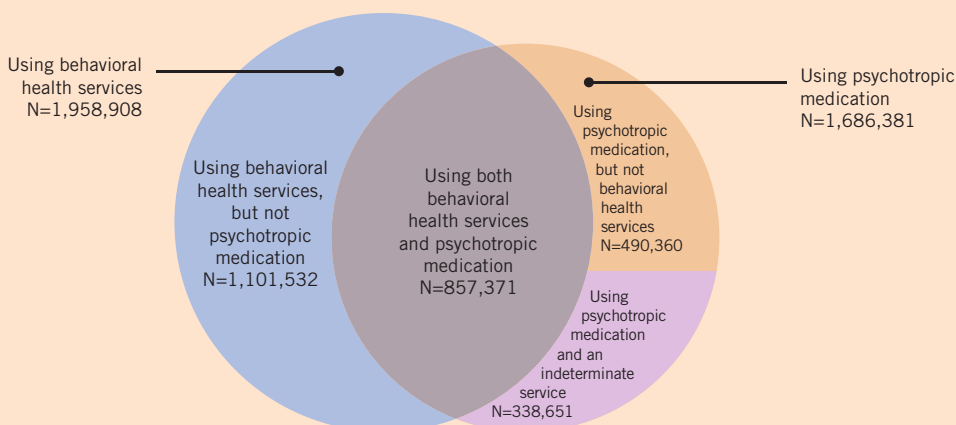
## STUDY DESIGN

This analysis used 2005 data from Medicaid Analytic eXtract (MAX) files<sup>a</sup>—the most recent data available at the time of the study—to identify children under age 19 who used behavioral health care. (A new analysis examining 2008 data is currently underway.) It includes all children in Medicaid (29 million in 2005), capturing fee-for-service (FFS) and managed care encounter records from all states. Mean expenditures for physical and behavioral health services could only be calculated for children with paid FFS claims. Total behavioral health expenditures, which included both children in FFS and children in managed care plans, were estimated based on expense data from FFS claims. Psychotropic medication use was identified using pharmacy claims. In this study, “concurrent” medication use means that a child had claims for more than one psychotropic medication during the study period.

The analysis identified 2.8 million children with a claim or encounter for behavioral health care in Medicaid in 2005 (Figure 1). Among these 2.8 million children, approximately 1.9 million used behavioral health services, either with or without use of psychotropic medications. Approximately 1.7 million children used psychotropic medications, with or without accompanying behavioral health services.

For more information, download the full report, *Faces of Medicaid: Examining Children's Behavioral Health Service Utilization and Expenditures*, at [www.chcs.org](http://www.chcs.org).

Figure 1: **ALL CHILDREN IN MEDICAID USING BEHAVIORAL HEALTH CARE, 2005 (N=2,787,919)**



a Center for Medicare & Medicaid Services, Medicaid Analytic eXtract (MAX) General Information. Available at: [http://www.cms.hhs.gov/medicaid-datasourcesgeninfo/07\\_maxgeneralinformation.asp](http://www.cms.hhs.gov/medicaid-datasourcesgeninfo/07_maxgeneralinformation.asp).

## “ALTERNATIVE” BEHAVIORAL HEALTH SERVICES

Behavioral health delivery systems are expanding beyond traditional services like outpatient therapy, residential treatment, and psychotropic medication to employ alternative approaches to addressing children’s behavioral health needs. These alternative—or non-traditional—approaches are often family-centered and include the provision of home- and community-based services, which have contributed to better outcomes for children and youth, frequently with reduced overall cost burden. Peer support services and a wraparound approach to care are two examples of these non-traditional services, many of which have been validated to varying degrees in the research literature.

**In this report, these services are referred to in the aggregate as “alternative.”** As the evidence in the literature of the clinical, functional, family, and cost impacts of these services grows, the prevalence of these services in behavioral health systems—and Medicaid’s likelihood to purchase them—is expected to increase.



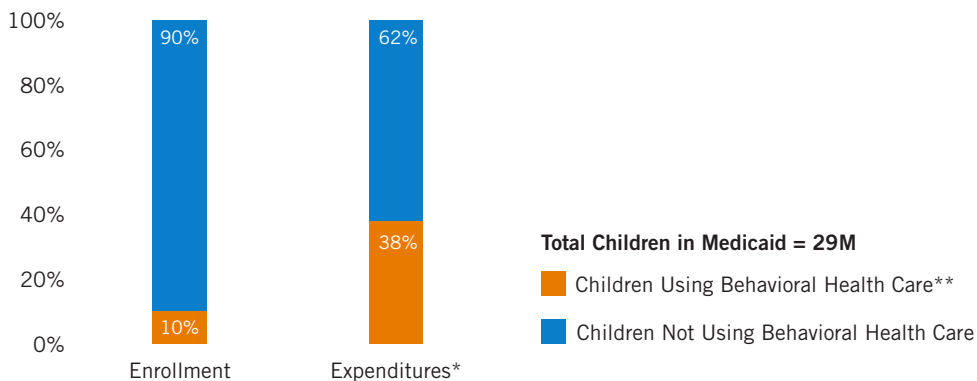
## FINDINGS

### Behavioral health accounted for a disproportionate share of Medicaid spending for children given the relatively small number of children who used behavioral health care.

Of the 29 million children enrolled in Medicaid, about 2.8 million (fewer than 10%) used any type of behavioral health care, including psychotropic medications. Behavioral health care accounted for an estimated 38 percent of total physical and behavioral health spending for all children in Medicaid in 2005 (Figure 2). Mean annual Medicaid expenditures for physical and behavioral health services for children who used behavioral health services were roughly \$8,500 per child—nearly *five times* greater than mean expense for the overall Medicaid child population.<sup>2</sup>

**IMPLICATIONS:** These figures highlight the opportunity to examine the way behavioral health care is organized, delivered, and financed for children with behavioral health needs, and to develop more customized and cost-effective interventions. Given national prevalence estimates for behavioral health need of 13-20 percent among children<sup>3</sup> and the increased risk for low-income children,<sup>4</sup> the overall behavioral health utilization rate in Medicaid is low. This suggests opportunities for states to improve the availability of and access to Medicaid's behavioral health services.

Figure 2: CHILDREN USING BEHAVIORAL HEALTH CARE AS A PROPORTION OF TOTAL MEDICAID ENROLLMENT AND EXPENDITURES



\* Total combined expenditures for all children in Medicaid in 2005 from: Centers for Medicare & Medicaid Services, Center for Medicaid and State Operations: Statistical Report on Medical Care: Eligibles, Recipients, Payments, and Services (HCFA 2082), Medicaid and Statistical Information System. 2008 Statistical Supplement.

\*\* Children using behavioral health care in 2005, N= 2,787,919.

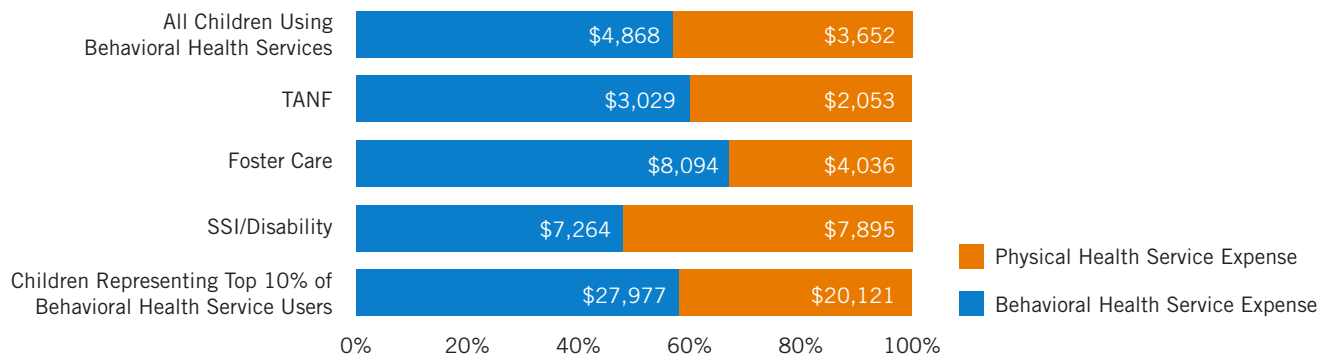


**An estimated 38 percent of children who used behavioral health services also had a chronic physical health condition; nonetheless, behavioral health costs accounted for the majority of Medicaid expenditures.**

Thirty-eight percent of children in Medicaid who used behavioral health services also had at least one chronic physical health condition—most often a pulmonary, skeletal, or central nervous system condition. Mean annual behavioral health expenditures for children in Medicaid were nearly \$4,900, while their physical health expenditures were about \$3,600. Behavioral health expenses outweighed physical health expenses for both children receiving TANF and those in foster care. Behavioral health expenses for children in foster care were double those of physical health. For children in the SSI/disability aid category, however, mean physical health expenses were slightly higher. The 10 percent of children in Medicaid with the highest behavioral health service use (N=121,323) had mean annual expense of \$48,000, with behavioral health expenses of almost \$28,000 and physical health expenses of about \$20,000 (Figure 3). These findings contrast with earlier research on adult populations in Medicaid with serious mental illness, who had much higher rates of chronic health conditions and for whom overall expenses were driven more by use of physical health care.<sup>5</sup>

**IMPLICATIONS:** States that are developing approaches to better identify and address children’s behavioral health needs may be able to reduce their overall expenditures—for both behavioral and physical health care. This is an important consideration for states looking into current models for integrating physical and behavioral health care, for which the focus may need to shift to behavioral health—rather than physical health, as in many adult models—to be effective.

Figure 3: MEAN ANNUAL EXPENSE FOR CHILDREN IN MEDICAID USING BEHAVIORAL HEALTH SERVICES\*



\* Includes children with at least one claim for a behavioral health service in 2005 with or without concomitant psychotropic medication use, N = 1,213,201.

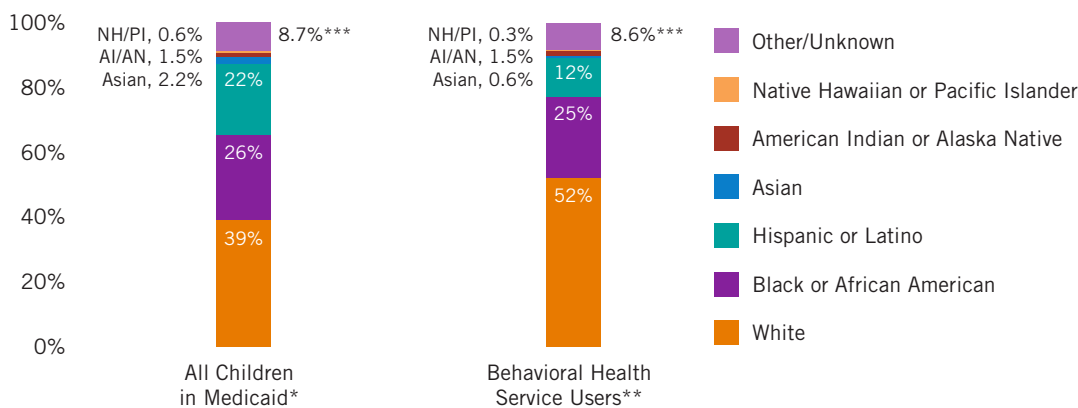


### Children in Medicaid from racially/ethnically diverse backgrounds were less likely than white children to use behavioral health services.

White children represented 39 percent of the Medicaid child population, but 52 percent of the population using behavioral health services. In contrast, while Hispanic/Latino children made up 22 percent of the Medicaid child population, they represented only 12 percent of children using behavioral health services. Similar trends were seen among Asian and Native Hawaiian/Pacific Islander children, who were also less likely to use behavioral health services. Compared to these children, black or African American and American Indian/Alaska Native children were more likely to use behavioral health services, but still less likely than white children (Figure 4).

**IMPLICATIONS:** Though certain cultural values may impact the choice to seek behavioral health services, these differences in utilization rates raise questions about possible disparities in access to behavioral health services across racial/ethnic groups. The availability of culturally and linguistically appropriate behavioral health services may also influence an individual or family's decision to seek care and the quality of that care. Examining the social determinants of health impacting children and youth—such as poverty, social stressors, and environmental hazards—may help Medicaid stakeholders identify root causes of disparities and develop appropriate, community-based interventions involving other public systems such as child welfare, education, and juvenile justice.

Figure 4: **MEDICAID ENROLLMENT AND BEHAVIORAL HEALTH SERVICE USE BY RACE/ETHNICITY**



\* All children in Medicaid in 2005, N = 29,050,305.

\*\* Behavioral health service users in 2005, N = 1,958,908.

\*\*\* Other category includes: 2.9%, Hispanic or Latino, plus one or more races; 0.3%, more than one race; and 5.6%, unknown.



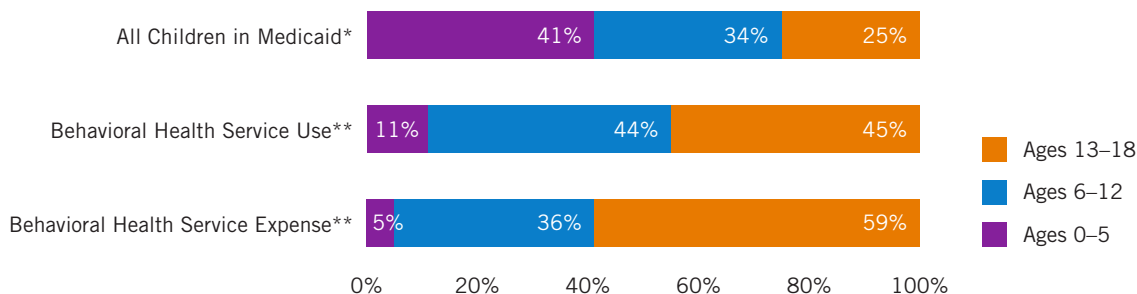
**Adolescents represented one-quarter of children enrolled in Medicaid, but nearly half of behavioral health service users and almost 60 percent of behavioral health expense.**

Adolescents, ages 13–18, represented 25 percent of the overall Medicaid child population, but 45 percent of children in Medicaid using behavioral health services (Figure 5). They were more likely than other children to use all behavioral health service types—particularly more expensive and restrictive services such as residential treatment/group care and inpatient psychiatric treatment. Among children receiving behavioral health services, 19 percent of adolescents—compared with 12 percent of other children—received substance use disorder services. (Overall, 0.8 percent of the Medicaid child population received substance use disorder services.)<sup>i</sup> Consistent with their higher utilization rates across many service types, adolescents had the highest mean (\$5,400) and total (\$4.7B) behavioral health expenditures, accounting for almost 60 percent of total behavioral health service expenditures for children in Medicaid.

Children ages 0–5, represented 41 percent of the Medicaid child population, and 11 percent of those using behavioral health services. Children in the 6–12 age group used services in slightly higher proportion (44%) than their enrollment in the overall Medicaid child population (34%). Mean expenditures for children ages 0–5 and 6–12 were approximately \$1,700 and \$3,400, respectively; while total expenditures for these age groups were \$373.6M and \$2.9B.

**IMPLICATIONS:** Because adolescents used disproportionately more services—particularly facility-based care—and accounted for more expenditures than other age groups, states may want to focus on cost-effective approaches to care that can be tailored to this age group. States can promote interventions such as Multisystemic Therapy and Functional Family Therapy that include key features such as youth-directed care planning, peer involvement, development of transitional adult skills, and coordination among juvenile justice, child welfare, and substance use service providers, in facilitating improved outcomes for adolescents.<sup>6</sup>

Figure 5: **MEDICAID ENROLLMENT, BEHAVIORAL HEALTH SERVICE USE AND EXPENSE BY AGE GROUP**



\* All children in Medicaid in 2005, N=29,050,305.

\*\* Behavioral health service use and expense in 2005, N=1,958,908.

<sup>i</sup> Rates of use for substance use disorder services are likely overstated, as there is an unknown amount of duplication of children across the substance use disorder service categories of screening and assessment, outpatient, and inpatient.



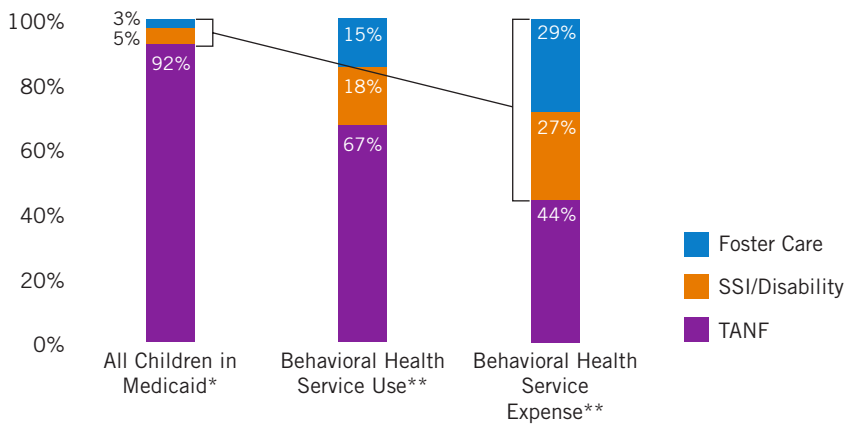
**Children in foster care and those with SSI/disability eligibility together represented only eight percent of the Medicaid child population, but their care accounted for 56 percent of total behavioral health spending.**

Children in foster care represented just three percent of the Medicaid child population, but accounted for 15 percent of those using behavioral health services and 29 percent of total behavioral health spending for children. Similarly, children eligible for Medicaid through SSI/disability status represented five percent of the Medicaid child population, but 18 percent of those using behavioral health services and 27 percent of overall expenditures (Figure 6).

Compared to the general Medicaid child population using behavioral health services, mean health care expenditures (physical and behavioral health) for children in foster care and those receiving SSI/disability were significantly higher. Mean annual health care costs for any child in Medicaid using behavioral health services were roughly \$8,500; however, for children in foster care this amount jumped to over \$12,000 per child, and for those on SSI/disability, it climbed to over \$15,000. Mean annual behavioral health expenditures were even higher for children in foster care—at nearly \$8,100 per child—than for children on SSI/disability (\$7,300). When behavioral and physical health expense are combined, mean expenses were higher for the SSI/disability population, due to its significant physical health service use.

**IMPLICATIONS:** The higher rates of service use and expense among children in foster care and children on SSI/disability are indicative of their complex needs. These children are frequently involved in multiple systems, such as behavioral health, child welfare, disability services, special education, and juvenile justice. Opportunities exist to develop more coordinated responses to behavioral health needs across care providers and systems, through interagency data sharing and blended funding, as well as the implementation of cost-effective and child- and family-centered service delivery models using a wraparound approach to care.<sup>7</sup>

Figure 6: **MEDICAID ENROLLMENT, BEHAVIORAL HEALTH SERVICE USE, AND EXPENSE BY AID CATEGORY**



\* All children in Medicaid in 2005, N=29,050,305.

\*\* Behavioral Health service use and expense in 2005, N=1,958,908.



## Faces of Medicaid: Illustrations of Children with Behavioral Health Needs

The stories below represent composite sketches of Medicaid beneficiaries.\* In each of these illustrations, the child and family would likely have benefited from access to an individualized needs assessment, followed by a set of behavioral health services and supports; improved care coordination; a more interconnected system of child-serving agencies; and, particularly for children involved in the child welfare system, a trauma-informed approach to care.

### Kayla

Five-year-old Kayla visited her pediatrician after her teacher reported that she was disruptive and aggressive. Kayla was diagnosed with attention-deficit hyperactivity disorder (ADHD) and prescribed Ritalin; however, with the medication, Kayla was more irritable, lost her appetite, and was having difficulty sleeping. Her teacher noted that Kayla was calmer in class, but was not keeping up with lessons and continued to be aggressive toward classmates during free time. The pediatrician recommended a child mental health specialist at the university several miles away, but Kayla's mother was unable to get off from work to drive her there. If Kayla and her mother had been provided with a telephonic consultation with a child mental health specialist from her pediatrician's office, relevant diagnostic information would have been identified to support a comprehensive assessment of Kayla's learning and social-emotional needs and an individually-tailored follow-up treatment plan for her and for her family, beyond ADHD medications.





### Angel

Eleven-year-old Angel, the second of five children, has been in and out of foster care since age six and rarely sees his siblings who are in separate foster homes. His 16-year-old-brother is in juvenile detention, and his father died in Central America when Angel was five. His mother, who has no family in the U.S., struggles with alcohol addiction, and her children have been removed from the home due to abuse and neglect. Angel worries about his family, and wonders whether his mother will come back. It is hard for him to concentrate at school. He feels hopeless and sometimes wants to die, but does not share his feelings with his foster mother for fear of being sent away. When his foster mother gets upset, Angel becomes frightened that something bad will happen again and he starts to shake all over. Access to a system of care that includes a Care Management Entity could provide Angel and his family with a variety of supports and services, including trauma-informed approach to care; a care coordinator to communicate with his school about his struggles and assist with appropriate access to his siblings; and; a peer specialist to provide guidance to his foster mother on how to support Angel.

### Brian

Brian, age 15, lives with his mother, stepfather, and two half-siblings. He and his stepfather often argue, and Brian sometimes becomes violent. After months of threatening outbursts, followed by running away for several days, Brian's family called the police, who brought him to the emergency room. After sharing homicidal thoughts, he was admitted to a psychiatric hospital, where he was diagnosed with a mood disorder with psychotic features and placed on multiple medications. Though less violent, Brian remained irritable, difficult to engage, and often fought with other patients. Following a fight with his roommate, Brian was discharged after 14 days to an acute residential treatment facility. After 45 days, he was sent home with instructions to pursue outpatient treatment. His parents, who are worried about his emotional stability, have met with a therapist at a local mental health center, but Brian refuses to go. He wants to stop his medications, saying he is unhappy with the acne and weight gain side effects. His parents are at a loss for what to do next. Brian and his family could benefit from better coordination among his primary care practitioner, the psychiatric hospital, the residential facility, and the local mental health center. Transitional support, particularly between the residential setting and home, should have included a safety plan, a re-assessment of his medications, including a review of his diagnosis and treatment history, and recommendations for additional non-medication based therapy. Brian and his family would particularly benefit from a home- and community-based wraparound approach, such as Multisystemic Therapy, that involves him in decision-making, as well as peer support services.

*\* These profiles represent composite sketches of Medicaid beneficiaries drawn from the experiences of clinicians and researchers in the fields of child behavioral health and child welfare. They do not portray real individuals, but rather serve to illustrate the varied experiences of children in Medicaid with behavioral health needs.*



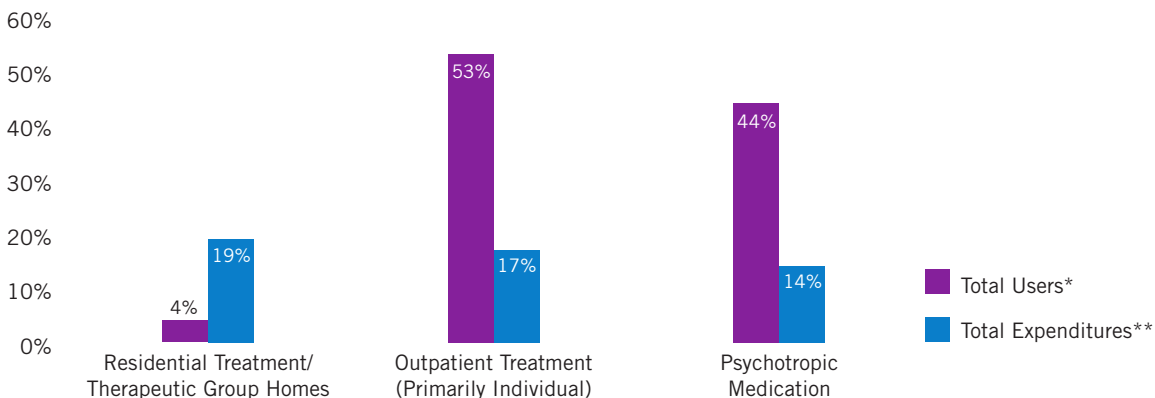
### Residential treatment/therapeutic group care, used by less than four percent of children, accounted for the largest proportion of total child behavioral health expenditures.

Less than four percent of children in Medicaid who used behavioral health services were in residential treatment/therapeutic group homes, yet these services accounted for 19 percent of total behavioral health costs, with a mean expense of almost \$22,000 per child. Outpatient treatment (primarily individual, office-based therapy) accounted for the second largest share of total spending, followed by psychotropic medications—both of which were used by a significant percentage of children using behavioral health services (Figure 7). Half of all behavioral health service costs for children in Medicaid were spent on these three services.

Conversely, combined spending on a range of alternative services—including behavioral management consultation; crisis intervention and stabilization; Multisystemic Therapy; respite; and therapeutic foster care—accounted for less than 10 percent of behavioral health expenses.

**IMPLICATIONS:** Results from the Centers for Medicare & Medicaid Services' Psychiatric Residential Treatment Facility waiver demonstration show that home- and community-based alternatives to institutional care can improve clinical and functional outcomes and lead to significant cost savings.<sup>8,9</sup> Approaches that are more child- and family-centered and rely on home- and community-based services, such as wraparound interventions and peer support, are more promising and cost-effective options for states to consider, particularly for children and youth that need a higher intensity of care.<sup>10</sup>

Figure 7: COMPARISON OF USE AND EXPENSE FOR CHILDREN'S BEHAVIORAL HEALTH SERVICES IN MEDICAID WITH HIGHEST TOTAL EXPENDITURES



\* Based on all children in Medicaid using behavioral health services in 2005, N=1,958,908.

\*\* Expenditures are based on 1.2 million children in fee-for-service arrangements and extrapolated to children in capitated managed care. Includes children with at least one claim for behavioral health services in 2005, with or without psychotropic medications use; does not include children with psychotropic medication use and no other behavioral health service claim.

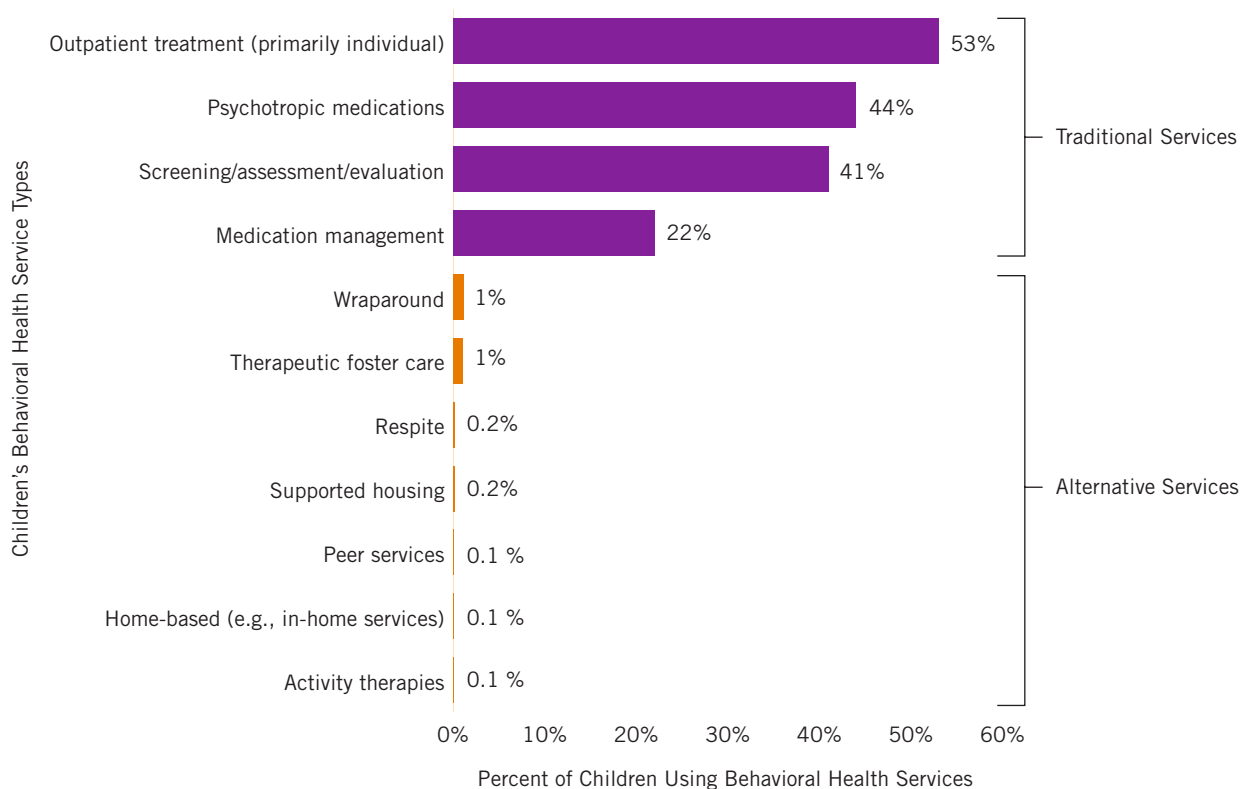


**Children in Medicaid were more likely to receive traditional behavioral health services, including outpatient treatment and psychotropic medication, versus alternative approaches, even those with an emerging or established evidence base.**

One percent or fewer children using behavioral health services received alternative services that have an existing or emerging evidence base,<sup>11</sup> such as wraparound (1%), supported housing (0.2%), peer services (0.1%), or home-based services (0.1%).<sup>ii</sup> This may be due to: inadequate knowledge among stakeholders about effective interventions; a dearth of trained providers to deliver the services; inconsistent coverage of these services in Medicaid; insufficient reimbursement rates; and/or lack of access to these services, even when covered (e.g., due to transportation or child care barriers).

**IMPLICATIONS:** To expand access to more appropriate and cost-effective behavioral health services and supports, states may need to examine whether their state Medicaid policies allow for coverage and adequate reimbursement of these treatments. States should also determine the geographic availability and level of awareness among providers regarding evidence-informed and home- and community-based services for children. States can look to funding sources outside of Medicaid, for example child welfare, education, or behavioral health, to facilitate co-financing and coordinated delivery of these services.

Figure 8: USE OF TRADITIONAL SERVICES VS. ALTERNATIVE SERVICES AMONG CHILDREN IN MEDICAID\*



\* Includes children with at least one claim for behavioral health services in 2005, with or without psychotropic medications use; does not include children with psychotropic medication use and no other behavioral health service claim, N = 1,958,908.

ii The utilization rates for these alternative services may be understated, as they may have been coded to different service categories, such as *psychosocial rehabilitation services*; however, only 12 percent of children in Medicaid used any type of psychosocial rehabilitation service.



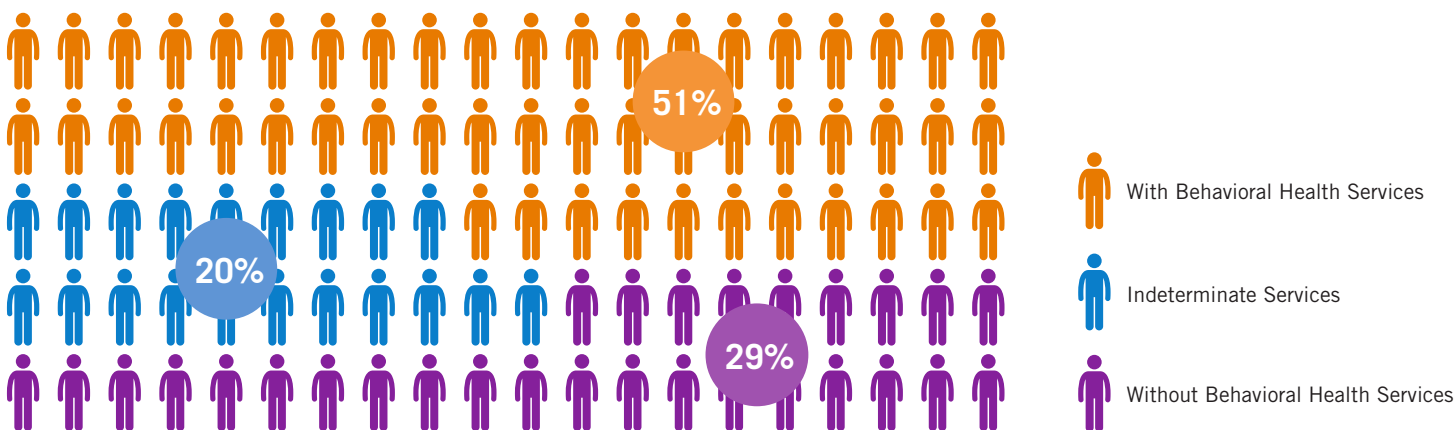
### Children in Medicaid were frequently prescribed psychotropic medications, but only half of those getting medications received accompanying behavioral health services.

Of the 1.7 million children in Medicaid who received psychotropic medications, only 51 percent also received identifiable behavioral health services. Twenty percent of psychotropic medication recipients received indeterminate services, which were not clearly identifiable as behavioral health or physical health, and 29 percent of children in Medicaid prescribed psychotropic medications (490,000) received exclusively physical health services (Figure 9).

Overall, about six percent of children in Medicaid were prescribed psychotropic medications, and adolescents, white children, and males were more likely to receive these medications. Children eligible for Medicaid through TANF were least likely to receive psychotropic medications (4%), while almost a quarter of those in foster care (23%) and over a quarter of those eligible through SSI/disability (27%) were prescribed psychotropic medication.

**IMPLICATIONS:** In the past decade, the prescription of psychotropic medications to children has increased significantly, raising concerns nationally about the appropriate use and oversight of these medications.<sup>12,13</sup> Children in Medicaid are at higher risk of experiencing overuse or misuse of behavioral health-related medications.<sup>14</sup> In addition, adverse side effects, including increased risk of obesity and diabetes<sup>15</sup> and risk for drug interactions, make it imperative that policymakers and providers work to improve oversight and monitoring of these medications and increase access to alternative non-pharmacological treatments.

Figure 9: CHILDREN IN MEDICAID PRESCRIBED PSYCHOTROPIC MEDICATIONS WITH AND WITHOUT ACCOMPANYING BEHAVIORAL HEALTH SERVICES\*



\* Based on all children in Medicaid receiving psychotropic medications in 2005, N = 1,686,387.



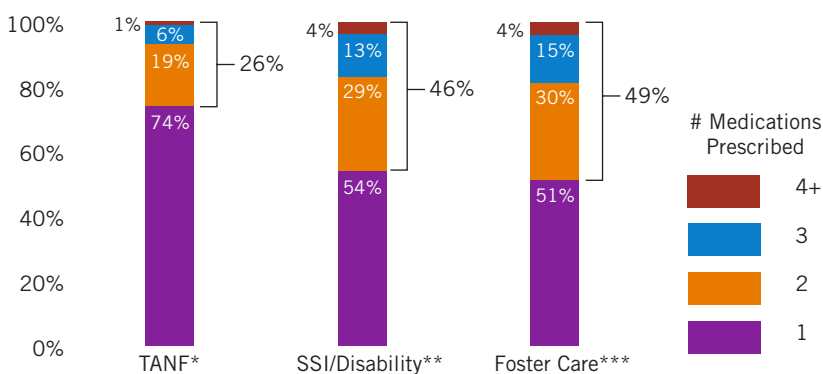
### Psychotropic medication prescribing for children in Medicaid revealed high rates of concurrent prescription<sup>iii</sup> and antipsychotic use.

Approximately one-third of children in Medicaid receiving psychotropic medications were prescribed two or more medications of different classes, with 11 percent prescribed three or more. About 20 percent of children who received psychotropic medications with no other behavioral health services were prescribed two or more medication classes. Children in foster care who were prescribed psychotropic medications were more likely than children in other aid categories to receive multiple medication types, with 49 percent prescribed two or more, and close to 20 percent prescribed three or more (Figure 10).

Among children in Medicaid who received psychotropic medications, over 26 percent were prescribed antipsychotic medication, although only four percent received a diagnosis of psychosis. This discrepancy between the number of children receiving a medication and the number with an appropriate diagnosis is indicative of “off-label”<sup>iv</sup> use.<sup>18</sup> Children in foster care and those on SSI/disability who received psychotropic medications were the most likely to be prescribed antipsychotics—with over 42 percent in each group receiving antipsychotics. Variations in antipsychotic use by age also reveal a concerning pattern, with almost a quarter (23%) of young children, ages 0–5, on psychotropic medications receiving these powerful medications.

**IMPLICATIONS:** Both concurrent medication use and antipsychotic use among children present significant health risks, including interaction between medications, weight gain, and cardio-metabolic side effects. These trends—and the growing shift of behavioral health treatment into primary care—highlight the need for effective monitoring and a review of current oversight systems. Ensuring appropriate behavioral health provider capacity, as well as access to evidence-based, non-pharmacological interventions, can help to reduce reliance solely on psychotropic medications to treat children with significant behavioral health needs.

Figure 10: **CONCURRENT PSYCHOTROPIC MEDICATION USE AMONG CHILDREN IN MEDICAID**



\*N=1,119,266 \*\*N= 354,945 \*\*\*N= 212,176

iii In this analysis, “concurrent prescription” is defined as the prescribing of more than one psychotropic medication class during the study year (2005).

iv The term “off-label” use refers to provider prescription of medications in ways that are not included on the federal Food and Drug Administration list of approved uses.



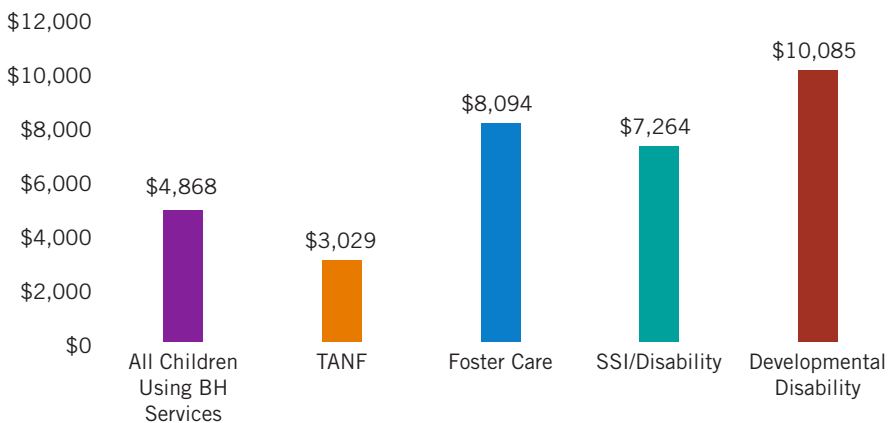
### Behavioral health expenses for children in Medicaid with a developmental disability were significantly higher than for other children using these services.

The subset of children with developmental disabilities identified in this study represented only about 115,000 children; however, 75 percent of these children (86,000) used behavioral health care in 2005. Compared to rates of behavioral health service and psychotropic medication use in the overall Medicaid child population using behavioral health care (70% and 61%, respectively), children with developmental disabilities using behavioral health care were more likely to receive behavioral health services and psychotropic medications (82% and 66%, respectively). Annual behavioral health expenditures for children in Medicaid with developmental disabilities were over \$10,000—more than double the \$4,800 for the general Medicaid child population using behavioral health services (Figure 11).

Based on total expenses, the top three services for children with developmental disabilities using behavioral health services were: (1) psychosocial rehabilitation, (2) psychotropic medication, and (3) residential treatment/therapeutic group homes. Close to 26 percent of these children used psychosocial rehabilitation, which represented 20 percent of total expenses. Psychotropic medications, used by 58 percent of children with developmental disabilities using behavioral health services, represented 18 percent of total expenses. The third highest expense, residential treatment/therapeutic group homes, were used by less than four percent of children with developmental disabilities, but represented over 13 percent of total expenditures.

**IMPLICATIONS:** While higher health care use and expense for children with developmental disabilities are expected given the nature of their health care needs, this analysis suggests opportunities for better management of psychotropic medication use, residential and group care use, and implementation of home- and community-based services for this population.

Figure 11: **MEDICAID BEHAVIORAL HEALTH SERVICES SPENDING PER ENROLLEE\***



\* Only includes children in Medicaid using behavioral health services in 2005, with or without concomitant psychotropic medication use, who are not enrolled in a comprehensive managed care organization; All Children Using Behavioral Health Services, N = 1,213,201; TANF, N = 730,764; Foster Care, N = 227,688; SSI/Disability, N = 254,749; Developmental Disability, N = 52,151.



## POLICY RECOMMENDATIONS

Children in Medicaid with serious behavioral health care needs are a complex and vulnerable population. Without access to a broad array of services (both traditional and alternative), care coordination, and collaboration among child-serving systems, they are at risk for poor outcomes and high costs. By identifying trends in behavioral health care use and expense, this *Faces of Medicaid* study highlights opportunities to improve access to behavioral health services, as well as the quality and cost-effectiveness of services for this high-risk population. These opportunities can be clustered into key themes, highlighted below.

### **Expand Access to Appropriate and Effective Behavioral Health Services—Both Traditional and Alternative**

Given the higher prevalence of behavioral health needs among children in poverty,<sup>17</sup> the overall use of behavioral health care among children in Medicaid was low, at under 10 percent. Further, variations in use for children of diverse racial/ethnic backgrounds indicate the need to examine how social and cultural determinants of behavioral health impact access to care. To improve access, it is essential to ensure that: (1) a range of behavioral health services is covered by Medicaid; (2) services are culturally and linguistically appropriate; (3) providers are sufficient in number, geographically accessible, and trained in both traditional and alternative services (including home and community-based services); and (4) delivery systems are knowledgeable about Medicaid reimbursement for behavioral health services.

Coverage of more home- and community-based services can help to reduce reliance on expensive, restrictive facility-based care and inappropriate use of psychotropic medications. In May 2013, the Centers for Medicare & Medicaid Services issued a bulletin to help states design a behavioral health benefit for children and youth in Medicaid with significant mental health conditions.<sup>18</sup> Among the recommended services in the bulletin are: intensive care coordination using wraparound, family and youth peer support, and intensive in-home services.

States may need to examine whether their current Medicaid policies allow for coverage of these treatments and how accessible they are for children who need them. Since states are not required to cover these services in their state plans, funding often comes from sources outside of Medicaid, such as child welfare, behavioral health, or public health funding streams.<sup>19</sup> Some states, like Arizona, Massachusetts, and New Jersey, have expanded access to these services for children by adding such services to their state Medicaid plans, revising service definitions, covering them through Targeted Case Management<sup>20</sup> or the Rehabilitation Services Option,<sup>21</sup> employing Medicaid waivers, or capitalizing on the 1915(i) provision of the Affordable Care Act (ACA).<sup>22,23</sup>

### **Invest in Care Coordination**

Adolescents, children in foster care, and those with developmental disabilities used more behavioral health care, and more expensive services (e.g., residential and group care) than other children in Medicaid. Psychotropic medications were prescribed frequently to children in all age groups, but most often to children ages 6–12 who are typically not able to participate in care decisions. Physical health issues are also a concern for children with behavioral health needs, who are at risk for chronic conditions like asthma and obesity.<sup>24</sup> That reality, plus the health risks associated with psychotropic medication use—especially for very young children,<sup>25</sup> and the high rates of use among those who received no other services, emphasize the need for close coordination between the primary care and behavioral health providers serving these children. Furthermore, children and adolescents with serious behavioral health conditions are often served by other entities such as child welfare, juvenile justice, and special education, making coordination across all child-serving systems especially critical.



### Intensive Care Coordination through a Care Management Entity Model

Wisconsin's **Wraparound Milwaukee** is a Care Management Entity that uses the wraparound approach to intensive care coordination to serve children with serious behavioral health challenges who are at-risk of placement in a residential treatment facility. Care coordinators conduct a strengths-based assessment of the child, convene a child and family team, and develop a treatment plan based on the child and family needs, goals, and formal/informal supports. Georgia, Maryland, and Wyoming are also pursuing Care Management Entity models for children with serious behavioral health needs, through a federally-supported quality improvement collaborative.<sup>v</sup>

Through temporary increased funding authorized by the ACA, states can invest in health homes that facilitate coordination of care for individuals with chronic conditions, including children with serious behavioral health needs.<sup>26</sup> Emerging models of intensive care coordination that use a wraparound approach,<sup>27</sup> such as the Wraparound Milwaukee model, provide many services identical to those required by health homes<sup>28</sup> and have resulted in good quality and cost outcomes for children with behavioral health needs.<sup>29</sup> In some states, including Massachusetts and New Jersey, intensive care coordination using wraparound is financed by Medicaid through Targeted Case Management funds.<sup>30</sup> Health homes may provide a new pathway for expanding access to these services. States like Montana and Maryland are also employing the ACA's 1915(i) state plan amendment provision to enable access to evidence-informed child behavioral health services, including care coordination approaches.

### Improve Collaboration and Coordination between Child Welfare, Medicaid, and Behavioral Health Systems

This *Faces of Medicaid* analysis supports evidence showing that children in the child welfare system are at greater risk for behavioral health issues, often associated with high levels of trauma and instability, and are more likely to be prescribed psychotropic medications.<sup>31,32</sup> Given their frequent involvement with multiple public agencies, broad cross-system communication and coordination are high priorities for this population. Federal legislation like the 2008 Fostering Connections to Success and Increasing Adoptions Act,<sup>33</sup> the 2011 Child and Family Services Improvement and Innovation Act,<sup>34</sup> and some provisions of the ACA, emphasize cross-system collaboration for better oversight and monitoring of psychotropic medications, improved care coordination, and expanded access to medical homes. Additionally, children in foster care are a priority population for recent federal grants from the Center for Medicare & Medicaid Innovation, boosting recognition of their needs and the role of state purchasers and system partners in improving their outcomes.<sup>35</sup>

### Monitoring Psychotropic Medication Use through Medicaid-Child Welfare Data-Sharing

Illinois, one of the states participating in CHCS' **Psychotropic Medications Quality Improvement Collaborative**, has established a data-sharing agreement between Medicaid and child welfare to monitor psychotropic medication prescribing. The state is enacting a "hard stop" whereby pharmacies will not receive Medicaid reimbursement for psychotropic medications dispensed to foster children whose medications have not been approved by the clinical consultant to the child welfare agency.

Cross-system collaboration and coordination can be achieved in a number of ways, including: (1) data-sharing among child welfare, Medicaid, behavioral health, and other child-serving systems; (2) interagency leadership teams to collectively address system-level issues; (3) training and capacity building across agencies; and (4) shared, family-driven treatment planning. Data-sharing, in particular, is an effective way to coordinate care and boost oversight and monitoring of psychotropic medication use.

<sup>v</sup> To learn more about Care Management Entities for Children with Serious Behavioral Health Needs: A CHIPRA Quality Improvement Collaborative, visit: [http://www.chcs.org/info-url\\_nocat3961/info-url\\_nocat\\_show.htm?doc\\_id=1250388](http://www.chcs.org/info-url_nocat3961/info-url_nocat_show.htm?doc_id=1250388).





Since 2004, Washington state's Medicaid agency and Department of Social and Health Services have been collaborating to promote safe prescribing of psychotropic medications to children in Medicaid through various programs, including a data-sharing agreement. More recently, several states participating in CHCS' *Psychotropic Medications Quality Improvement Collaborative*, made possible through support from the Annie E. Casey Foundation, have instituted data-sharing programs between their Medicaid and child welfare systems. Some states, like Illinois, New Jersey, and Texas, have developed health passports for children in foster care, that enable providers to access critical health information easily and in one place.<sup>36</sup> Staff training specific to the needs of children involved with multiple systems is another important aspect of collaboration between agencies. In Michigan, for example, staff members in community mental health agencies receive training on serving children in child welfare, oftentimes from child welfare agency staff or foster parents. Mental health agencies, in turn, provide child welfare staff with training on various behavioral health services and the specifics of the state's Medicaid home- and community-based services waiver for children with serious emotional disturbances.<sup>37</sup> Finally, child- and family-driven treatment planning that incorporates all involved agencies and providers, ensures that treatment plans are inclusive, strengths-based, and complete with the necessary information to reduce risk and improve outcomes.

## CONCLUSION

Many states have already sought to improve care for children with behavioral health needs, for example by covering family and youth peer supports,<sup>38</sup> implementing a wraparound care coordination model,<sup>39</sup> transitioning children from residential to more natural settings,<sup>40</sup> or better monitoring psychotropic medication use.<sup>41</sup> Still, many other opportunities to improve care exist. States can: (1) ensure network providers are knowledgeable about diverse populations, emerging service innovations, and best practices for recognizing and treating children's behavioral health conditions; (2) expand home- and community-based services; (3) adopt family- and child- centered approaches; (4) collaborate across child-serving systems; and (5) establish data-sharing agreements to closely monitor psychotropic medication use and other health needs. By examining behavioral health utilization and costs for children in their own states, Medicaid stakeholders can better target cost-effective opportunities to improve the health and futures of this high-risk, high-need population.

### Areas for Further Study

This analysis of 2005 Medicaid data provides a comprehensive point-in-time analysis of behavioral health service use and expense among children in Medicaid. The authors have launched a new analysis examining 2008 claims data to explore evolving patterns of behavioral health use and expense. The findings from this analysis suggest several key opportunities for further exploration. For instance, a look at substance use disorder service utilization among children in Medicaid may establish a clearer picture of how subgroups are impacted. A picture of service expenditure at a per-member per-month level may provide a more granular look into the relationship between service volume and expense. An examination of the most common chronic physical comorbidities among children in Medicaid using behavioral health services can lend insight into the physical health care needs of this population. For children prescribed psychotropic medications, data about concurrent psychotropic medication use; the number of children using psychotropic medications without a diagnosis; and who these children are, by aid category, age, gender, and race/ethnicity, may further refine where interventions should be targeted. Understanding patterns of service use and expense related to behavioral health diagnoses across Medicaid aid categories may lead to a better understanding of how to focus quality improvement efforts. Finally, comparing 2008 to 2005 data to generate trends for penetration rates and service use over time can help to shed light on implications emerging from states' shift to capitated managed care arrangements, particularly for high-need populations like children in foster care.



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### About CHCS

The Center for Health Care Strategies (CHCS) is a nonprofit health policy resource center dedicated to improving health care access and quality for low-income Americans. CHCS works with state and federal agencies, health plans, providers, and consumer groups to develop innovative programs that better serve people with complex and high-cost health care needs. For more information, visit [www.chcs.org](http://www.chcs.org).

### Additional Resources

Since 2000, CHCS has shed light on the complex needs of Medicaid's most challenging populations through its series of *Faces of Medicaid* data analyses. This brief is one in a set of resources developed for *Faces of Medicaid: Examining Children's Behavioral Health Service Utilization and Expenditures*. The full report can be downloaded at [www.chcs.org](http://www.chcs.org). To explore CHCS' full portfolio of work related to children with complex health care needs, visit the [Children's Health](#) page.



## (Endnotes)

1. This report makes a distinction between behavioral health *care* and behavioral health *services*. Behavioral health care is used as an umbrella term and encompasses both behavioral health service use (with or without psychotropic medication use) and psychotropic medication use (without use of other behavioral health services), while references to behavioral health services do NOT include children who used *only* psychotropic medications. Figures present results for either children using behavioral health care (N= 2,787,919) or children using behavioral health services (N= 1,958,908).
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