

Behavioral Therapies for Children Evaluation

Report to the Department of
Health Care Policy and Financing

April 10, 2017



EPSDT—Behavioral Therapies Program Evaluation

Health First Colorado (Colorado’s Medicaid Program) offers a behavioral therapy benefit through the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) program. Previously, behavioral therapy was made available to children from birth through age five through a waiver option. In 2016, EPSDT began offering behavioral therapy services to children 20 and under. Funding and statutory authority of the evaluation of these services was moved from CWA to the EPSDT program via House Bill 16-1405 “FY 2016-17 Long Appropriation Bill,” Health Care Policy and Financing Footnote 11. This has led to programmatic changes, some of which substantially change both program implementation and outcome goals. It has also resulted in shifts in eligibility for services and, therefore, changes in the population being served.

The evaluation of these behavioral therapies is statutorily mandated under Section 25.5-6-806 (2) (c) (I), C.R.S.

The statute mandates annual evaluation reporting of the following:¹

- The number of eligible children receiving services or who have received services under the EPSDT program;
- The average and median age of eligible children when they begin receiving services, and the average length of time that children receive services; and
- The average cost of services provided to an eligible child.

In addition, the statute requires an evaluation of program outcomes, particularly assessing the program’s success in the following areas:

- Serving the children most vulnerable to institutionalization without the services provided;
- Keeping children out of institutions;
- Demonstrating improvement in the child's expressive and receptive communication, adaptive skills (such as dressing and toileting), and a reduction in the severity of the child's maladaptive behavior, including self-injurious or aggressive behavior and tantrums, through the use of standardized and norm-referenced assessments.

As previously stated, an important context for understanding this evaluation effort is the recent move of the evaluation of these behavioral therapy services from the Children With Autism (CWA) waiver to the EPSDT program. This change has implications for the descriptive analysis

¹ See Appendix A of this report for a full text of the statute.

program eligibility and the overall character of the treatment population. This means that some of the original program goals and evaluation metrics might require updating.

This report begins by first discussing the impacts of the statutory change of the evaluation of the CWA to the EPSDT program, including changes in eligibility, the services approval process, and program goals. While this report focuses on calendar year 2016, the full reporting period for this report is November 1, 2015 through December 31, 2016. The first two months (November and December 2015) are included because the program (newly moved to EPSDT) began collecting authorizations for service in November of 2015.

After a discussion of the impacts of the program change, the remainder of the report is organized based on the format of the statutory reporting requirements, with each section corresponding to a subject from the two bulleted lists on page one of this report. Within each section, the methods for collecting and analyzing data are discussed briefly. A full Evaluation Methodology for the report is also included in Appendix B.

Introduction

Differences in the Behavioral Therapies Program Under EPSDT

Perhaps the most significant impact of adding additional Behavioral Therapies to the EPSDT program is the expansion of service coverage to children who have a diagnosis other than an autism spectrum disorder. This new group of children, previously ineligible for CWA services, has an opportunity to participate in behavioral therapies appropriate to their diagnoses.

Prior to the programmatic change children had to have an autism disorder diagnosis in order to be eligible for the services. Under EPSDT the majority of the 464 children eligible for services (based on a completed Prior Authorization Request) did have a diagnosis within the autism spectrum, however, 26% of children eligible for services had another medical diagnosis. Table 1, below, shows the distribution of diagnoses across all children eligible for services. Requests listed multiple diagnoses for more than a quarter of eligible children (28%).

**Table 1: Children Eligible for Services, by Medical Diagnosis (n=464)
Based on Authorizations**

Distribution of Diagnoses	Number of Children	Percent of Children Eligible
Number of Diagnoses		
Single Diagnosis	336	72%
Multiple Diagnoses	128	28%
Diagnoses of Eligible Children		
<i>Total exceeds number of children eligible due to multiple diagnoses per child. Percentages total to more than 100% due to some children being counted multiple times.</i>		
Autistic Disorders (incl. Asperger's)	345	74%
Developmental Disabilities	96	21%
Congenital Malformations (incl. Down syndrome)	38	8%
ADHD and Conduct Disorders	25	4%
All Other Diagnoses	48	10%

While the majority of children eligible for behavioral therapy services (74%) under the EPSDT program did have a diagnosis of autism, many did not. A total of 119 children had no diagnosis of autism and would not have been eligible to receive services under the CWA Waiver. Under EPSDT, this program has expanded to serve more children, including those of all ages and those who have needs outside of just an autism spectrum disorder diagnosis.

While expanding the number of children eligible for services, the EPSDT program has also used

the Prior Authorization Request (PAR) system² to ensure that providers are identifying children for whom these services are medically necessary. The table below shows the distribution of PARs, based on type and status of the request.

Table 2: Distribution of Prior Authorization Requests

Authorization Requests	Number of Requests	Percent Approved ³	Percent Rejected	
			No Medical Necessity	Technical Denial
Request for Mental Health Assessment	677	99%	0%	>1%
Request for Community Psychiatric Supportive Treatment ⁴	566	97%	0%	3%
Requests for Comprehensive Community Support Services	556	97%	0%	3%

All but four of the unique children (n=464) had an authorization request for an assessment, with multiple assessment requests made for some children. Seven (7) of the 677 requests for assessments were denied for technical reasons such as the failure to submit required clinical documents with the PAR. It should be noted that for all seven requests, a subsequent PAR for an assessment was resubmitted and approved. Nearly all (97%) of requests for either community psychiatric or comprehensive community support were approved, and none received a medical necessity denial.

The mental health assessment is a behavior identification assessment conducted during a face-to-face interaction with the patient and caregiver(s). The assessment includes the administration of standardized and non-standardized tests, a detailed behavioral history, patient observation, and caregiver interview. The clinician conducting the assessment provides an interpretation of test results, discusses findings and recommendations with the primary caregiver(s), and prepares a formal report.⁵

Community Psychiatric Supportive treatment includes adaptive behavior treatment delivered by a therapist, certified by the Behavior Analyst Certification Board (BACB). Comprehensive Community Support services are adaptive behavior treatments delivered by technicians,

² This will be described further in the next section of this report.

³ Includes requests that were approved for fewer units of services than initially requested.

⁴ Specific descriptions of services are included later in this report in the discussion on services delivered.

⁵ Descriptions of assessment and services summarized from the HCPF website:

<https://www.colorado.gov/pacific/hcpf/pediatric-behavioral-therapies-information-providers>.

supervised by a therapist. Most children have claims for services from both a licensed therapist and a supervised technician. Specific services that are provided (social skill development, communication, physical skill development and self-regulation, for example) vary depending on the needs of the individual child.

Number of Eligible Children Receiving Services or Who Have Received Services under the EPSDT Program

Before a provider can begin treatment, a Prior Authorization Request (PAR) must be submitted to eQHealth Solutions, the Department of Health Care Policy and Financing's (the Department) third party utilization management vendor. The number of children potentially eligible for services is calculated by counting the number of unique member IDs for whom PARs were submitted during the reporting period. Claims data is used to count the number of children who have received services. However, claims data often lags behind actual service provision.

Because this program is new and in order to meet reporting deadlines, claims data was extracted early in 2017. This means that services provided at the end of the period were very likely still going through the process and are not included in the claims data extract. As a new program, this effect is compounded by the fact that the majority of services actually took place later in the year, given the time needed to for the authorization of an assessment, completion of the assessment, and then the authorization for services.

460	Children with a request for a behavioral health assessment.
397	Children with a request for behavioral therapy services.
322	Children with a medical claim paid for behavioral therapy services.

A total of 464 unique children had at least one PAR submitted during the time period. Of those, 397 (86%) children had a PAR submitted for therapy services.

Average and Median Age of Eligible Children When They Begin Receiving Services and Average Length of Time that Children Receive Services

As previously discussed, there are some concerns that claims data remains incomplete as a result of lags between service delivery and claims payment. Therefore, characteristics of children eligible for services, rather than those with a claim for service, are presented here.

As seen in the following table, the majority of children who received behavioral therapy services were male (74%). The vast majority (82%) were under the age of 12, with half of those (41% of the total number served) between the ages zero to five years and the other half between the ages six to 11 years. A much smaller number (16%) were between 12 and 17 years

old and only two percent were age 18 years or older at the start of the PAR authorization. The mean age of children served was 7.5 years old.

Table 3: Characteristics of Children Eligible for Services

Child Characteristics	Number	Percent
Total Number of Children Eligible	464	100%
Gender		
Female	120	26%
Male	344	74%
Age		
0 to 5 years	190	41%
6 to 11 years	190	41%
12 to 17 years	74	16%
18 years and over	10	2%
Mean and Median Age		
Mean Age	7.5 years	
Median Age	6 years	

A change in eligibility under the EPSDT program means that older children are eligible for services and that younger children remain eligible for services longer. Previously, the CWA Waiver served children from birth through age five. EPSDT covers children ages 20 and under. Therefore, the length of time that a child receives services is no longer constrained by the program and is not a relevant measure of program compliance.

In addition, this report essentially provides a “reset” of data and only includes children who began behavioral therapies under the new EPSDT-housed program. Because most children are still receiving services at this time, it is not possible to calculate a total or average length of service.

For subsequent reporting, once claims data becomes more complete and more children end their service participation, this report will discuss the length of time children receive services and specific counts of services received (as opposed to services authorized, as reported here).

Average Cost of Services Provided to an Eligible Child

It is difficult to isolate program costs for an individual child so early in the implementation of a program. While the behavioral therapy services, in general, have been provided for a longer period of time, they are newly provided under the EPSDT benefit. As a result, nearly all children

receiving services are doing so on an ongoing basis as of the time this report was produced. Calculating average member costs using a population for whom services are ongoing (as opposed to the more traditional method of only calculating costs once services have ended) is not precise. Because of this, the table below should be reviewed with caution, and serves only as a general descriptions of cost, based on the currently available—and incomplete—claims data.

Table 4: Average Cost of Services Provided

Description of Costs and Claims	Number
Total Number of Children (Members) with Any Claim	322
Total Number of Claims	3,361
Cost Ranges and Averages	
Lowest member cost ⁶	\$20.35
Highest member cost	\$299,103.75
Mean cost per member (all costs for period)	\$52,985
Median cost per member (all costs for period)	\$33,379

As the program continues, and more individual children have a complete course of services, then average costs for those who have completed (either by finishing, aging out, meeting goals, or otherwise leaving treatment) services will be more accurate in describing the average costs per child served for this program.

Evaluation of Program Outcomes

Serving the children most vulnerable to institutionalization without the services provided.

Keeping children out of institutions.

These reporting requirements are no longer relevant to the evaluation because they are specific to the specific goals and features of the CWA waiver. They do not apply to the program administered under EPSDT.

Demonstrating improvement in the child's expressive and receptive communication, adaptive skills (such as dressing and toileting), and a reduction in the severity of the child's maladaptive behavior, including self-injurious or aggressive behavior and

⁶ One member in the claims data set received only one unit of Community Psychiatric Supportive treatment services. As most children receive multiple units of service, as well as an assessment prior to completing service, this data point likely represents a child for whom most claims are missing from this data set (either because there was a system issue, or the claim is still pending payment).

tantrums, through the use of standardized and norm-referenced assessments.

This requirement was written based on the approved ages for the CWA waiver. The EPSDT program has expanded services to children ages 20 and under. Therefore, this specific evaluation outcome, as written, is no longer applicable to the program. Under EPSDT, a new set of program outcomes will need to be established in order to determine whether or not the behavioral therapies being funded are effective in serving this new population of children, based on the general goals of adaptive behavioral treatments.

Children with either an autism spectrum disorder or other significant developmental, behavioral, or medical diagnoses often have difficulties with both social and physical skills, communication, and self-regulation and/or external interactions. Many of the behavioral therapies being provided focus on basic communication skills—verbal communication, being comfortable interacting with others, listening to/observing warning commands (“stop,” “don’t”). Sometimes therapy also focuses on physical skills, such as fine motor skills (picking up an object, using a spoon to eat) and bathroom training.

This report examines two potential methods for determining individual child outcomes, based on data that is currently available: 1) a review of a sample of PAR records, focusing on information contained in follow-up requests for authorization, and 2) interviews of parents/caregivers of children receiving services.

PAR Record Review Summary

TriWest Group identified 63 individual children who seemed most likely to have a six-month follow-up PAR based on 1) having multiple PAR records and 2) an initial PAR that began within the first six months of the new PAR reporting system (because all requests for services must be renewed every six months in order for services to continue).

Of the 63 PAR records that were reviewed in detail, about half were completed after an initial PAR had been submitted for either an assessment or service. Upon closer examination these PARs were not a request for a continuation of services; rather, they were either a new PAR for service following an assessment, or a PAR for new services (either a different provider, or different type of service) that happened after the initial PAR.

A total of 25 of the initial records identified did prove to be six-month follow-up service requests. The following table contains an overview of the results of chart reviews conducted for each one of those cases.

Table 5: PAR Review Results

Child Characteristics	Number	Percent
Total Number Individual Children’s PARs Reviewed	63	100%
Six-Month Follow-up Status		
Had multiple PARs, but did not have a six-month follow up (based on date and/or content)	32	51%
Six-Month Follow-up PARs	25	40%
Not certain/no approvals	6	9%
Potential for Monitoring Outcomes (Members with Six-Month Follow-up PARs) (n=25)		
Initial behavioral health documentation and behavioral goals	24	92%
ABA Initial Comprehensive Assessment	16	64%
Ongoing progress documentation	20	80%

Most of the identified follow-up records contained information discussing the progress of a child receiving treatment; all but one record had documentation of the initial goals for adaptive behavior treatment and 80% contained documentation of ongoing treatment progress. However, the data was inconsistent (there are no requirements for specific data or forms to be used) and not recorded in a way that allowed for analysis by any method other than chart review.

Our review of PAR records generally found that the current PAR data system is not designed to adequately capture outcome data in a reportable format. In its current form, the system does not contain discrete data fields needed for a statistical pre-posttest analysis of changes in behavior; in fact, there is no standardized pre-posttest data collection. While most PARs document some level of goal progress, the follow-up PARs that were reviewed were linked to the original assessment documentation, not a follow-up assessment (making even a qualitative determination of progress difficult).

Parent/Caregiver Perspectives of Services

Another possible indicator of whether the program is achieving its outcomes is the perspective of parents or other caregivers of the children receiving services. These individuals are in the best position to observe the day-to-day progress of their child(ren) and to assess whether any improvement is evident.

Interviews were completed with 20 parents and caregivers. The original evaluation plan called for interviewing parents who had either stopped services or switched providers. However, only 35 potential interviewees who appeared to meet that criteria were identified and only six

interviews were completed. The sample of parents to be contacted for interviews was then expanded to include a random sample of parents of all children who received services.

Parent satisfaction with Medicaid behavioral therapy services (current provider or most recent Medicaid provider) was measured on a scale of one to five (1-5), with 1 indicating “Does not meet expectations” and 5 indicating “Exceeds expectations.” The following table provides a summary of parent satisfaction.

Table 6: Satisfaction with Services

Rating Scale	Number
Total Interviews	20
1 – Does/did not meet expectations (1)	5%
2 – Somewhat meets expectations (2)	10%
3 – Mostly meets expectations (3)	15%
4 – Met/meets expectations (7)	35%
5 – Exceeds expectations (7)	35%
Average score (scale 1 – 5)	3.3

Parents, overall, reported being satisfied with behavioral therapy services. The majority (75%) reported that their child is doing better with the services provided. Most (85%) reported that services at least mostly met their expectations. On average, parents ranked their satisfaction as a 3.3 on a scale of 1-5, or somewhere between “mostly meets expectations” and “meets expectations.”

Parents tended to report high levels of satisfaction with their child(ren)’s individual therapists, as well as an overall positive view of the organizations providing services. The most common positive comments were about providers working with a child in the best environment (at home or community, as opposed to the therapist’s office) or having a general positive relationship with the child.

Parents spoke positively about the fact that Medicaid payment for services reduced at least the monetary stress that is often the result of high and complex behavioral therapy needs.

Most frustrations expressed by parents were less about providers and more about either the general

“[The Medicaid provider] has done a great job and [Medicaid] has paid for all of his care. His provider gives wonderful services and my child has gotten the best care.”

requirements for Medicaid⁷ (navigating the system is too difficult), the demand on providers (long wait times), or lack of information (hard to find information on websites, spending too much time on the phone trying to determine eligibility).

Several (4) parents suggested that the Department's Medicaid website be more user friendly and helpful in providing answers to questions, because when having to call, they often had to wait several days before receiving a response. One parent specifically recommended having a provider rating on the website. She discussed being very happy with her child's therapist and that the child had been seeing the same therapist for the duration of services. Initially, she was concerned because other parents warned her of very high rates of staff turnover for providers.

Regarding individual providers, parents struggled most often with changes in staff (turnover). More than half of (8) the parents interviewed identified problems with disrupted treatment when a therapist who had bonded with their child left a provider organization.

For some, provider availability (difficulty in scheduling appointments) or long distances from provider organizations also made access to services less than optimal for their child(ren).

Other issues discussed in parent interviews were "holdovers" from the CWA program. Some parents whose children are currently receiving services under EPSDT, but who (seemingly) could not under the CWA, are much happier now.

One suggestion for improving the program included seeing children at an earlier age (this was somewhat related to the amount of time between a parent's initial observation of behavioral issues to when services are put in place). Some parents reported struggling for years before signing on to the program as well as authorization denials for a specific type, amount, or location of service (home versus clinic-based). Other parents reported an issue of not understanding the benefits available to their child(ren).

Another suggestion for improvement was provider training, noting that workers need to learn "there are varying types of autism and there's not just one plan out there. Plans need to be made per the child and their specific needs."

Some parents also felt they should have more input in selecting their child's provider.

⁷ While the department has begun a new initiative to rename its Medicaid program Health First Colorado, parents still recognized and used the term "Medicaid" to refer to the program.

“ [I] would like a provider that works for my son, not for Medicaid. Therapy is a good investment for his future . . . it is hard to find a provider that will work for this low pay rate.”

Summary and Recommendations

Under EPSDT, the behavioral therapies program appears to be implemented as planned. It has expanded services so that more children—including those with non-autism diagnoses and children of all ages—can receive services. It is too early to provide a reliable description of the length and cost of these services.

Parents are generally satisfied with the services their children are receiving; some do have suggestions for improvement, as described above. These suggestions largely focused on better access to information (either faster personal response or improved website information) or on addressing the issue of provider turnover. The later suggestion, in particular, may be difficult for the Department to achieve, but still presents an opportunity for program improvement.

While parent satisfaction of services is important, as is their assessment of their child’s progress, an objective assessment of child progress cannot be made using the current PAR data. For future evaluation efforts, creating some standardized/consistent assessment of progress—either by mandating a set of pre/post assessment tools or through specific review questions—would help to enhance this aspect of the program.

Appendix A: Behavioral Therapies Evaluation Statute

(1) As provided in subsection (2) of this section, the state department shall submit written program evaluations to the health and environment committee of the house of representatives, or any successor committee, and to the health and human services committee of the senate, or any successor committee, concerning home- and community-based services provided to children with autism pursuant to this part 8. The state department shall determine the appropriate process and procedures for conducting the evaluation, including procedures to protect a program participant's individually identifying information.

(2)(a) On or before June 1, 2013, the state department's evaluation shall include, at a minimum, information concerning:

(I) The number of eligible children receiving services or who have received services under the waiver program;

(II) The average and median age of eligible children when they begin receiving services and the average length of time that children receive services; and

(III) The average cost of services provided to an eligible child.

(b) On or before June 1, 2014, the state department's evaluation shall include, at a minimum, information concerning the design and implementation of the ongoing evaluation process pursuant to section 25.5-6-804(8).

(c)(I) On or before June 1, 2015, and every June 1 thereafter, the state department's evaluation shall include an evaluation of eligible children's care plans and evaluations conducted at the beginning and ending of services, as well as ongoing evaluations during the course of services, to determine whether home- and community-based services provided pursuant to this part 8 are effective in meeting the goals of the waiver program, which goals include, but are not limited to:

(A) Serving the children most vulnerable to institutionalization without the services provided pursuant to this part 8;

(B) Keeping children out of institutions; and

(C) Demonstrating improvement in the child's expressive and receptive communication, adaptive skills, such as dressing and toileting, and a reduction in the severity of the child's maladaptive behavior, including self-injurious or aggressive behavior and tantrums, through the

use of standardized and norm-referenced assessments.

(II) The state department may contract with an independent program evaluator with expertise in reviewing treatment progress reports, individual evaluations, and medical records for purposes of conducting the evaluation pursuant to this paragraph (c) concerning the effectiveness of the home- and community-based services provided pursuant to this part 8.

Appendix B: Evaluation Methodology

The evaluation utilized a mixed-method design, including both quantitative and qualitative data analysis. However, because of the type of specific data that was available, the design relied heavily on qualitative methods (interviews, chart reviews) to examine program efficacy. Quantitative data was used to provide a descriptive analysis of children served, services provided, and program costs.

Data Sources

The report drew from three primary sources of data:

Prior Authorization Request (PAR) Data: Before a provider can begin treatment, a PAR must be submitted to the Department's third party utilization management vendor, eQHealth Solutions. Each PAR requesting services for the first time must include:

- a. A clinical evaluation, including a standardized assessment tool;
- b. A letter of medical necessity, including documented diagnosis and behaviors;
- c. A signed patient Plan of Care that outlines services requested.

A new PAR requesting a reauthorization of services must be submitted every six (6) months and must include:

- a. Documentation of meaningful, measurable, functional improvement changes, or documentation of significant interfering events, if applicable;
- b. A signed revised treatment plan with all of the criteria mentioned above as well as how behavioral changes have been used outside the treatment setting;
- c. A plan to address challenges encountered during the previously authorized services, if applicable.

PAR data was analyzed to compile a description of the number of unique clients for whom a service was authorized, including the types of services requested, diagnosis, and demographic characteristics of children for whom services were requested. In addition, PAR records were reviewed to determine the degree to which the data contained in the requests can be used to assess improvement in child behavioral outcomes (increases in communication and expressive and adaptive behaviors, and decreases in maladaptive behavior).

Health First Colorado (Colorado's Medicaid Program) Claims Data: This data set was analyzed to provide a description of children receiving services, the types of services received, and service costs per child.

Parent Interviews: The initial purpose for conducting parent interviews was to add parents' perspectives regarding their satisfaction with and the efficacy of services provided. For the

focus on these interviews, behavioral therapy program staff identified families whose children had either changed providers during the program year or stopped receiving services. The primary purpose of interviews was to determine level of satisfaction with services as well as reasons for changing providers or terminating services.

An initial sample of 17 children who appeared to have stopped services during the year was drawn from members who had PARs that ended in October of 2016 or earlier and for whom no new PAR had been requested. Because a new PAR is required to continue services, the absence of a subsequent PAR was used as an indicator that services had terminated.

An additional sample of 19 children who, based on claims data, appeared to have changed providers during the year, was also selected. Children (identified through unique Member ID) with claims paid to more than one provider during the year were included in this group.

The above samples yielded only eight (8) interviews. Therefore, the sample population was expanded to include all children receiving services (sampled randomly). A total of 20 interviews were conducted.

The number of eligible children receiving services or who have received services under the EPSDT program was defined as the unique count of “Member ID” numbers identified in the claims data between 11/1/2015 and 12/30/16.⁸ This number was contrasted with the number of children who had a PAR request for the same time period.

The average and median age of eligible children when they began receiving services was calculated based on the difference between the child’s date of birth and the start date for the first PAR record in the time period. Both the statistical mean (the mathematical average of all values) and the median (the middle value in an ordered list of all values) were reported.

A PAR record review was conducted to determine the degree to which pre-post data is available in the eQsuite system. The review targeted those records where a six-month follow-up PAR was available, meaning it only included records for clients served during the first half of 2016. This yielded a sample of 63 individual children with both an initial and later PAR. A random sample of 24 records was included in the preliminary review. The review focused on documentation available in follow-up PARs, including the feasibility for using that documentation to construct pre-posttest data tables for program evaluation purposes. The review also included a more general analysis of data availability for measuring the outcomes identified in statute (see bulleted list on Page 1 of this report).

⁸ The time frame extends to the two months prior to the start of the year to account for the timing of the PAR system coming online.

The average cost of services provided to an eligible child. This evaluation reports actual costs per member, independent of length of service eligibility. Because the current behavioral therapy implementation is so new, very few children have been identified as “completing” services. This report attempts to estimate an average monthly cost per member, based on all of the data available to date. As soon as more data is available, this estimate can be more precisely calculated using actual service dates.