Behavioral Supports Report: Q1/FY23

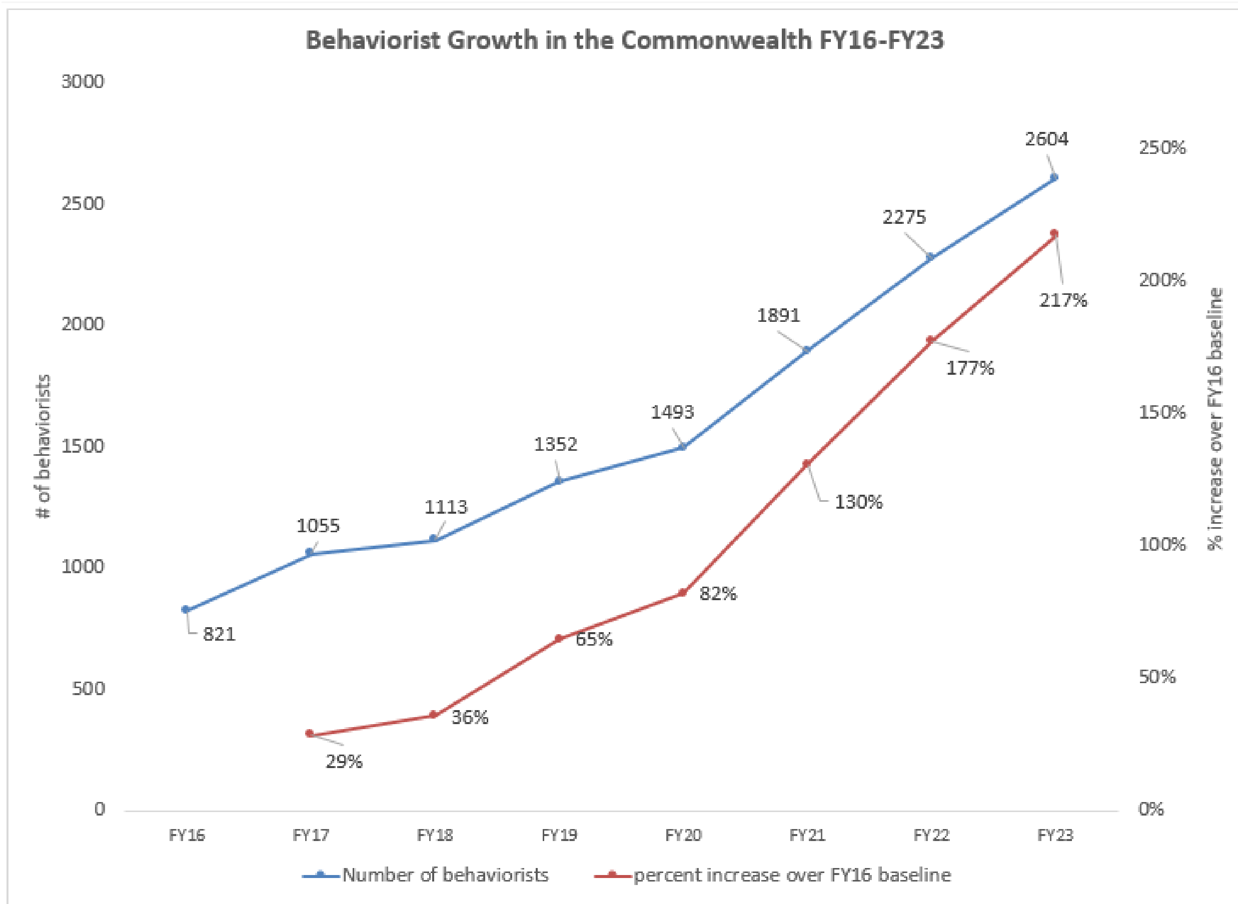
This report provides data and associated information on behavioral services provided in home and community-based settings through the Commonwealth of Virginia's Developmental Disability (DD) waivers, specifically services billed under therapeutic consultation behavioral services. This report also includes information on behavioral resources, training, technical assistance, and quality assurance being shared with and provided to the behaviorist community.

Therapeutic consultation behavioral services under DD waivers in Virginia (henceforth referred to as therapeutic consultation) can be considered "focused" behavior services. Focused behavioral interventions which are "problem focused" typically address specific behaviors for decrease such as aggression, self-injury, pica, property destruction, or other challenging behaviors. This type of behavioral intervention involves completion of a functional behavior assessment (FBA) and associated function-based behavior treatment planning. The behavior support plan, or BSP, incorporates the results of the FBA and will usually involve modifying specific aspects of the person's environment to reduce the likelihood that challenging behavior occurs, minimizing the provision of reinforcement for challenging behavior, and teaching new skills to replace the challenging behavior(s). Initial and ongoing training on BSP tactics for those implementing the BSP, as well as data collection and appropriate analysis and data-based decision-making, are critical to the success of such behavioral services delivered through therapeutic consultation.

Behaviorist provider growth

There are two primary provider types that provide therapeutic consultation in Virginia: Positive Behavior Support Facilitators (PBSF) and Board Certified Behavior Analysts®/Licensed Behavior Analysts (BCBA®/LBA). Also included in the data on the display on the following page are assistant level behavior analysts (BCaBA®/Licensed Assistant Behavior Analysts) as they also may bill this service under the supervision of Master's or Doctoral level Licensed Behavior Analysts. It is of great interest to the Department of Behavioral Health and Developmental Services (Department or DBHDS) that persons who are seeking therapeutic consultation are able to secure a behaviorist in a timely manner so that their needs can be met. In addition, a compliance indicator agreed to by the Commonwealth and the United States Department of Justice for implementation of the Settlement Agreement between the Commonwealth and the United States (Settlement Agreement) calls for growth in the number of behaviorists. It provides: *By June 2019, DBHDS will increase the number of Positive Behavior Support Facilitators and Licensed Behavior Analysts by 30% over the July 2015 baseline and reassess need by conducting a gap analysis and setting targets and dates to increase the number of consultants needed so that 86% of individuals whose Individualized Services Plan identify Therapeutic Consultation (behavioral support) service as a need are referred for the service (and a provider is identified) within 30 days that the need is identified.* (Settlement Agreement Section III.C.6.a.i-iii, filing reference 7.14.)

The graphical display below illustrates growth in the number of behaviorists in the Commonwealth of Virginia since Fiscal Year 2016, which speaks to the first component of this compliance indicator.



The blue line corresponds to the primary y-axis (# of behaviorists) while the orange line corresponds to the secondary y-axis (percent increase over FY16 baseline). A baseline of 821 behaviorists was established at the beginning of FY16 (July 2015); currently, the PBSF provider organization and the Virginia Department of Health Professions (which governs LBA and LABA licensure) report a combined total of 2,604 behaviorists, which represents a 217% increase over the July 2015 baseline. This is also an increase of 329 behaviorists since the time of the most recent report of this nature (FY22Q3). This exceeds the requirement of the compliance indicator for an increase in the number of PBSFs and LBAs by 30% over the July 2015 baseline. PBSFs account for 3% of the current number of behaviorists in Virginia; LBA/LABAs account for 97% of the current number of behaviorists in Virginia. Of note and as it relates to the specific language of “LBAs” in this indicator, there are currently 2,281 LBAs and 245 LABAs licensed in the Commonwealth. If only LBAs and PBSFs (of which there are 78) are included in behaviorist growth data, the percent increase calculates to an approximate 187% increase over the July 2015 baseline.

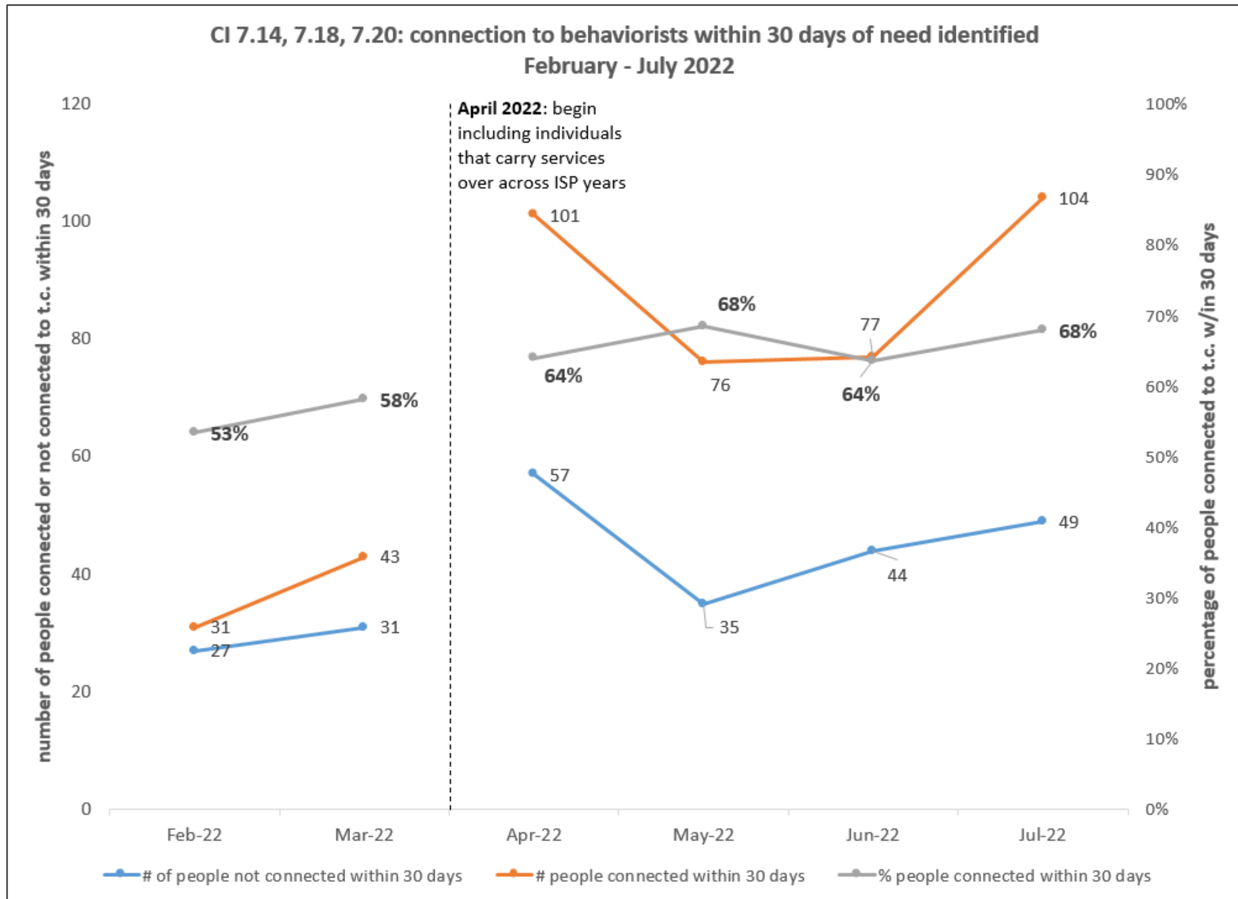
Connecting people in need to therapeutic behavioral consultation

Beginning in July 1, 2020, DBHDS launched tracking to determine the number of individuals identified during the ISP planning process as being in need of therapeutic consultation. Beginning in the FY22Q1 report, DBHDS began reviewing and displaying data on a monthly basis to indicate the number of people connected to this service within 30 days, the number not connected within 30 days, and the overall percentage connected within 30 days. At the time of this report, DBHDS has made further enhancements to data collection and analysis which will be described throughout this section of the report.

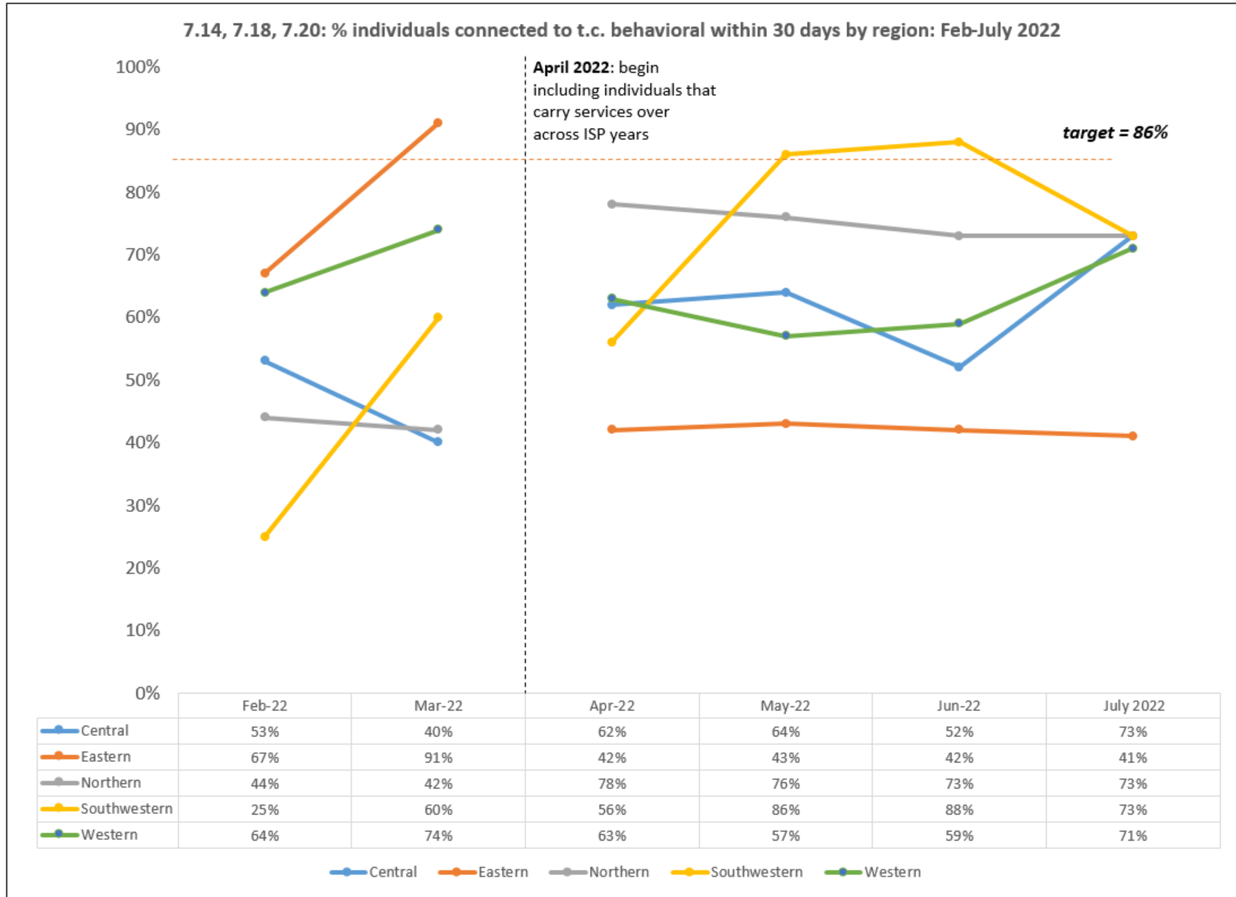
In prior reports, DBHDS was able to provide data on connecting individuals in need of this service to this service within the required 30 days, which was based on the individual and their ISP team indicating that a referral was needed based on their response to a query in the Virginia Waiver Management System (WaMS) at the time of the ISP meeting. In this report, DBHDS is also including data on individuals that were connected to a behaviorist prior to the date of their ISP meeting and remained connected after their ISP meeting (e.g. the individual had an updated service authorization for therapeutic behavioral consultation within 30 days of the ISP meeting). This data refinement began with the April 2022 data and is noted on the graphs that follow with a dashed vertical line and associated text box. The inclusion of people whose therapeutic behavioral services are "carrying over" from one ISP year to the next (along with people that did not have services and needed a referral) is a better reflection of the work of support coordinators to connect people with a need for this service to it within the required timeframe, and further provides a more complete picture about consumer need and provider capacity for this service.

Two graphical displays are provided on the subsequent two pages of this report. The first display (page 4) provides data from February 2022 through July 2022 on the number of individuals that needed this service and were connected to a behaviorist within 30 days (orange line), the number of individuals that needed the service and were not connected within 30 days (blue line), and the overall percentage of individuals connected to a behaviorist within 30 days (gray line). This first graph reflects performance across all regions of the state combined. Between February and July 2022, approximately 64% of people needing this service were connected within 30 days. These data reflect improvement from the previous data reported in the FY22Q3 report, when approximately 60% were connected within 30 days of the need being identified across the five month span of September 2021 through January 2022.

The graphs that follow are relevant to the second component of compliance indicator 7.14, as well as the following compliance indicator: *Within one year of the effective date of the permanent DD Waiver regulations, 86% of those identified as in need of the Therapeutic Consultation service (behavioral supports) are referred for the service (and a provider is identified) within 30 days.* (Settlement Agreement Section III.C.6.a.i-iii, filing reference 7.18.)



The graph on the following page (page 5) provides regionalized performance on the percentage of individuals connected within 30 days across the same period as the graph above. The red dashed horizontal line represents the target performance of 86%. Two of the regions have met the 86% benchmark at least once since the past report of this nature; the eastern region met this benchmark in March, while the southwestern region met this benchmark in May and June. The northern region consistently has the most people needing services, followed by the central region, which is a logical correlate to the population densities in these areas of the state. With the inclusion of people that "carry over" services from one ISP year to the next, the data trends for each region, with the exception of the southwestern region, have been relatively stable. DBHDS is additionally sharing such regionalized data at regional support coordinator roundtable meetings, along with information on how to locate behaviorists and access support from DBHDS.



The table below supplements the visual display above by providing raw data on the number of people connected and not connected to services within 30 days from February 2022 through July 2022.

Table 1: Raw data on people connected and not connected to therapeutic consultation within 30 days, 2/22-7/22

	Feb # NO connect	**Feb # YES connect**	**March # NO connect**	**March # YES connect**	**April # NO connect**	**April # YES connect**	**May # NO connect**	**May # YES connect**	**June # NO connect**	**June# YES connect**	**July # NO connect**	**July # YES connect**
Central	7	8	12	8	17	28	9	16	15	16	9	24
Eastern	3	6	1	10	11	8	8	6	7	5	13	9
Northern	9	7	11	8	10	36	9	28	11	29	14	38
S.Western	3	1	2	3	8	10	3	18	2	14	4	11
Western	5	9	5	14	11	19	6	8	9	13	9	22
TOTAL	**27**	**31**	**31**	**43**	**57**	**101**	**35**	**76**	**44**	**77**	**49**	**104**

Information on people connected within any timeframe

Also commencing in April 2022, DBHDS has improved data collection to identify if an individual was connected to a behaviorist beyond 30 days. The following table outlines connection to this service without the 30 day metric in place (e.g. # and percentage of people connected within any timeframe as of the date the data were reviewed).

Table 2: Data on people connected or not connected to therapeutic consultation regardless of timeframe

	Additional # of people connected beyond 30 days	Total # connected (any timeframe)	Total # not connected (any timeframe)	Total % connected (any timeframe)	Range and average of people connected beyond 30 days
April 2022	17	118	40	75%	33-104 days, average 68
May 2022	3	79	32	71%	44-81 days, average 59 days
June 2022	8	85	36	70%	34-105 days, average 71 days
July 2022	6	110	43	72%	34-84 days, average 59 days

Service utilization and people on DD waivers using ABA

As part of a curative action surrounding CI 29.21, and as a corollary some components of CI 7.20, DBHDS has worked with DMAS to obtain utilization data for people that have been connected to therapeutic consultation. As has been noted in past study reviews, therapeutic consultation consists of an array of different services (e.g., recreational therapy, occupational therapy, behavioral services, speech-language therapy) which are shared across two service identification codes. In September 2022, DBHDS updated WaMS to add a unique modifier to delineate behavioral services from all other services under these service codes. In future reporting, DBHDS believes it will be possible to report out specifically on service utilization for people that have an authorization specific to behavioral consultation given this change to WaMS, which will help speak more directly to part 1 of compliance indicator 7.20, which reads as follows: *DBHDS will implement a quality review and improvement process that tracks authorization for therapeutic consultation services provided by behavior consultants and assesses: (1) the number of children and adults with an identified need for Therapeutic Consultation (behavioral supports) in the ISP assessments as compared to the number of children and adults receiving the service*. Currently, DBHDS is able to provide information on utilization for all types of therapeutic consultation, and that information follows in the brief table on the following page.

Table 3: Service utilization for therapeutic consultation (note: includes all therapy modalities, not just behavioral)

	# of individuals with claims filed for any type of therapeutic consultation	# of individuals with no claims (e.g. service authorization was in place for any type of therapeutic consultation, but no claims were billed)
FY21	2025	423
FY22	2317	421

It should be noted that providers have one full year to bill Medicaid, so it is possible that some claims not yet filed from FY22 could still be made.

Additionally as part of this curative action, DBHDS obtained from DMAS on the number of active members enrolled in the DD waivers that also received ABA (formerly known as behavioral therapy) from January 2021 through late October 2022. There were 460 active members enrolled in the DD waivers that also received ABA services during that time period.

Root causes

There are most likely numerous factors which have contributed to not yet achieving the performance opportunity of 86% of individuals being referred for the service with a provider identified within 30 days. Previous versions of this report have outlined DBHDS' work to improve real-time data collection, and this report has noted the important inclusion of persons that carry services over from one ISP year to the next, of which were not previously included in these data. Additionally, previous reports have outlined other efforts with important stakeholders such as CSBs and professional provider organizations, along with continued work to increase provider enrollment for this service.

In the 20th Report the Court, the reviewers for crisis and behavioral services indicated that DBHDS had not completed a root cause analysis, nor a gap analysis with targets and dates to increase performance. In October 2021, the Performance Diagnostic Checklist-Human Services (Carr, Wilder, Majdalany, Mathisen, & Strain, 2013), or PDC-HS, was used to assess these related indicators and as is now being provided in this report to speak to the reviewers' request (with updated action results as of October 2022). The Performance Diagnostic Checklist (Austin, 2000) and the PDC-HS are organizational behavior management (OBM) assessment tools are used in business settings to assess the functional determinants of performance. An informant-based tool, the PDC (and PDC-HS) is broken down into four categories of questions, with the categories of the PDC-HS as follows: training; task clarification and prompting; resources, materials and processes; and performance consequences, effort, and competition. When the "function(s)" of performance deficits are identified, a function based intervention can be applied to improve performance and in turn help to reach business goals. An OBM approach to solving business problems focuses on obtaining organizational results (e.g. mission, business goals, desired outcomes) through examination of employee behavior(s) and adjustment of variables that contribute to poor (or desirable) performance. A variation of the PDC-HS was completed by a DBHDS Board Certified Behavior Analyst® with subject matter expertise in this

particular business problem who also has experience in the use of organizational behavior management assessment tools and associated solutions.

The performance of support coordinators (SC) as a group were the primary consideration for the conceptualization of applicable questions from the PDC-HS, as support coordinators hold the responsibility of "connecting" a person in need to this service, and DBHDS was conceptualized as the "supervisor" that could strive to adjust the overall environment for support coordinators via antecedent and consequence interventions. The results of the variation of the PDC-HS suggest the following to be potential maintaining variables that are contributing to this business opportunity, and it is noted to the reader that several of the possible contributing variables cross different performance categories (e.g. resources to obtain a behaviorist also bleeds into the response effort required on the part of a SC to find a behaviorist):

Training: As SC's play the role of connecting individuals in need to services, they need be aware that there are different guilds of behaviorists that are available to deliver the service, and they need to know how to access behaviorists in their regions. Previously, it may have been unclear if SC's were aware of the Settlement Agreement requirement for timely connection to services as outlined in the related compliance indicators or could describe the targets. It is also known that SC turnover is a factor that can impact the institutional knowledge base in a CSB.

- Update 10/2022: As of 7/1/21, Exhibit M of the Performance Contract between DBHDS and CSBs outlines requirements to complete required training in the Commonwealth's learning management system, which includes information about timely connectivity and where to find behaviorists. Exhibit M also outlines requirements for timely referrals and assisting individuals with getting onto multiple waitlists if services are not yet immediately available. The expectation is reviewed by DBHDS staff at provider and support coordinator roundtables each quarter. WaMS auto-populates a message to connect the person to services within 30 days if the need for a referral is indicated at the ISP meeting. At this time, adequate instruction on expectations (antecedents) have been and will continue to be provided to support coordinator through multiple avenues.

Task Clarification & Prompting: Similar to training, SC's (or other critical CSB personnel) may not have been previously aware of the desired performance targets (compliance indicators) as well as the associated scrutiny on these related compliance indicators.

- Update 10/2022: the updates for the "training" section above are also applicable to the "task clarification and prompting" section. Anecdotally, during dialogue surrounding data sharing, several CSB staff have shared that internal lists of behaviorists that are providing services in their catchment area are used by SCs, which may be considered a type of job aid for this task (with that noted, this also may be possibly limiting the scope of providers that are accessed based on the frequency of updates to these internal lists used by CSBs).

Resources, Materials, & Processes: At an individual CSB level and for each CSB, it is not possible for DBHDS to determine every unique process that is working or is disconnected that may be impacting SC performance. It is also not possible to determine the true value (number) of individual behaviorists that are delivering this service, primarily because the service authorization and utilization data the DBHDS has available ties into the tax identifier or

overarching NPI number for a provider group or organization, as opposed to each individual behaviorist delivering services under that provider's operational umbrella. With that noted, DBHDS has data available on the overall number of provider group organizations that are delivering this service, and can link that information into the CSB that each individual receiving services hails from. This can be paired with the regionalized data presented above in this report to give an estimation of regions where provider growth needs the most improvement (see more information in "gap analysis" section that follows the PDC-HS results). Additionally, as a part of discussions with CSBs in data sharing related to these compliance indicators, DBHDS has learned that many CSBs keep and use their own internal roster of behaviorists as opposed to accessing available search engines/provider directories that may be more updated in real time. In discussions with some current providers that are enrolled to provide this service, DBHDS has learned that some providers that are enrolled are not receiving referrals and/or are having challenges connecting with CSBs to advertise their ability to deliver the service. It is suspected, based on anecdotal information, that some support coordinators refer only to particular provider groups or guilds of behaviorists over another. DBHDS has also learned that some new providers have faced challenges with enrollment to become a new provider with DMAS.

- Update 10/2022: A key resource/material is the availability of behaviorists and support coordinator knowledge to be able to access them. Over the past several years, DBHDS has worked actively to advertise this service via an array of different modalities and assists interested providers with provider enrollment by connecting them with a DBHDS Community Resource Consultant, as well as DMAS staff if needed. DMAS has been an integral partner in this effort to shepherd new providers through the enrollment process. Since FY17, there has been an approximate 37.5% increase in the number of providers enrolled in this service, from 48 providers in FY17 to 66 providers in FY22. Since the last report of this nature, DBHDS added this service into the "jump start" funding program as a means to attract and assist more behaviorists in enrolling into this service. DBHDS continues to introduce new or expanding behavioral providers to CSBs via email introduction whenever the opportunity presents. DMAS and DBHDS have worked together to substantially increase rates for this service, with increases between 22 and 31% above the previous rate increase (rate increase percentages vary across provider type and location of provider's operations within the state). DBHDS has a survey set up to launch in October 2022 with the Virginia Association for Behavior Analysis (VABA) to attract more behaviorists to this service. DBHDS is providing a training in partnership with VABA in October 2022 about navigating this service from an administrative standpoint which is intended for aspiring and current therapeutic behavioral consultants alike. Lastly, while it is important to continue to work to increase the number of behaviorists enrolling in this service, SCs may benefit from one singular, easy-access resource that lists all behaviorists that provide this service (this is described more in the following section, which relates to response effort to complete this task, or in other words, how challenging it is or how much time and effort it takes a SC currently to search for behaviorists and then facilitate a referral).

Performance Consequences, Effort, & Competition: While it is not possible to ascertain the level of supervision that each individual SC receives at each CSB as it relates to connecting

individuals in need to behaviorists in a timely manner, or even if supervision (performance consequences) are a contributing variable for each SC, it is well established that many support coordinators across the Commonwealth have large caseloads with numerous competing priorities beyond connecting people in need to this particular service.

- Update 10/2022: From the standpoint of feedback provided by DBHDS to the CSB leadership, DBHDS has delivered feedback in the form of providing lists of individuals to each CSB (after data pulls) that are not connected to behaviorists, along with links to access behaviorists. Prior to DBHDS setting up a data system where these data could be reviewed monthly, the CSBs were not receiving "real time" data on their performance in connecting individuals to behaviorists. Sharing data is intended to be a means to foster assistance and resource sharing with CSBs. In acknowledgment of the competing priorities for SC's, as well as the current lack of one centralized repository to search for behaviorists, DBHDS has crafted a survey that was sent to all behavioral providers for this service in September 2022; the results of this survey will be used to minimally create a provider directory, or possibly a search engine, for this service that will be housed on the DBHDS website and can be searched regionally, based on telehealth/face to face modalities, based on provider pedigree, languages spoken, etc. DBHDS expects this to be completed and then shared with providers and CSBs by November 2022, and in the future the survey will be updated several times per year to account for new behaviorists to this service. These survey results will most likely land on a new webpage specific to behavioral services that DBHDS created in FY23Q1 and is available now. Lastly, starting in November 2022, DBHDS Community Resource Consultants will begin contacting CSBs directly to provide assistance for any person that data indicates did not have a service authorization at the time of data review for follow up assistance.

Gap analysis and improvement targets:

As noted above, the data which DBHDS has available on providers do not drill down to the individual behaviorist level but instead are tied into the overarching tax identifier or NPI number for the behavioral agency. While there were 66 providers for this service at the time of the most recent data review, one provider could consist of just one behaviorist, while another provider could have ten behaviorists on staff that deliver this service. The following is offered based on data trends since April 2022 for each region, along with a targeted percentage for growth and number of behavioral providers to increase in each region.

The table below displays the regionalized percentage of individuals not connected out of the larger whole of those not connected, region by region, from April through July 2022.

Table 4: Regionalized percentages of people not connected w/in 30 days out of larger whole of those not connected w/in 30 days

	April % NO connect	May % NO connect	June % NO connect	July % NO connect
Central	30%	26%	34%	18%
Eastern	19%	23%	16%	27%
Northern	18%	26%	25%	29%
Southwestern	14%	9%	5%	8%
Western	19%	17%	20%	18%

Over the past four quarters, between 67% and 75% of people not connected within 30 days came from the central, eastern, and northern regions of the state. As can be observed in the graph on page 5, the northern region has the highest and most stable percentage of people connected within 30 days to this service, while the southwestern region has more variability but achieved the 86% of people connected within 30 days in May and June 2022. Since April 2022, the eastern region has had the lowest percentage of people connected to this service within 30 days (see graph on page 5) and also a range of between 16% and 27% for the entire state for those not connected within 30 days. The eastern region also has the lowest number of providers identified in this state for this service (based on data from May 2022, the number of behavioral providers for each region are as follows: Western, 32; Northern, 35, Southwestern, 22; Central, 31, and Eastern, 21). While all regions may stand to either grow the number of providers or improve awareness to CSBs of enrolled providers such that they receive increased referrals, this opportunity may be most substantial in the eastern region.

As DBHDS does not have data available to determine the exact number of individual behaviorists delivering this service, it is challenging to forecast the exact number of providers that would be needed to deliver this service in each region. What follows is an estimation that may help address current deficits. The Council of Autism Service Providers (CASP) *ABA Treatment of ASD Practice Guidelines for Healthcare Funders and Managers* (2020) offers some insight into possible caseload sizes for behavior analysts in focused versus comprehensive behavior analysis treatment models, though these models do assume direct service delivery by Registered Behavior Technicians® (RBT®, which is not a component of the therapeutic behavioral consultation service). The CASP projections outline a recommended caseload of 10-15 individuals when there is no supporting BCaBA® for the BCBA® or BCBA-D® (again, this model assumes that a RBT® is delivering some level of direct services). Based on the CASP caseload size, it is hypothesized that one behaviorist may be able to support between 5-10 people through this service (the CASP model also notes that focused treatment is complex and requires smaller caseloads). Based on data for people not connected in each month from April through July, the following is offered, with a conservative estimate of 5 individuals per behaviorist on a caseload. To continue to inform this estimation of sustainable caseloads for therapeutic consultation in Virginia, DBHDS will begin inquiring as to typical caseloads during BSPARI feedback review sessions with behaviorists that are delivering therapeutic consultation.

Table 5: Estimation of individual behaviorists needed to address gaps per region with target date

	Total # not connected April – July 2022	Mean not connected per month	Possible number of additional behaviorists needed to address need of mean not connected per month (based on 5 persons to 1 behaviorist)	Target date for behaviorist growth in region
Central	50	12.5	3	June 2023
Eastern	39	9.75	2	June 2023
Northern	44	11	3	June 2023
Southwestern	17	4.25	1	June 2023
Western	35	8.75	2	June 2023

As noted above, DBHDS has worked to improve data collection and analysis while also addressing the number of providers for this service over the past several fiscal years and will continue with the current efforts that have been underway. It is also possible that the advent of one centralized directory for all behaviorists delivering services will help improve connectivity. To the greatest extent possible, DBHDS will target behaviorist growth in all regions, while focusing in particular on the northern, eastern, and central regions as they contain the bulk of people not connected over the past 4 months.

Expectations for behavioral programming and quality assurance

On 3/31/2021, the permanent regulations for therapeutic consultation behavioral services went into effect (note: DBHDS provided until 7/1/2021 for providers to come into full accordance with the expectations of the regulations). These regulations outline basic expectations for the content areas of behavior support plans and associated expectations for the service (Settlement Agreement Section III.C.6.a.i-iii, filing reference 7.17: *The permanent DD waiver regulations will include expectations for behavioral programming and the structure of behavioral plans*). DBHDS has also provided associated *Practice Guidelines for Behavior Support Plans* to the community, behaviorists, and CSBs, which relate directly to a compliance indicator for Section III.C.6.a.i-iii (filing reference 7.15) that provides as follows: *The Commonwealth will provide practice guidelines for behavior consultants on the minimum elements that constitute an adequately designed behavioral program, the use of positive behavior support practices, trauma informed care, and person-centered practices.* As noted in past reports, DBHDS launched a training in the Commonwealth of Virginia's Learning Management System for support coordinators that reviews the *Practice Guidelines* and also outlines the components of behavior support planning tied into regulations such that support coordinators can observe to determine if key hallmarks are being implemented for individuals that receive this service (Settlement Agreement Section III.C.6.a.i-iii, filing reference 7.16: *The Commonwealth will provide the practice guidelines and a training program for case managers regarding the minimum elements that constitute an adequately designed behavioral program and what can be observed to determine whether the plan is appropriately implemented*. This compliance indicator was found to be "met" in the 20th review period, when a total of 755 CSB staff members had taken this training through February 2022. Through late September 2022, 901 CSB staff members have

completed this training. The increase in trainees is likely a reflection of additional hires and/or turnover within CSBs/BHA across the Commonwealth.

DBHDS has created a scoring tool that determines the adherence of behavior support plans to the *Practice Guidelines for Behavior Support Plans*. This Behavior Support Plan Adherence Review Instrument (BSPARI) utilizes a weighted scoring system that provides a score for each behavior support plan content area and its associated minimum elements as outlined in the *Practice Guidelines*. The BSPARI (and its associated Scoring Instructions Guide and Feedback Process) has been reviewed and approved by the DOJ expert reviewer for behavioral services and received input from members of Virginia's behavioral community with extensive experience in delivering therapeutic consultation behavioral services. The BSPARI was also reviewed by a researcher with numerous peer-reviewed publications in behavior analysis with experience creating behavior analysis assessment tools. Since the initial approval of the BSPARI and related Scoring Instructions Guide and Feedback Process by the DOJ reviewer for behavioral services, DBHDS made a few key updates to the tool, which are as follows:

> 1) The BSPARI includes automated scoring using visual basic coding, which improves the reliability of the tool, as it is not possible for a reviewer to make an error in scoring transfer (e.g. the reviewer does not have to reference the Scoring Instructions Guide document as the BSPARI has automated scoring embedded). Required behavior plan element sections are automatically scored and color-coded in green if all minimum elements required for the highest point valuation are present, and coded in red if any elements are absent and the highest point valuation is not achieved.
>
> 2) The BSPARI has a resource tab with references to the regulations, *DBHDS/DMAS Practice Guidelines for Behavior Support Plans*, and most importantly for quality improvement, to the professional literature (e.g. peer reviewed publications, seminal books/chapters, and related web resources). The resource tab has embedded coding that tie into the minimum elements that are reviewed via the BSPARI, such that when a reviewer marks any area as absent, the resource tab will highlight that element in red and provide relevant resources, including hyperlinks to related literature available on the web.

DBHDS is using the BSPARI to review behavior support plans (and associated documentation) authored under the therapeutic consultation service, and is additionally reviewing support coordinator assessment on the appropriate implementation of behavioral programming. This corresponds to parts 4 and 5 of the following compliance indicator: *DBHDS will implement a quality review and improvement process that tracks authorization for therapeutic consultation services provided by behavior consultants and assesses: (1) the number of children and adults with an identified need for Therapeutic Consultation (behavioral supports) in the ISP assessments as compared to the number of children and adults receiving the service; (2) from among known hospitalized children and adults, the number who have not received services to determine whether more of these individuals could have been diverted if the appropriate community resources, including sufficient CTHs were available; (3) for those who received appropriate behavioral services and are also connected to REACH, determine the reason for hospitalization despite the services; (4) whether behavioral services are adhering to the practice*

guidelines issued by DBHDS; and (5) whether Case Managers are assessing whether behavioral programming is appropriately implemented (Settlement Agreement Section III.C.6.a.i-iii, filing reference 7.20).

As noted above, the BSPARI uses a weighted scoring system, with 40 total weighted points possible. Behavioral programming is determined to be adhering to the *Practice Guidelines*, and overall adequate, if 34 points are obtained on the BSPARI (which equates to a score of 85%). Adequacy of behavioral programming also addresses a related compliance indicator (in addition to 7.20, noted above), which reads as follows: *At least 86% of people with identified behavioral support needs are provided adequate and appropriately delivered behavioral support services* (Settlement Agreement Section V.B, filing reference 29.21). Reviews are being conducted by DBHDS staff that are Licensed and Board Certified Behavior Analysts® with extensive experience in the assessment and treatment of challenging behavior and positive behavior supports across a variety of settings. At the time of this report, 250 behavior plans and related programming have been reviewed by DBHDS since commencement of this quality review process; 100 sets of behavior plans were reported out in the FY22Q3 report, and an additional 150 sets of behavior plans are outlined in this report.

Feedback sessions are provided to behaviorists by DBHDS reviewers based on the results of the BSPARI. Prior to the reviews, the behaviorist is provided with copies of all BSPARIs that will be reviewed via an encrypted email. These sessions occur via a secure web conferencing system and include review of the BSPARI, review of resources, and an opportunity for the behaviorist to ask questions about the BSPARI results and resources. DBHDS also seeks out feedback that behaviorists have about the tool, the service authorization process, or connection to individuals in need of services during these meetings. At the time of this review, DBHDS is not requiring a feedback session if performance for a behaviorist on all BSPARIs reviewed are at or above 34 out of 40 points; instead the BSPARIs are sent in secure email with trend analysis for any improvement areas. As reviews progress over time, it would be expected that minimum elements that are absent are addressed and improved upon by behaviorists, and that subsequent behavioral programming would have improved scores in future reviews using the BSPARI. The first table that follows (*Table 6*) provides scores information on BSPARI reviews conducted as reported out in the FY22Q3 Behavioral Supports Report. The second table (*Table 7*) provides the same type of information, but reflects data on BSPARI reviews from the time of the last report (FY22Q3, approximately mid-April 2022), through the end of FY23Q1, approximately late September 2022.

Table 6: BSPARI reviews conducted late FY22Q1 through FY22Q3

# of BSPARIs reviewed	Mean points score and mean % on BSPARIs	Median points score on BSPARI	Score ranges, mode	BSPARIs scoring at least 34 out of 40 points (85%)	BSPARIs scoring at least 30 out of 40 points (75%)	BSPARIs reviewed with feedback provided to behaviorist
100	25.9 points, ~65%	28 points, ~70%	Range of scores: 34 (4 to 38) Mode = 31, 32	13%	40%	53%

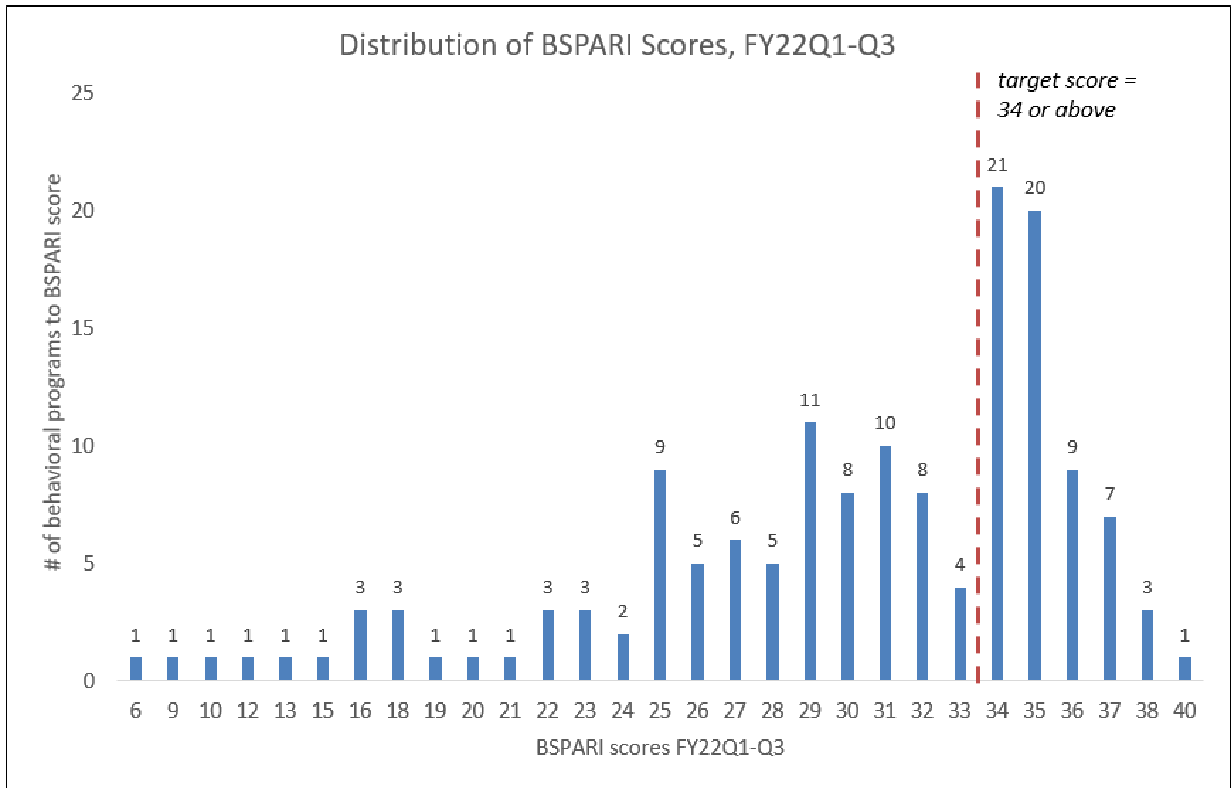
Table 7: BSPARI reviews conducted mid FY22Q3 through late FY23Q1

# of BSPARIs reviewed	Mean points score and mean % on BSPARIs	Median points score on BSPARI	Score ranges, mode	BSPARIs scoring at least 34 out of 40 points (85%)	BSPARIs scoring at least 30 out of 40 points (75%)	BSPARIs reviewed with feedback provided to behaviorist
150	29.8 points, ~74%	31 points, ~78%	Range of scores: 34 (6 to 40) Mode = 34	61 out of 150, ~41%	91 out of 150, ~61%	68%

Note: At the time of this report, out of the 250 behavioral programs reviewed since inception of the BSPARI and the related feedback process, approximately 76% have also received a feedback session with the behaviorist (191 out of 250). A small percentage of behavior plans (3%) were crafted by providers that left waiver services prior to a review occurring. Reviews continue to be scheduled on an ongoing basis, with numerous already scheduled with behaviorists for October 2022.

The data on reviews suggest significant performance improvement on both the mean and median weighted points score, as well as the percentage of BSPARIs that are at an overall adequate adherence quality level to the *Practice Guidelines*. The mean points score for reviews conducted from mid FY22Q3 through FY23Q1 increased nearly 4 points, while the median increased by 3 points and remains higher than the mean, indicating that the bulk of the reviews had scores above the mean. Perhaps most notably, the percentage of BSPARIs that reflect behavioral programming in adherence with the *Practice Guidelines* increased from 13% during the first report of this nature, to 41% of programs reviewed from mid FY22Q3 through late FY23Q1, reflecting an increase of 28%.

The graphical display that follows provides a display of the score distribution of the 150 BSPARIs reviewed from mid FY22Q3 through late FY23Q1. The vertical (y) axis displays the number of BSPARIs reviewed that had a particular score, while the x (horizontal) axis displays each of the scores yielded across the 150 reviews. Each blue bar has a number above it, which corresponds to the y-axis. For example, there was one BSPARI reviewed that had a score of 6, there were five BSPARIs reviewed that had a score of 26, and there was one BSPARI reviewed that had a score of 40. The dashed red line provides an indicator of the target score of 34 points or above; any data to the right of the dashed line is at or above that target.



It is hypothesized that some combination of the enhanced expectations for behavioral services via the regulations and *Practice Guidelines,* ongoing training opportunities given to the public by DBHDS and contracted Board Certified Behavior Analysts®, information and resource sharing, and the individualized feedback session to review BSPARI results with behaviorists are contributing to improved performance. As it relates to feedback sessions, several behaviorists have expressed that they are using the tool to "self-monitor" and improve their behavioral programming, as well as to complete peer reviews with other behaviorists in their agency. During feedback sessions, DBHDS reviewers emphasize the resources tab to behaviorists to highlight areas to access the professional literature or other helpful information. DBHDS will continue to complete reviews of behavioral programming (paired with feedback sessions to behaviorists) using the BSPARI in the coming quarters. DBHDS believes that salient properties of the BSPARI (clear indications on presence/absence of required elements, color coding, resources features), paired with the quality feedback sessions that have been and will continue to be provided to behaviorists will continue to improve BSPARI scores over time and assist in achieving these related compliance indicators.

Support coordinator assessment of behavioral programming

The BSPARI also has an “administrative” component that is used by DBHDS reviewers to evaluate support coordinator’s assessment of behavioral programming (part 5 of compliance indicator 7.20) via the On-Site Visit Tool, as well as the presence or absence of required documents based on the authorization status of behavioral programming, which corresponds to the following: *86% of individuals authorized for Therapeutic Consultation Services (behavioral supports) receive, in accordance with the time frames set forth in the DD Waiver Regulations, A) a functional behavior assessment; B) a plan for supports; C) training of family members and providers providing care to the individual in implementing the plan for supports; and D) monitoring of the plan for supports that includes data review and plan revision as necessary until the Personal Support Team determines that the Therapeutic Consultation Service is no longer needed* (Settlement Agreement Section III.C.6.a.i-iii, filing reference 7.19). To address part 5 of CI 7.20, DBHDS reviewed the On-Site Visit Tool (OSVT) that corresponded to the timeframe of the available behavioral programming reviewed to make a determination as to if the OSVT was scored correctly or incorrectly by the support coordinator. The OSVT has a question that is particular to behavioral programming, which reads as follows: “Are behavioral services available and occurring as needed, and as authorized?”. The possible responses that a support coordinator can choose from are “yes”, “no”, or “n/a”. For anyone that is receiving behavioral services, “n/a” should never be selected as a response by the support coordinator; the only possible correct responses would be “yes” or “no” for someone receiving this service. If a response of “yes” is selected, the support coordinator is affirming that all of the following are in place (though based on the rules of the OSVT, the SC does not need to respond specifically to these 5 questions):

- An onsite assessment was completed (e.g. FBA)
- A behavior plan designed to decrease negative behaviors and increase functional replacement behaviors?
- Caregivers are trained to implement the behavior plan
- Presence of data collection/reviews to improve supports
- Changes made to the behavior plan as needed

When a “yes” response is selected, DBHDS reviewers are cross reviewing all documents from the time that the OSVT was completed to determine if a “yes” assessment is accurate. If any of the above are not present and the OSVT was scored as a “yes”, DBHDS will determine that the OSVT was not scored correctly, and that the support coordinator is not accurately assessing if behavioral programming is being implemented correctly (part 5 of CI 7.20). Conversely, if a support coordinator responds with “no” to the question of, “Are behavioral services available and occurring as needed, and as authorized?” the support coordinator is required to provide “yes” or “no” responses to the 5 questions. These responses are reviewed by DBHDS reviewers to determine if the support coordinator has accurately assessed if behavioral programming is being implemented incorrectly (e.g. absent any of the 5 components in the bulleted questions above). Thus, DBHDS reviewers are determining if the support coordinator is overall accurate in their assessment of behavioral programming using the OSVT via their response of “yes”, “no”, or “n/a” to this question on the OSVT. Out of the 150 behavioral programming reviews that occurred from mid FY22Q3 through late FY23Q1, 61% of OSVTs were scored correctly (i.e.

based on documentation review, the support coordinator accurately assessed if behavioral programming is being implemented correctly or not), and 39% were either scored incorrectly or were not provided to DBHDS for this review (i.e. the support coordinator erred in their assessment of behavioral programming being implemented correctly or incorrectly, or the OSVT was not available in WaMS for review). DBHDS has updated formatting of the questions on the OSVT to address the curative action related to CI 29.21. This was reviewed with CSBs in November 2022, will be piloted informally in December 2022 to obtain additional feedback from CSBs, and will be required for all CSBs in January 2023.

To assess compliance with CI 7.19, DBHDS is using the randomized sample of behavior support plans/programming that are conducted as part of quality review on adherence to the *Practice Guidelines* via the BSPARI. Specifically, DBHDS reviewers are analyzing the dates of behavior plans and associated documentation in comparison to the authorization type and expectations of associated timelines in the overarching regulations for this service to determine if required components are in place within the required timeframes. For this indicator, DBHDS is focusing on "annual" authorization types, as the four key overarching deliverables expected to occur correspond to this type of authorization only; in summary, those deliverables are: 1) functional behavior assessment, 2) plan for support (behavior support plan), 3) training for supporters and 4) monitoring of the plan via data collection and plan revision as necessary. The behavior support plan and FBA also need to be completed within 180 days of the initial authorization. During this review period, there were 99 behavior programs that were in an annual authorization status, 50 behavior programs that were in a secondary authorization status, and 1 behavior program that was available while the authorization was still in an initial status. Of the 99 behavior programs in an annual status, 88 of these had authorizations that were after 7/1/2021 (which is the date the updated regulations took effect in consideration of the "grace period" that has been described in previous reports). Of those 88 annual authorizations penned on or after 7/1/2021 for which all four deliverables from CI 7.19 are required, 76 out of the 88 contained all four requirements (86%). For the entirety of the 150 plans reviewed (including the one plan reviewed that was still in an initial authorization phase), 97% (146 out of 150) had a FBA and a BSP completed prior to or within 180 days after the authorization.

Behavioral Services intersections with Crisis Services

To address compliance with parts 2 and 3 of CI 7.20, DBHDS is providing the following information for FY22Q3 and FY22Q4:

- *(2) from among known hospitalized children and adults, the number who have not received services to determine whether more of these individuals could have been diverted if the appropriate community resources, including sufficient CTHs were available*
    - In FY22Q3, there were 142 unduplicated individuals that accepted REACH (known) and did not have therapeutic consultation services at the time of the hospitalization. REACH data from the same time period indicated that 14 hospitalizations could have been diverted if a CTH bed were available during the same time period; however, for 11 of these hospitalizations, the person or their

decision maker refused a CTH, only 3 possible diversions that did not occur were due to unavailability of a CTH bed.
    - In FY22Q4, there were 137 unduplicated individuals that accepted REACH (known) and did not have therapeutic consultation services at the time of the hospitalization. REACH data from the same time period indicated that 6 hospitalizations could have been diverted if a CTH bed were available during the same time period; however, for 5 of these hospitalizations, the person or their decision maker refused a CTH, only 1 possible diversion that did not occur was due to unavailability of a CTH bed.
- *(3) for those who received appropriate behavioral services and are also connected to REACH, determine the reason for hospitalization despite the services*
    - In FY22Q3, there were 19 people that had therapeutic consultation service (e.g. a service authorization present) at the time of their hospitalization that also had accepted REACH services at the time of their hospitalization. In FY22Q4, this number was 21 people. The indicator speaks to determining the reason for hospitalization; DBHDS has provided this information in a separate addendum document to the DOJ consultants for review to ensure confidentiality for each individual.

Behavioral Resources

A compliance indicator for Settlement Agreement Section V.H.1 (filing reference 49.5) provides as follows: *DBHDS makes available for nurses and behavioral interventionists training, online resources, educational newsletters, electronic updates, regional meetings, and technical support that increases their understanding of best practices for people with developmental disabilities, common DD-specific health and behavioral issues and methods to adapt support to address those issues, and the requirements of developmental disability services in Virginia, including development and implementation of individualized service plans.*

To address the indicator specific to behavioral services/interventionists, DBHDS has undertaken the following measures from FY22Q3 through FY23Q1:

- Publication of five educational articles on behavioral services (included on the DBHDS website and in the Office of Integrated Health's monthly newsletter) on the topics listed below. Each article contains references to the professional literature and/or website resources.
    - April 2022: Telehealth in behavioral services
    - May 2022: Applications of ABA beyond Autism Spectrum Disorders
    - June 2022: Resource directories for behaviorists
    - July 2022: Organizational behavior management
    - August 2022: BSPARI Trends
    - September 2022: Writing Behavioral Objectives
- DBHDS launched a new section of the DBHDS Developmental Services website entitled "Behavioral Services". The above-noted articles, information for the community on how to locate a behaviorist, and many DBHDS sponsored trainings on behavioral services

(noted in the next section) are included on this webpage. Additionally, a professional resources section for behaviorists is present, which includes (but is not limited to) links to several open-access peer reviewed journals in behavioral science, state level and national organizations in applied behavior analysis and positive behavior support, and related information on evidence-based assessments and tactics in behavior analysis.

- DBHDS provided a training on "BSPARI Trends" on August 19, 2022, which reviewed trends from quality reviews conducted thus far on over 200 sets of individual behavior programs. There were approximately 75 participants in this training (attendance numbers fluctuated during the presentation). The trend areas for improvement were reported out in the FY22Q3 Behavioral Supports Report and are as follows:
    - Operational definitions, measurement, and associated graphical display and analysis of replacement behaviors; ensuring that replacement behaviors have associated tactics to promote acquisition
    - Obtaining appropriate signatures on documentation (or attestation of verbal consent provided if electronic signature is not available to the behaviorist)
    - Using a behavioral skills training approach in training plans, ensuring that training record is uploaded to WaMS
    - Inclusion of risk/benefit statement(s) in behavior support plan
    - Measurable benchmarks related to behavior(s) being targeted in the plan (this is an overarching ISP requirement)
    - Use of FBA methods beyond indirect assessment

The training content provided to practitioners in the "BSPARI Trends" training directly relates to these observed trends for improvement, as well as a few others (e.g. several person centered information areas) while also highlighting the areas that were generally in adherence to the *Practice Guidelines*. A link to a recording of this training is available here on the DBHDS YouTube channel as follows: BSPARI Trends, 8/2022

Also of note, many of the article topics in the "ABA Snippets" from the OIH Newsletter were selected directly based upon observed trends in reviews of behavior plans (i.e. Brief thoughts on frequency & rate, Functional communication training and replacement behaviors, A plan for training in behavior plans, BSPARI Trends).

Summary

DBHDS has made numerous improvements related to the tracking on the need for therapeutic consultation services for individuals on the Family and Individual Supports and Community Living waivers. Critically, DBHDS is able to report, and will be able to do so in a more automated manner in future reports, on the number of people that "carry over" this service from one ISP year to another. This information is paramount in understanding the number of people that have an authorization for this service and in planning for improvements on connecting those that do not. Over the past 6 months, improvement has been seen in the percentage of individuals with a need for this service being connected to a behaviorist within 30 days of the need being

identified at the ISP meeting. DBHDS has noted several initiatives that it believes will continue to bolster timely connectivity to this service. DBHDS has continued information dissemination and technical assistance related to best practice in the delivery of behavioral services specific to "problem focused" behavioral services both via ongoing written communication and resources provided to the public, as well as offering both introductory and advanced training on behavior analysis topics from venerable experts in the field. These resources are now available online for free access to the public. Permanent waiver regulations that outline expectations for behavior planning for this service were established in 2021, along with an associated *Practice Guidelines for Behavior Support Plans* that expand upon the content of the regulations to provide specific guidance on expectations to behaviorists, along with helpful resources and literature. DBHDS has created an automated instrument and scoring system (BSPARI) to determine adherence to these *Practice Guidelines* and data are showing demonstrable improvement in the overall adherence and quality of the most recent 150 behavioral programs in comparison to the "baseline" review conducted with the first set of 100 behavior programs reported on in the FY22Q3 report. Quality review sessions using the BSPARI have occurred for over three-quarters of the entirety of behavioral programming reviewed thus far. DBHDS is not aware of any other state that has created a quality assurance tool for behaviorally analytic services and is using BCBAs with extensive practical experience to provide pinpointed feedback on adherence to quality framework guidelines. A training on this service is required for support coordinators across the Commonwealth, such that these CSB staff are aware of these quality expectation changes and are provided with associated resources to help improve timely connectivity to behaviorists. DBHDS believes that significant progress was made in the most recent semi-annual review period, while acknowledging that work remains toward achieving all aspects of the provisions and compliance indicators specific to behavioral services.

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